Lincolnshire Lakes, Scunthorpe

Biodiversity Impact Assessment (BIA) Report

Keepmoat Homes

Prepared by:

SLR Consulting Limited

Unit 2, Newton Business Centre, Thorncliffe Park Estate,
Newton Chambers Road, Chapeltown, Sheffield, S35 2PH

SLR Project No.: 424.065033.00001

19 April 2024

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
V1	12 January 2024	Ellie Tew	Gary Oliver	Gary Oliver
V2	29 February 2024	Lucy Sumner	Julia Kozlowska	Julia Kozlowska
V3	19 April 2024	Lucy Sumner	Julia Kozlowska	Julia Kozlowska

Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with Keepmoat Homes (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations, and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations, and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

Table of Contents

Document References

Appendices

Appendix A Preliminary Ecological Appraisal

Appendix B Landscape Plan

Appendix C Statutory Biodiversity Metric Final Calculator and Condition Assessments (Supplied Separately)

1.0 Introduction

1.1 Background

SLR Consulting Ltd was instructed by Keepmoat Homes to undertake a biodiversity impact assessment (BIA) of an approximately 23.94 ha site in Ashby Parkland, Lincolnshire, DN17 2AA (approximate central OS Grid Reference: SE 86163 08625).

This report follows a Biodiversity Net Gain (BNG) Baseline Report completed by SLR Consulting and issued to the client on the 12th June 2023[1], and a Preliminary Ecological Appraisal and Phase 1 Habitat Survey completed by Ecus in 2023 (Appendix A). The first version of this report identified that there would be a net loss (-16.28%) of area habitat units and (-9.70%) of watercourse units but a gain in 25.90 hedgerow units.

Following this, a BNG Strategy report was commissioned by Keepmoat Homes to document amendments to the site design to maximise on-site gains and demonstrate that the project had followed the biodiversity gain hierarchy. A meeting was held on the 15th February 2024 with North Lincolnshire Council to discuss these findings where it was agreed that certain amendments could be made and it was likely that a gain on-site would be achievable. A meeting was held again on 12th March 2024 with North Lincolnshire Council to agree these alterations. This is further discussed in Section 2.2.3. This report documents the final version of the BNG assessment results, building on previous reports, design iterations and landscape plans, and will be used to inform a planning application for a large residential development.

1.2 Site Description

The application site (herein referred to as the 'Site') comprises arable fields with small areas of semi-improved grassland and one centrally located ditch. Further ditches are present just outside of the northern and western boundary.

The Site lies southwest of the town of Scunthorpe. The M181 borders the Site to the west, and Carisbrooke Manor Lane is adjacent to the Site to the east. The Site is surrounded by further agricultural fields to the north, west and south, however further east of the Site are residential areas.

1.3 Details of the Proposed Development

The proposed development involves the development of a residential estate of 599 units, with associated access, driveways, gardens and areas of Public Open Space (POS). The development also proposes to create a large (3.35ha) lake in the west of the Site (Appendix B). This lake will be planted with native marginals and surrounded by areas of wildflower meadow (totalling 1.71ha), native planting of trees and shrubs to create other broadleaved woodland (0.72ha) and reedbeds (0.02ha). The central ditch will largely be retained and creates a central green corridor within the Site.

Throughout the Site there will be a total of 1.3ha of amenity grassland sown, 244 new trees and 3.31km of new species-rich native hedgerow will also be planted. 0.78km of new drainage channels will be created and managed for their biodiversity value.

[1] Biodiversity Net Gain (BNG) Baseline Report, 12th June 2023, SLR Consulting

2.0 Methodology

2.1 BNG Baseline Calculation

A Biodiversity Net Gain (BNG) Baseline Report was issued to the client on the 12th June 2023[2]. This report was written following an ecological walkover of the Site by Miss Helen Chambers, Ecologist from SLR Consulting, on the 6th June 2023. The ecological walkover allows the broad habitat types on Site to be identified in accordance with the UK Habitat Survey (UKHab) methodology[3] and condition assessments of these habitats to be completed following Biodiversity Metric 4.0 guidance[4].

The UK Habitat Classification (UKHab) system comprises a principal hierarchy (the Primary Habitats) which involves the identification of broad habitats and Priority habitats, as well as the use of non-hierarchical Secondary codes.

The Preliminary Ecological Appraisal (PEA) completed by Ecus Ltd (Appendix A) was used to support the field survey and BNG baseline assessment.

2.2 Statutory Biodiversity Metric

The results of the initial BNG baseline survey were analysed within Biodiversity Metric 4.0[4], to calculate a baseline biodiversity value of the Site. The Biodiversity Metric 4.0 has since been superseded by the Statutory Biodiversity Metric[5], published on the 12th February 2024. The baseline results have therefore been transferred into the new metric, no change in the Site's baseline habitat or watercourse units has occurred. One hedgerow which was previously excluded from the baseline has now been included in the baseline for the Site as it is now considered to fall within the Site boundary, resulting in a baseline of 2.48 hedgerow (linear) units.

The Statutory Biodiversity Metric follows the same principles as Biodiversity Metric 4.0, using habitat as a proxy for biodiversity and its primary application is to provide planners and developers with a method of establishing how much and what type of habitats should be created or enhanced in order to ensure that the impacts of a development do not result in a net loss of biodiversity. Habitats are assigned the following 'multiplier' scores:

- Distinctiveness: A measure of the type and importance of a habitat;
- Condition: A measure of the present or predicted condition of a habitat type; and
- Strategic significance: How a habitat is regarded within Local Planning Policy.

2.2.1 Habitat Distinctiveness

Within the biodiversity metric the following is used to determine habitat distinctiveness:
"Distinctiveness is a measure based on the type of habitat and its distinguishing features. Professional survey is required to determine habitat type. The biodiversity metric tool automatically assigns distinctiveness category to your selected habitats."

Technical Table 2-1 (taken from the Statutory Biodiversity Metric – User Guide [5]) shows the categories and the thresholds used for assignment.

[2] Biodiversity Net Gain (BNG) Baseline Report, 12th June 2023, SLR Consulting

[3] https://ukhab.org

[4] Natural England. (2023). The Biodiversity Metric 4.0 Technical Annex 2 – Technical Information. https://publications.naturalengland.org.uk/publication/6049804846366720.

[5] Natural England. (2023). The Statutory Biodiversity Metric User Guide. https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf

Table 2-1: Habitat distinctiveness categories and scores

Distinctiveness category	Criteria threshold
Very high	8
High	6
Medium	4
Low	2
Very low (hedgerow module)	1
Very low (area module)	0

2.2.2 Condition Assessments

The following applies to habitat condition assessments, undertaken as part of BNG calculations: "*Habitat condition is a measure of the state of a habitat and is used to measure variation between parcels of the same habitat type. Condition is often linked to past management, present management, and land use.*"

Table 2-2 (taken from the Statutory Biodiversity Metric – User Guide) shows the metric condition categories and resulting score multipliers.

Table 2-2: Metric condition categories and scores

Condition category	Condition score multiplier applied in the metric
Good	3
Fairly Good	2.5
Moderate	2
Fairly Poor	1.5
Poor	1
Condition Assessment N/A	1
N/A - Other	0

2.2.3 Strategic Significance

The final Statutory Biodiversity Metric score multiplier concerns the strategic significance of the land and the habitats present, wherein:

"*Strategic significance is the local significance of the habitat based on its location and habitat type. Where a Local Nature Recovery Strategy (LNRS) has been published, you should use the relevant published LNRS, and the descriptions set out [below] to assign strategic significance. You should assess each individual habitat parcel, both at baseline and at post-intervention, for on-site and off-site. You should split habitat parcels where they are intersected by:*

- *A boundary between two areas of different strategic significance;*
- *A planning authority boundary.*

You should assign strategic significance for off-site habitats using relevant local documents for the off-site location rather than the development location. If an LNRS has not yet been published, a relevant planning authority should specify alternative documents for assigning strategic significance whilst an LNRS is put in place."

Following the meeting with North Lincolnshire Council on 15th February 2024, it was agreed that the Lincolnshire Lakes Area Action Plan (AAP)[6] was a suitable document to refer to and assign certain habitats high strategic significance. This includes reference to the lake, natural/semi natural green space surrounding the lake and strategic green linkages following the retained central ditch on Site. Areas of natural green space were also mentioned along the southern Site boundary; however, on review of the AAP this was not described. Following the meeting on 12th March 2024, the Lincolnshire Lakes Design Guide was also provided as another document to refer to and assign certain habitats high strategic significance to. In particular, the areas of broadleaved woodland to the west of the site bordering the M181.

Table 2-3 (taken from the Statutory Biodiversity Metric – User Guide) shows the strategic significance categories and resulting score multipliers.

Table 2-3: Metric strategic significance categories, where an LNRS has not yet been published

Strategic significance category	Score multiplier applied in the metric	Description
High (Formally identified in local strategy)	1.15	The habitat type is mapped and described as locally ecologically important within a specific location, within documents specified by the relevant planning authority. - If your project delivers the mapped habitat creation, enhancement or actions set out within specified alternative documents, or enhances an existing habitat identified within specified alternative documents as locally ecologically important, strategic significance can be recorded as high in the post-intervention sheets; - If the specified alternative documents identify existing habitat as locally ecologically important within a specified location, strategic significance may be recorded as high in the baseline. You should record the name of the plan the relevant planning authority has specified in the user comments and record that you have used the specified document in your gain plan.
Medium (Location ecologically desirable but not in local strategy)	1.10	This category can be applied when the LPA has not identified a suitable document for assessing strategic significance. Users should: - explain how the habitat type is ecologically important within a specific location; - demonstrate the importance of that habitat in providing ecological linkage to other strategically significant locations; - use professional judgement When the above criteria are met, strategic significance may be recorded as medium in the baseline and post-intervention sheets.
Low (Area / compensation not in local strategy)	1	Where the definitions for high and medium strategic significance are not met.

[6] North Lincolnshire Council (2016) Lincolnshire Lakes Area Action Plan. Available at: https://m.northlincs.gov.uk/public/planningreports/LincolnshireLakes/Adoption/Lincolnshire_Lakes_AAP_2016.pdf [Accessed: 02/02/2024].

3.0 Biodiversity Net Gain (BNG) Baseline Assessment

3.1 On-site Baseline Value

The calculated baseline units for habitats and watercourses on Site are provided below in Tables 3-1, 3-2 and 3-3. A more extensive description of the on-Site habitats are provided in the Lincolnshire Lakes BNG Baseline Report submitted to the client on the 12th June 2023.

Overall, the Site is calculated to hold a baseline biodiversity value of 48.48 habitat (area) units and 2.03 watercourse (linear) units. One hedgerow which was previously excluded from the baseline has now been included in the baseline for the Site as it is now considered to fall within the Site boundary, resulting in a baseline of 2.48 hedgerow (linear) units.

Table 3-1: Baseline habitat units on Site.

UK Habitat type	Condition	Strategic significance	Estimated extent	Habitat units
c1c Cereal crops	N/A	Area/compensation not in local strategy/ no local strategy	22.6 ha	45.20
g4 Modified grassland	Moderate	Area/compensation not in local strategy/ no local strategy	0.3 ha	1.20
g4 Modified grassland	Poor	Area/compensation not in local strategy/ no local strategy	1.04 ha	2.08
		Total	**23.94 ha**	**48.48**

Table 3-2: Baseline watercourse units on Site.

UK Habitat type	Condition	Strategic significance	Estimated extent	Watercourse units
r1g 50 Ditch – on Site (D5 in PEA)	Poor	Area/compensation not in local strategy/ no local strategy	0.5 km	0.75
r1g 50 Ditch – on boundary (D2-3 in PEA)[7]	Poor	Area/compensation not in local strategy/ no local strategy	0.85 km	1.28
		Total	**1.35 km**	**2.03**

Table 3-3: Baseline hedgerow units on Site

UK Habitat and proposed habitat type	Predicted condition	Strategic significance	Estimated extent	Hedgerow units
h2a Hedgerow (priority habitat)	Good	Area/compensation not in local strategy/ no local strategy	0.18 km	2.16
		Total	**0.18km**	**2.16**

[7] This length of ditch has been included within the BNG baseline calculation as its 5m wide riparian zone falls within the Site boundary.

4.0 Biodiversity Net Gain (BNG) Post Development Assessment

4.1 On-Site Post Development Habitats

Details of the proposed habitats on Site post development are illustrated in the landscape plan, (Appendix B). The habitats created within the post development Site and their accompanying predicted condition assessments are summarised below in Table 4-1, 4-2 and 4-3.

Table 4-1: Habitats located on Site post development.

Broad habitat type	UK Habitat and proposed habitat type	Predicted condition	Criteria failed	Estimated extent
Grassland	g3c Other neutral grassland	Good	C – Bare ground	1.11 ha
Grassland	g4 Modified grassland	Poor	A – No. of species B – Sward height D – Physical damage E – Bare ground cover	1.30ha
Woodland and forest	w1g other broadleaved woodland	Moderate	N/A Condition Assessment Score = 28 out of a possible 39	0.72 ha
Wetland	f2e Reedbeds	Moderate	A – Water table I – Diverse structure	0.015 ha
Urban	u1 847 Introduced shrub	N/A	N/A	0.015 ha
Urban	u1 828 Vegetated garden	N/A	N/A	5.55 ha
Urban	u1b Developed land – sealed surface	N/A	N/A	11.29 ha
Lakes	r1a 46 Ornamental lake	Moderate	N/A – Lake naturalness assessment	3.35 ha
Individual trees	g4/g3c 200 Urban tree	Moderate	C – Maturity D – Human activities E – Ecological niches	0.87 ha
Individual trees	g4/g3c 200 Urban tree	Moderate	C – Maturity D – Human activities E – Ecological niches	0.12 ha
Grassland	g3c Other neutral grassland	Good	C – Bare ground	0.6 ha

Table 4-2: Post development watercourse creation units on Site.

Broad habitat type	UK Habitat and proposed habitat type	Predicted condition	Criteria failed	Estimated extent
Urban	u1 851 Culvert (within D5)	Poor	N/A	0.09 km
Wetland	r1g 50 Ditch	Poor	B – range of plant species D – aquatic marginal fringe F – water levels	0.78 km

Table 4-3: Post development hedgerow creation units on Site.

Broad habitat type	UK Habitat and proposed habitat type	Predicted condition	Criteria failed	Estimated extent
Hedgerow	h2a5 Species-rich native hedgerow	Good	C2 – Nutrient-enriched perennial vegetation	3.31 km

4.2 On-Site Post Development Value

The calculated units for the post development habitats, watercourses and hedgerows on Site are provided below in Tables 4-2, 4-3, and 4-4.

Overall, under current proposals, the Site is calculated to attain a post-development biodiversity value of 52.34 habitat (area) units, 2.69 watercourse (linear) units, and 28.06 hedgerow (linear) units.

Table 4-4: Post development habitat units on Site.

UK Habitat and proposed habitat type	Predicted condition	Strategic significance	Estimated extent	Habitat units
g3c Other neutral grassland	Good	Formally identified in local strategy	1.11 ha	10.75
g4 Modified grassland	Poor	Area/compensation not in local strategy/ no local strategy	1.30 ha	2.50
w1g other broadleaved woodland	Moderate	Formally identified in local strategy	0.72 ha	3.86
f2e Reedbeds	Moderate	Formally identified in local strategy	0.015 ha	0.11
u1 847 Introduced shrub	N/A	Area/compensation not in local strategy/ no local strategy	0.015 ha	0.03
u1 828 Vegetated garden	N/A	Area/compensation not in local strategy/ no local strategy	5.55 ha	10.71
u1b Developed land – sealed surface	N/A	Area/compensation not in local strategy/ no local strategy	11.29 ha	0.00
r1a 46 Ornamental lake	Moderate	Formally identified in local strategy	3.35 ha	13.85

UK Habitat and proposed habitat type	Predicted condition	Strategic significance	Estimated extent	Habitat units
g4/g3c 200 Urban tree	Moderate	Area/compensation not in local strategy/ no local strategy	0.87 ha	2.66
g4/g3c 200 Urban tree	Moderate	Formally identified in local strategy	0.12 ha	0.43
g3c Other neutral grassland	Good	Formally identified in local strategy	0.6 ha	5.80
		Total (excluding area of individual trees)	23.94 ha	50.70

Table 4-5: Post development watercourse units on Site.

UK Habitat and proposed habitat type	Predicted condition	Strategic significance	Estimated extent	Watercourse units
r1g 50 Ditch (D2-3 in PEA[8] retained in full)	Poor	Area/compensation not in local strategy/ no local strategy	0.85 km	1.28
r1g 50 Ditch (D5 partially retained)	Poor	Area/compensation not in local strategy/ no local strategy	0.32 km	0.48
u1 851 Culvert (within D5)	Poor	Area/compensation not in local strategy/ no local strategy	0.087	0.08
r1g 50 Ditch	Poor	Formally identified in local strategy	0.78 km	0.86
		Total	2.04 km	2.69

Table 4-6: Post development hedgerow units on-Site.

UK Habitat and proposed habitat type	Predicted condition	Strategic significance	Estimated extent	Hedgerow units
h2a5 Species-rich native hedgerow (retained in full)	Good	Area/compensation not in local strategy/ no local strategy	0.18	2.16
h2a5 Species-rich native hedgerow	Good	Area/compensation not in local strategy/ no local strategy	3.31 km	25.90
		Total	**3.31 km**	28.06

[8] This length of ditch has been included within the BNG baseline calculation as its 5m wide riparian zone falls within the Site boundary.

5.0 Conclusion

The full results of the Statutory Biodiversity Metric are provided in Appendix C (supplied separately, in Excel format).

In summary, the Site was assessed as having a baseline value of 48.48 habitat units; following construction and taking into account all of the enhancements illustrated within the Landscape Plan (Appendix B), the Site is predicted to have a value of 50.70 habitat units, equating to a 4.58% gain.

In terms of linear habitats, the Site is predicted to currently support a baseline value of 2.03 'watercourse units'; post-development and taking into account the partial retention and culverting of the current on-Site ditches, it is predicted to support 2.69 watercourse units, resulting in a 32.98% gain.

In terms of hedgerow units, the Site currently supports 2.16 hedgerow units. Therefore, taking into account the proposed planting of 3.31km of native species-rich hedgerow, the Site is predicted to support 25.90 hedgerow units, resulting in a 1199.18% gain.

Appendix A Preliminary Ecological Appraisal

Lincolnshire Lakes, Scunthorpe

Preliminary Ecological Appraisal

Ecus Ltd

19 January 2023

Lincolnshire Lakes Site, Scunthorpe

Preliminary Ecological Appraisal & Water Vole Survey

Keepmoat Homes

Report prepared by:
Ecus Ltd.
Brook Holt
3 Blackburn Road
Sheffield
S61 2DW

0114 266 9292

January 2023

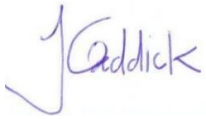
Ecus Ltd

Report to:	**Keepmoat Homes**
Report Title:	**Lincolnshire Lakes Site, Scunthorpe** **Preliminary Ecological Appraisal & Water Vole Survey**
Version:	**V3.0**
Issue Date:	**January 2023**
Report Ref:	**17942**

Originated By:

Anna Byatt
Graduate Ecologist Date: 22nd October 2021

Reviewed By:



Jennie Caddick & James Grundy
Associate Director Date: 27th October 2021
5th November 2021

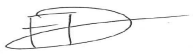
Approved By:

Faye Durkin
Regional Manager: Yorkshire and East Midlands Date: 9th November 2021

Amended By:

Francesca Thorley
Consultant Ecologist Date: 19th August 2022

Amendments Reviewed and Approved By:



Faye Durkin
Regional Manager: Yorkshire and East Midlands Date: 31st August 2022

Prepared by:
Ecus Ltd.
Brook Holt
3 Blackburn Road
Sheffield S61 2DW

t. 0114 266 9292

Version	Author	Description	Date
V0.1	AB	Initial draft	22.10.2021
V0.2	JC	QA1	26.10.2021
V0.3	AB	QA1 comments addressed.	01.11.2021

V0.4	JG	QA1	05.11.2021
V0.5	AB	QA1 comments addressed	05.11.2021
V0.6	FD	QA2	09.11.2021
V1.0	AB	Final Report issue	10.11.2021
V1.1	Francesca Thorley	PEA Updates due to new layout	19.08.2022
V1.2	Faye Durkin	Final QA	31.08.2022
V2.0	Francesca Thorley	V2.0 Final Report Issue	31.08.2022
V3.0	Francesca Thorley	Update to refer to new layout	19.01.2023

Contents

Executive Summary

Ecus Limited (Ltd), was commissioned in September 2021 by Keepmoat Homes to undertake a Preliminary Ecological Appraisal (PEA) with water vole survey at Lincolnshire Lakes in Scunthorpe (Ordnance Survey (OS) National Grid Reference (NGR): SE 86163 08625), hereafter referred to as 'the Site'.

The Site is 23.94 Ha and comprises mainly arable farmland with additional habitats including dense bramble scrub, semi-improved grassland, ditches and a hedge.

The proposals for the Site include the construction of a residential estate (599 units) with associated infrastructure, soft landscaping, Sustainable Urban Drainage Systems (SUDS) and areas of Public Open Space (POS) as displayed on Keepmoat Homes '*Viability Layout, Burringham Road, Scunthorpe – Sheet 3 of 3'* drawing (Dwg No 101/2021/003/ Rev S, 16th January 2023).

One statutory designated site which is a Local Nature Reserve (LNR) was identified using MAGIC and four local wildlife sites (LWS) were returned by Lincolnshire Environmental Records Centre (LERC) for locations within 2 km of the Site but due to the distance between the statutory and non-statutory designated sites and the Site and the local nature of the works on the Site it is not expected that any direct or indirect impacts will occur on any of the designated sites.

Habitats on Site offer limited suitability for amphibians, with higher value habitat located around the Site boundary. However, there is opportunity for amphibians to utilise the Site and GCN presence on Site cannot be established without further survey effort. To avoid the requirement for further waterbody assessment (at WB2- WB5) or GCN survey effort we recommend that a GCN District Level Licence (DLL) enquiry is submitted to Natural England. The enquiry will confirm whether the Site is suitable for inclusion in the DLL scheme and (where it is suitable) will identify any cost associated with joining.

Best practice measures should be taken with regards to badger Meles meles, reptiles and hedgehog Erinaceus europaeus; the details of which can be found within Section 4 of this report.

No trees were observed to display potential bat roost features. An updated assessment of trees should be undertaken prior to the removal of trees from the area of woodland. The woodland, scrub and ditch habitats at the Site display moderate suitability for foraging and commuting bat species. In line with current guidance, it is recommended that a single bat activity transect survey be conducted per transect survey per season (spring –April/May, summer – June/July/August, autumn – September/October. It is recommended that building integrated bat roost boxes be provided on 30% of properties in order to provide an enhancement for roosting bats at the Site.

Evidence of water vole was found in ditches D2 and D3. Further survey effort is recommended at ditches D1 –D6 prior to the commencement of development to fully assess the level of water vole activity at and

adjacent the Site.

The Charted Institute of Ecology and Environmental Management (CIEEM) advise that surveys and reports between 18 months and three years old may still be valid in certain circumstances. In order to determine validity, an ecologist should be commissioned to undertake a site visit, to compare the current site status with that recorded during the original survey(s). Where significant changes to the original survey conditions are identified it may be necessary to undertake some or all of the surveys again, including the desk study. There is also the possibility that surveys for 'new' species may be identified.

1. Introduction

1.1 Background

1.1.1 Ecus Limited (Ltd), was commissioned in September 2021 by Keepmoat Homes to undertake a Preliminary Ecological Appraisal (PEA) with water vole *Arvicola amphibius* survey at Lincolnshire Lakes in Scunthorpe (Ordnance Survey National Grid Reference (OSNGR) SE 86163 08625), hereafter referred to as 'the Site'.

1.1.2 The Site is 23.94 hectares (ha) and comprises mainly arable farmland with additional habitats including dense bramble scrub, semi-improved grassland, and one ditch (D5) linked to offsite ditches (D1 – D4 and D6) and a hedgerow.

1.1.3 The proposals for the Site include the construction of a residential estate (599 units) with associated infrastructure, soft landscaping, Sustainable Urban Drainage Systems (SUDS) and areas of Public Open Space (POS) as displayed on Keepmoat Homes *'Viability Layout, Burringham Road, Scunthorpe – Sheet 3 of 3'* drawing (Dwg No 101/2021/003/ Rev S, 16th January 2023).

1.1.4 The purpose of the PEA was to carry out an ecological desk study and an extended Phase 1 habitat survey, in combination with a water vole survey, to inform an assessment of the ecological value of the Site and its potential to support habitats or be used by species protected under either UK or European nature conservation legislation. This includes those listed within the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Natural Environment and Rural Communities (NERC) Act 2006. Full details of legislation relating to those habitats and species discussed within this report can be found at: http://www.legislation.gov.uk.

1.1.5 This report details the findings of a data consultation, extended Phase 1 habitat survey and the water vole survey carried out by Ecus Ltd during September 2021. The methodologies employed during the surveys and all survey findings are described along with an evaluation and assessment of the ecological value of the Site and the likely ecological impacts of the development works. Any requirement for further survey work and/or mitigation/enhancement is also detailed as required.

2. Methodology

2.1 Data Consultation

2.1.1 As part of the PEA process, a data consultation was undertaken by Ecus Ltd in October 2021 with the local record centre, Lincolnshire Environmental Records Centre (LERC) which is part of the Greater Lincolnshire Nature Partnership (GLNP). The data consultation was undertaken to determine the presence of existing biological records or local non-statutory designated sites of nature conservation interest within 2 km of the Site. All records received have been reviewed, but records dating from the past twenty years are considered to have greater relevance.

2.1.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (http://magic.defra.gov.uk) was consulted for information on statutory designated sites of nature conservation interest, and the presence of European Protected Species (EPS) mitigation licences for great crested newt *Triturus cristatus* (GCN) and bats within 2 km of the Site. MAGIC was also used to search for information relating to GCN Class Survey Licence Returns within 250 m of the Site.

2.1.3 Information obtained from LERC and MAGIC is included within the report where appropriate.

2.2 Extended Phase 1 Habitat Survey

2.2.1 The Site was surveyed on 29th September 2021 by Graduate Ecologist Anna Byatt BSc (Hons) MSc using the extended Phase 1 habitat survey methodology (JNCC, 2016). This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the Site.

2.2.2 Habitats and vegetation types present inside the Site were recorded on to a field map and notable, rare or scarce plant species, including other features of ecological interest, were highlighted and marked using Target Notes (TN).

2.2.3 Evidence of protected species or species of nature conservation importance were recorded where present at the time of survey. Habitats present that are listed as priority habitat under Section 41 of the NERC Act 2006 or the Local Biodiversity Action Plan (LBAP) for Doncaster were also noted. Survey findings and TN are detailed in Section 3 below and annotated on Figure 1 with details of TNs provided in Appendix 1. Site photographs can be seen in Appendix 2.

2.2.4 The abundance of plant species recorded was classified according to the DAFOR rating. The standardised terms are as follows:

- D – Dominant;
- A – Abundant;
- F – Frequent;

- O – Occasional, and,
- R – Rare.

2.2.5 The value and sensitivity of ecological features present in the Site was determined based on the guidance given in '*Guidelines on Ecological Impact Assessment'* (CIEEM, 2018). Individual ecological receptors (habitats and species) that could be affected by the proposed development were assigned levels of importance for nature conservation. The highest level is International, then decreasing in order of importance through UK, national, regional, county, local, and lastly site level (within the zone of influence).

2.3 Protected and Key Species

2.3.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit http://www.legislation.gov.uk.

Amphibians

2.3.2 A desk-based search for waterbodies within 500 m of the Site, which are not separated by a significant barrier to amphibian dispersal, were searched for using 1:10,000 OS mapping. Access to waterbodies within 500 m to assess for their suitability to support amphibians was attempted during the site visit.

2.3.3 The search and site visit identified that one onsite ditch (D5) and five offsite ditches (D1 – D4 and D6) and five offsite Waterbodies (WB1 –WB5) were relevant. Ditches D1 – D6 and Waterbodies WB1 –WB2 were assessed for their aquatic habitat suitability for great crested newt Triturus cristatus (GCN) using the habitat suitability index (HSI) which incorporates several parameters (e.g. waterbody size, location, fish and wildfowl presence, shading and macrophyte cover, presence of suitable surrounding terrestrial habitat). N.B. The presence of fish and / or waterfowl, heavy shading and lack of submerged vegetation are likely to reduce aquatic habitat suitability and therefore the likelihood of GCN presence. The HSI assessment at D1 – D6 was undertaken during the water vole survey. Information to inform the HSI at WB1 and WB2 was obtained using aerial photography and Google searches of land use (as access permission could not be obtained to visit these waterbodies from the landowner/s). WB3, WB4 and WB5 were excluded from the HSI assessment on the grounds of their distance from the Site (over 250 m) and as it was concluded that any GCN populations potentially associated with these waterbodies would not be, in any way, dependant on habitats at the Site. Refer to Annex A: HSI Results

Badger

2.3.4 Signs of badger *Meles meles* activity were searched for within the Site and up to 30 m from the Site boundary, where accessible.

2.3.5 The search followed standard methodology detailed in '*Surveying Badgers'* (Harris et al., 1989) and the approach as described in '*The History, distribution, status and habitat requirements of the badger in Britain*' (JNCC, 1990).

2.3.6 This included search for badger setts, latrine/dung pits, foraging marks, feeding signs (e.g. snuffle holes), footprints, badger hairs and worn pathways, specifically along linear features and boundaries in the Site.

2.3.7 The search focussed on areas with suitable topography and/or vegetation for sett building as well as key habitats favoured for foraging such as hedgerows and ditches.

2.3.8 Where badger sett(s) were identified, these were examined and key details recorded, including the number of entrances and their status (e.g. active, partially used, and disused). Where present setts identified were categorised using nationally recognised sett classification (main sett, annexe sett, subsidiary sett, outlier sett) where possible.

Bats

2.3.9 Trees within or immediately adjacent the Site were subject to a ground-based assessment for their suitability to support roosting bats during the survey.

2.3.10 An individual tree may have several features of potential interest to roosting bats associated with it and it is not always possible to confirm usage of a feature by bats, as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently it is customary when undertaking such ground based assessments to assign each feature to a defined category of roosting potential as follows: negligible, low, moderate, high, confirmed (Collins, 2016).

2.3.11 The Site was also assessed for its suitability for foraging and commuting bats.

Birds

2.3.12 In 2015, a re-assessment of Birds of Conservation Concern (BoCC) was published by Eaton et al. (2015), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.

2.3.13 "Red" is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. "Amber" is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by "Green", indicating that the species are relatively unthreatened.

2.3.14 Desk study data was filtered for Wildlife and Countryside (WCA) Act 1981 (as amended) Schedule 1 bird species and those species protected under Annex 1 of the EU Directive on the Conservation

of Wild Birds, also known as the Birds Directive. Priority species (NERC Act 2006, LBAP) were likewise highlighted and the UK Red List for birds, also known as the Birds of Conservation Concern (BoCC) as described above, was also referred to.

2.3.15 While on Site during the survey any species of birds encountered were recorded and habitats assessed for their potential value to nesting, wintering and foraging birds.

Reptiles

2.3.16 The habitats present on Site were assessed for their suitability to support reptiles, notably with reference to their connectivity with other areas of suitable habitat within the wider landscape.

Other Key and Notable Species

2.3.17 Whilst on Site habitats were assessed for their potential to support any other nationally, locally scarce or locally notable species.

Invasive Species

2.3.18 During the extended Phase 1 habitat survey any evidence of invasive species, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), was recorded and mapped where seen.

2.4 Water Vole Survey

2.4.1 In respect of water vole a desk based search for watercourses on, and within 30 m of the Site which are not separated from the Site by a significant barrier to dispersal was undertaken using OS 1:10,000 mapping.

2.4.2 Six ditches (D1- D6) were identified as potentially providing water voles with suitable habitat and a water vole survey was undertaken at these ditches on the 29th and 30th of September 2021 by Consultant Ecologist Francesca Thorley BSc MSc, with support from Seasonal Ecologist Fern Harris BSc MSc and Graduate Ecologist Emily Andrew BSc MSc.

2.4.3 Signs of water vole activity, including sightings, burrows, latrines, footprints, pathways in vegetation, feeding remains and cropped grass around tunnel entrances were searched for and recorded in accordance with current best practice guidance (Dean et. al., 2016). The general characteristics of the ditch channels and banks was also recorded as part of the water vole survey.

2.4.4 During the water vole survey any evidence of otter *Lutra lutra* or white-clawed crayfish *Austropotamobius pallipes* was also noted.

2.5 Survey Limitations

2.5.1 An extended Phase 1 habitat survey is intended to provide a rapid assessment of habitats present within a site and is not intended to replace detailed vegetation or targeted protected species surveys, where deemed necessary.

2.5.2 Ditch D3 on the western boundary of the Site had been mown on the eastern bank and the aquatic vegetation cleared from within the bank along its entire length the day before the water vole survey took place. This may have resulted in the loss of some evidence of water vole activity at this location.

2.5.3 Both banks of ditch D2 were not surveyed on the western half (approximately 250 m) due to dense vegetation limiting access for the surveyors.

2.5.4 Access permission to visit Waterbodies WB1 and WB2 located within 250 m of the Site (identified as extant during the data consultation) could not be obtained and they were not accessible at the time of the survey Site visit as they are on private land.

3. Findings and Evaluation

3.1 Site Description

3.1.1 The Site is two arable fields separated by a ditch (D5) to the east of the M180 in Scunthorpe, North Lincolnshire (Figure 1). Habitats found on the Site include arable farmland, semi-improved grassland, dense scrub, ditches, and a hedgerow.

3.1.2 The Site is immediately surrounded by agricultural farmland to the north and south with the town of Scunthorpe to the east and the M181 to the west.

3.2 Designated Sites

3.2.1 One statutory designated site which is a Local Nature Reserve (LNR)) was identified using MAGIC and four Local Wildlife Sites (LWS) were returned by LERC for locations within 2 km of the Site.

3.2.2 Details of statutory and non-statutory sites of nature conservation interest are provided in Table 1 below.

Table 1. Designated Sites within 2 km of the Site

Designated Site	Description from Citation	Approximate Distance and Direction from Site
Statutory		
Silica Lodge LNR	A mixture of scrub, acid grassland (unimproved and semi improved) with a lake and coarse grassland. The lake is used for fishing and is associated with a rich fauna of birds and invertebrates.	1.8 km south east.
Non-Statutory		
Ashby Decoy Golf Course LWS	Acid grassland with woodland, scattered scrub, neutral grassland and standing water.	950 m south east.
Westcliffe Lagoon LWS	A complex lake system surrounded by oak-birch woodland and a little remnant heathland. Water quality is poor because much inflow is runoff from nearby urban areas.	1.25 km north east.
Silica Park LWS	A rich mixture of open sandy grassland, denser and longer grassland, open water, marshy ground, scattered and dense scrub, and trees.	1.8 km south east.
Brumby Common West LWS	New non-native plantation, lake, mature semi-natural woodland, unimproved acid grassland, bracken, scrub and arable farmland.	1.8 km north.

3.2.3 The statutory designated site Silica Lodge LNR is considered to be important to nature conservation at the county level. The non-statutory designated sites are considered to be of importance to nature conservation at between the local and county level. All designated sites are

separated from the Site by roads. The Ashby Decoy Golf Course LWS may have connectivity with the Site through the network of drains in the area.

3.3 Habitats

Arable Farmland

3.3.1 The majority of the Site comprises arable farmland. At the time of survey the fields were predominantly bare ground with no crop and very few arable weeds or other species recorded.

3.3.2 Arable farmland is an intensive, highly managed habitat that is not a NERC Act 2006 Section 41 priority habitat nor is it listed within the LBAP as a habitat of importance. Arable has negligible intrinsic ecological value given its man-made nature, frequency in the local and wider area and lack of floral species diversity, however, the value of this habitat is considered further within Section 3.4 with regards to protected and key species.

Semi-improved Grassland

3.3.3 The field margins on the north, south and west of the Site as well as the margins surrounding D5 support semi improved grassland. The field margins are around 3 m wide with the composition of the grassland including dominant perennial rye grass *Lolium perenne*, abundant false oat grass *Arrhenatherum elatius*, abundant white clover *Trifolium repens* and occasional nettle *Urtica dioica*, horsetail *Equisetum sp*., broad leaved dock *Rumex obtusifolius*, and hogweed *Heracleum sphondylium.*

3.3.4 The eastern field margin is more diverse containing species including frequent creeping thistle *Cirsium arvense*, yarrow *Achillea millefolium* and willow herb *Chamaenerion angustifolium*, and occasional chamomile *Chamaemelum nobile*, and rose bay common poppy *Papaver rhoeas*, *,* and white campion *Silene latifolia* and rare violet species *Viola spp.*

3.3.5 Semi-improved grassland is not a NERC Act 2006 Section 41 priority habitat, however arable field margins a UKBAP and LBAP habitat. The surrounding landscape is largely farmland so this habitat is likely to be common in the surrounding landscape therefore the semi improved grassland on Site can be considered important at the Site level only.

Hedgerows

3.3.6 Along the eastern boundary of the Site is a heavily managed hedgerow approximately 150 m in length. The hedge is intact and dominated by hawthorn with occasional elder and ground cover dominated by ivy. It is around 2 m tall and 1.5 m wide.

3.3.7 Hedgerows are a NERC Act 2006 section 41 habitat of principal importance and are listed within the LBAP as a priority habitat. As the hedgerow is short in length, species poor, heavily managed and is isolated, it is considered that hedgerow on Site is of value to nature conservation at the Site level only.

Dense Scrub

3.3.8 There is a small area of dense scrub in the north eastern corner of the Site. The scrub is dominated by bramble *Rubus fruticosus* with frequent nettle *Urtica dioica* and occasional dog rose *Rosa canina.* It is expected that this habitat will be retained post development.

3.3.9 Scrub habitat is not listed as a NERC Act 2006 habitat of principal importance, nor is a priority habitat in the Lincolnshire LBAP. The scrub on Site covers a small area and contains common species which are likely common in the wider landscape therefore the scrub on Site is of value to nature conservation at the site level only.

3.4 Protected and Key Species

Amphibians

3.4.1 LERC returned a total of 28 records of amphibians for locations within 2 km of Site. Of these two pertained to GCN, the closest of which was recorded to a 10 km grid reference (SE) which, at its closest point falls within 50 m of the Site.

3.4.2 The remaining records include, three smooth newt *Lissotriton vulgaris*, five, 10 common frog *Rana temporaria* and 13 common toad *Bufo bufo* for locations within 2 km of the Site. The closest record to Site pertained to a common toad record approximately 470 m north of Site from 2006.

3.4.3 No EPS licenses pertaining to GCN were identified within 2 km of the Site using MAGIC.

3.4.4 The onsite ditch (D5) and five offsite ditches (D1 – D4 and D6 linked to the Site) were subject to a HSI assessment. No ponds or other waterbodies were observed on the Site during the survey though five waterbodies (WB1- WB5) were identified as extant within 500 m of the Site from MAGIC. Of these, two waterbodies (WB1 and WB2) were located within 250 m of the Site, which is considered to be within the typical accepted dispersal distance for GCN (Figure 1), refer to Annex A: HSI Results.

3.4.5 WB1 is located approximately 180 m north west of the Site however it is separated from the Site by the M180 motorway which presents a significant barrier to amphibian dispersal. In addition, WB1 appears to be a fishing lake so it is considered unlikely to offer GCN with suitable breeding habitat as coarse fish will predate GCN eggs and larvae.

3.4.6 WB2 is located approximately 90 m east of the Site, it is considered to have good connectivity to the site as there is grassland habitat connecting the two Sites, there is a road between WB2 and the Site but this is small and unlikely to be subject to heavy traffic. It was not possible to make an assessment of the potential of WB2 to support breeding GCN as it was not accessible during the survey (due to a lack of access permission and being located within the grounds of a private property).

3.4.7 Consequently GCN presence / likely absence at D1 – D6 and WB1 and WB2 and the likely status

of the species at the Site cannot currently be established without undertaking further GCN survey effort at the correct time of year. Therefore the species cannot be ruled out as a receptor to the proposed development works at the Site.

3.4.8 Suitable habitat for amphibians is limited on Site to the field margins, grassland margins of D5 and woodland, which provide some level of refuge and foraging opportunity. There is more suitable habitat including larger vegetated margins surrounding waterbodies WB3- WB5 located within 250 m- 500 m of the Site, therefore habitats on the Site are only considered to be important at a site level to amphibians.

Badgers

3.4.9 One record of badger dated between 1976 and 1977 was supplied by LERC for locations within 2 km of the Site. The exact location of the record is not provided within this report to safeguard badgers from persecution; however, the record is located over 200 m from the Site.

3.4.10 No signs of badger activity were identified on Site during the survey however some mammal paths were identified along the southern boundary of the Site in the field margin and from the field boundary along the northern boundary of the site into D2.

3.4.11 The Site provides suitable habitats for foraging and commuting badger in the form of scrub, semi improved grassland, arable farmland and woodland, and the area of woodland and ditch banks provide suitable sett building habitat. There is an abundance of suitable, accessible habitat in the area surrounding the Site therefore the habitats on Site are considered important to badgers at site level only.

Bats

3.4.12 GLNP returned a total of 27 bat records for locations within 2 km of the Site, of which, one record of a bat roost was returned, pertaining to an unidentified bat species *Chiroptera,* approximately 1.2 km north east of the Site in 2008.

3.4.13 The remaining 26 records pertained to observations of bats in flight or grounded/injured bats and included common pipistrelle *Pipistrellus pipistrellus,* soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula.* The closest of these records to the Site pertained to a soprano pipistrelle approximately 250 m north west, from 2016 (accurate to 1 km).

3.4.14 No EPS license relating to bats were identified within 2 km of the Site using MAGIC.

<u>Roosting Bats</u>

3.4.15 No buildings or structures are present within the Site. All trees adjacent the Site were inspected from the ground and no potential roost features were identified as the trees are young. Therefore, all trees within the Site are considered to display negligible suitability for roosting bats. As a result, roosting bats are not considered to be a potential receptor to the proposed development and are

not discussed further in this report.

Foraging and Commuting Bats

3.4.16 Arable farmland takes up a large proportion of the Site. This habitat is considered to be of low value for foraging/commuting bats due to its low species diversity and intense management, a result of the arable rotation, poor structural diversity, including absence of vegetated corridors, and the subsequent low levels of invertebrate fauna suitable for foraging bats which would likely result.

3.4.17 The boundary habitats including the woodland, hedge, and ditches are of higher value for foraging and commuting bats. These habitats support a greater diversity of species and ecotones, and provide good connectivity to other suitable habitats in the surrounding landscape. The habitats on Site are common within the wider area, with similar habitats immediately adjacent to the Site. As such the habitats on the Site are only considered to be of site level importance for nesting birds.

Birds

3.4.18 In 2015, a re-assessment of Birds of Conservation Concern (BoCC) was published by Eaton *et al*. (2015), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.

3.4.19 “Red” is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. “Amber” is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by “Green”, indicating that the species are relatively unthreatened.

3.4.20 LERC returned a total of 815 records comprising 76 bird species for locations within 2 km of the Site. A total of 28 Schedule 1 bird species, as listed within the Wildlife and Countryside Act 1981 (as amended), 18 Red, 8 Amber and 16 Green listed species are included within the records. Bird records are summarised in Appendix 2.

3.4.21 The habitats on Site provide suitability for nesting and foraging birds: arable land is considered suitable for ground nesting birds and dense scrub, hedgerow and adjacent woodland and scattered trees habitats provide nesting and foraging opportunities for a range of small passerine species. Whilst on Site common species including herring gull, magpie and wood pigeon were observed foraging on Site.

3.4.22 The habitats on the Site are common within the wider area, with similar habitats immediately adjacent to the Site. As such the habitats on the Site are only considered to be of site level importance for nesting birds.

Reptiles

3.4.23 LERC provided a total of five records of reptiles for locations within 2 km of the Site. The records relate to common lizard *Zootoca vivpara* and grass snake *Natrix helvetica.* Records were older than 40 years with exception of one which dated from 2017 and was found approximately 1.5 km north from the Site.

3.4.24 The majority of the Site supports arable farmland which is not considered suitable for reptiles as it is frequently disturbed. The base of the hedge, edges of scrub, tussocky grass in the grassland field margins, ditches and ditch bank provide suitability for foraging and sheltering reptiles though these areas are limited and similar habitats are frequent in the wider area.

3.4.25 With consideration to the small size of suitable habitat on Site and its availability in the wider landscape, in combination with the lack of recent records close to the Site, it is considered that the Site is of value to reptiles at the site level only.

Other Notable and Key Species

Brown Hare

3.4.26 A total of 19 records of brown hare *Lepus europaeus* were returned by LERC for locations within 2 km of the Site. The closest record was noted approximately 610 m south of Site from 2016.

3.4.27 No brown hare were seen on Site during the survey, however, the mosaic of the arable farmland, grassland and scrub habitats is suitable for brown hare.

3.4.28 It is considered that the Site habitats are of importance to brown hare at the site level only, due to an abundance of similar farmland and margins in the wider surrounding area.

Harvest Mouse

3.4.29 LERC returned one record of harvest mouse *Micromys minutus* which was a historical record 1.5 km from Site from between 1976- 1977.

3.4.30 The semi improved grassland of the field margins and the hedgerow provides suitable habitat for harvest mouse. With consideration to the small size of suitable habitat on Site and its availability in the wider landscape, in combination with the lack of recent records close to the Site, it is considered that the Site is of value to harvest mouse at the site level only.

Hedgehog

3.4.31 GLNP returned 17 records for hedgehog *Erinaceus europaeus*. The closest record was of two hedgehogs found approximately 170 m south of the Site in 2011.

3.4.32 The grassland, scrub and hedgerow bases as well as adjacent woodland are considered suitable for hedgehog to use for foraging and shelter. Given the presence of similar suitable, well connected habitats in the wider area it is considered that Site habitats are of importance to hedgehog at the

site level.

Invertebrates

3.4.33 LERC returned 87 records for notable invertebrate species. The closest record of which pertains to a harlequin ladybird *Harmonia axyridis* from 2017 approximately 1.1 km from Site.

3.4.34 The arable land, hedgerow and woodland at the Site are considered to provide a suitable foraging resource for a variety of invertebrate groups and species. Loss of arable habitats at the Site may impact invertebrate species, however, as the land is highly managed it is unlikely to support a diverse range of invertebrate species. As boundary habitats including the semi improved grassland and hedgerow are to be retained this is considered to be of importance to invertebrates at the site level, as such invertebrates are not considered to be a constraint to works and will not be discussed further in this report.

Invasive Species

3.4.35 LERC returned five records for invasive plants within 2 km of the Site. The records include common rhododendron *Rhododendron ponticum* and Japanese knotweed *Fallopia japonica.* The closest record less than 20 years old as found in 2007 approximately 710 m south east from Site and pertained to common rhododendron.

3.4.36 LERC returned a total of 151 records of invasive bird species within 2 km of the Site, pertaining to Canada goose, ruddy duck and ring-necked parakeet. The closest record to Site pertains to a Canada goose record approximately 1.8 km north of Site from 2002.

3.4.37 No invasive species were identified during the survey, therefore it is considered likely that invasive species are absent from the Site, consequently they are not considered a constraint to the works and have not be discussed further in this report.

3.5 Water Vole Survey

Water Vole

3.5.1 LERC returned 60 records of water vole for locations within 2 km of Site which were dated between 1977- 2017. The closest record to Site was from 1978, approximately 380 m north of Site.

3.5.2 Six ditches (D1- D6, Figure 1) were identified as relevant during the survey with a network of ditches in the wider landscape and the River Trent located approximately 1.5 km east of the Site. The River Trent appears to have connectivity with the Site through the drainage system.

3.5.3 At the time of the survey, D1, D4, D5 and D6 were all found to be dry though the presence of common reed and yellow flag iris was noted in D5, indicating that it likely contains water at other times of the year. D2 and D3 contained water and were surveyed for signs of water vole.

3.5.4 D2 displayed suitability for supporting water vole due to; the steep soil banks which can be used

by the species to dig burrows, the bank profile and grassy vegetation along the banks which provides suitable foraging habitat. However, there was also evidence of slumping of the bank which would make it less suitable as slumping may bury or expose burrows. Signs of water vole presence in D2 were found during the survey including three potential water vole burrows on Site at SE 86475 08835, SE 86445 08835 and SE 86267 08861 and one off Site at SE 86542 08825 (Figure 2) with feeding signs around the two easternmost burrows. The western end of D2 was inaccessible for survey due to dense vegetation.

3.5.5 D3 displayed suitability for water vole including steep, earth banks, however recent vegetation clearance, including mowing along the entire length of the eastern bank may have destroyed/removed some evidence of water vole activity and likely resulted in disturbance/ reduction in habitat suitability for this species at this location. However two potential water vole burrow were identified at SE 85958 08826 and SE 85941 08775 during the survey.

3.5.6 At the time of survey, D2 and D3 were considered to provide suitable habitat for water vole. While the other ditches (D1, D4, D5, D6) were dry at the time of survey, they may hold water at other times of year providing suitability for water vole. The ditches subject to survey effort have connectivity to a significant number of further suitable ditches and the wider network of field drains present in the surrounding landscape. As such, the Site can be considered important to water vole at the local level.

Otter and White-clawed Crayfish

3.5.7 Five records of otter were identified for locations within 2 km of the Site. The closest record is 1.4 km from Site, from 2017.

3.5.8 No evidence of otter was identified during the survey. The River Trent is located 2 km to the west of the Site, within the dispersal distance of otter and has connectivity to the Site through the ditch network, however, the habitats on Site are of limited value for this species, with possible refuge locations along the ditches and field margins being managed and disturbed. Therefore the Site is considered important to otter at site level only.

3.5.9 No records of white-clawed crayfish were provided by LERC for locations within 2 km of the Site and. No watercourses suitable for white-clawed crayfish were identified on the Site therefore this species are not considered to be a receptor to the works and are not discussed further in this report.

4. Impact Assessment, Mitigation and Enhancements

4.1.1 The Charted Institute of Ecology and Environmental Management (CIEEM) advise that surveys and reports between 18 months and three years old may still be valid in certain circumstances. In order to determine validity, an ecologist should be commissioned to undertake a site visit, to compare the current site status with that recorded during the original survey(s). Where significant changes to the original survey conditions are identified it may be necessary to undertake some or all of the surveys again, including the desk study. There is also the possibility that surveys for 'new' species may be identified.

4.2 Proposals

4.2.1 The proposals for the Site are taken from Keepmoat Homes '*Viability Layout, Burringham Road, Scunthorpe – Sheet 3 of 3'* drawing (Dwg No 101/2021/003/ Rev S, 16th January 2023) and include the construction of a residential estate (599 units) with associated infrastructure, soft landscaping, areas of Public Open Space and SUDS.

4.2.2 The largest area of habitat loss will be in association with the arable farmland. The loss of this habitats will facilitate the construction of the housing. It is understood that the ditches and boundary habitats including the hedge, scattered trees and semi improved grassland will be retained.

4.3 Designated Sites

4.3.1 One statutory designated site, Silica Lodge LNR, was identified using MAGIC and four non-statutory LWS were returned by LERC for locations within 2 km of the Site.

4.3.2 Due to the distance between the Site and designated sites and the local nature of the works on the Site it is not expected that any direct or indirect impacts will occur on any of the designated sites. As the Site contains drains that are part of a wider drainage network, designated sites may be impacted by pollution runoff into water courses. To mitigate this, general principles of pollution prevention should be adhered to. This will be incorporated in the MS described above and will include Guidance for Pollution Prevention (GPP) documents produced by NRW, NIEA and SEPA should be referred to for site works which may impact the local environment. Relevant examples include:

- GPP5 – works and maintenance in or near water (NRW, NIEA and SEPA, 2018),
- GPP21 – pollution incident response planning (NRW, NIEA and SEPA, 2017) and
- GPP22 – dealing with spills (NRW, NIEA and SEPA, 2018).

4.3.1 Pollution Prevention Guidelines 1 (NRW, NIEA and SEPA, 2013), is now withdrawn but provides a general overview for good practice environmental measures in construction and where followed will assist with protection of the running water and ditch habitats;

- Materials shall not be stored within 10 m of any running water or aquatic habitat; and
- Details of the Environment Agency should be stored in the site office during construction works should any pollution incident occur which may impact upon off-Site waterbodies/watercourses.

4.4 Habitats

Arable Farmland

4.4.1 The largest area of habitat loss at the Site relates to the arable farmland. The loss of this habitat is considered to be of importance to nature conservation at the site level as a result of this habitat experiencing frequent disturbance and nutrient input from the farming operations. Additionally, the crop is dominated by a single plant species (i.e. a cereal crop) with only isolated additional plant species recorded, resulting in a lack of botanical diversity.

4.4.2 Given the disturbed nature and poor diversity of arable farmland its loss is unlikely to result in a significant negative ecological impact therefore no mitigation, compensation or enhancement measures are considered necessary although recommendations pertaining to birds are detailed at Section 4.4 below.

Semi Improved Grassland

4.4.3 Semi-improved grassland field margins on the Site are expected to be retained. This habitat is common within the wider landscape and is considered important at the site level only.

4.4.4 New landscaping should incorporate native/ wildflower grasslands as an alternative to low diversity amenity grassland mixes in areas of open space and along road verges. The seed mix selected should be appropriate to the soil conditions at the Site (soil testing should take place to ensure the seed mix selected will be successful). During the first year, these grassland areas should be mown every two months with cuttings removed. In subsequent years no more than two cuts (including arisings removal) should take place.

4.4.5 Mowing of open areas could be rotational or areas immediately adjacent roads or paths could be mown leaving the remaining areas to grow tall and providing valuable habitat for invertebrates, amphibians and small mammals.

4.4.6 Biodiversity Protection Zones should be implemented during construction to protect grassland habitats that are to be retained on Site. These areas will be specifically protected during construction by buffer zones. The buffer zones will be fenced with secure Heras fencing, to avoid encroachment of machinery, materials and staff. Materials will be stored in designated areas on

Site and no stock piles or machinery will be stored within the Biodiversity Protection Zones.

Hedgerows

4.4.7 Based on current proposals it is anticipated that the hedge will be retained and this feature should be protected by the implementation of Root Protection Zones RPZs in accordance with British Standard 5837 (2012).

4.4.8 It is recommended that hedgerows are managed sensitively going forward as part of the development to maintain their ability to support a range of wildlife. This should include actions such as cutting at between January and February or rotationally and allowing the hedgerows to produce flowers/berries to benefit invertebrates and bird species in winter, and maximise benefits for wildlife all year.

4.4.9 Where feasible, additional native hedgerow planting along Site boundaries (such as in the west of the Site) should be included within the Site design. New hedgerows should contain a range of species of local provenance and would be considered as an ecological enhancement for the Site.

Dense Scrub

4.4.10 The dense scrub on site covered a relatively small area on the northern boundary of the Site and comprised commonly occurring species. This area will not be impacted and is to be retained. For this reason no mitigation is considered necessary.

4.5 Protected and Key Species

Amphibians

GCN

4.5.1 GCN are protected under Wildlife and Countryside Act 1981 (as amended) ("WCA 1981") and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 and are a European Protected Species ("EPS") and LBAP species.

4.5.2 Records for GCN were returned from LERC during the data consultation, with two waterbodies identified within 250 m of the Site (WB1 and WB2) and three waterbodies within 500 m (WB3-WB5).

4.5.3 Suitability for GCN at WB1 was originally scoped out based on the presence of coarse fish stocking and the M181 motorway running between the waterbody and the Site, which presents a significant barrier to amphibian movement. While it is recognised that field drains cross beneath the motorway (and may offer opportunity to move more easily between WB1 and the Site) no drains were recorded immediately adjacent WB1 or the Site boundary and any culvert would be at least 45 m long therefore making any direct route convoluted and greater than 250 m in distance.

4.5.4 WB2 is located approximately 90 m east of the Site with good connectivity to the Site through

vegetated habitats.

4.5.5 Although beyond 250 m (the generally accepted usual dispersal distance for GCN) WB3- WB5 do have connectivity to the Site via field boundaries and other vegetated corridors. Given that these waterbodies could not be accessed during the survey their suitability for GCN has not been determined.

4.5.6 Habitats on Site offer limited suitability for amphibians, with higher value habitat located around the Site boundary.

4.5.7 Given there is opportunity for amphibians to utilise the Site (albeit likely to predominantly be at the Site boundaries) and the presence of potential suitable water bodies has been noted within 250 m the status of GCN at the Site level cannot be determined based on the data currently available.

4.5.8 It is recommended that that a GCN District Level Licence (DLL) enquiry for this Site is submitted to Natural England on the basis that GCN survey data is not currently available. It is recommended that the Enquiry is submitted at the earliest opportunity. The enquiry will confirm whether the Site is suitable for inclusion in the DLL scheme and will identify the cost associated with joining the scheme. Acceptance into the DLL scheme may also be used to support/inform the planning application for this Site without undertaking any additional GCN survey effort.

4.5.9 Being part of the DLL scheme will deliver major planning, licencing and development timetabling benefits and will negate any further costs or programme delays that may occur where/should further GCN survey be required.

Common Amphibians

4.5.10 Common amphibians are protected under the Wildlife and Countryside Act 1981 (as amended) against sale, barter or exchange of captive animals. Common toad is listed as a priority species under Section 41 of the NERC Act 2006. Smooth newt, palmate newt *Lissotriton helveticus* and natterjack toad *Epidalea calamita* are listed as LBAP species.

4.5.11 Records of smooth newt, common and common toad were also noted within 2 km of the Site with the closest record to Site occurring approximately 470 m to the north, and it is likely that common amphibians will utilise higher value habitats on Site during their terrestrial phase and possibly breed in ditches which hold water.

4.5.12 As common amphibians are likely present on Site it is recommended that the works proceed under the Best Practice Measures (BPM) detailed below:

- All Site personnel to keep a high level of vigilance for common amphibians during construction works. A Toolbox Talk Site Guide may be made available to all site personnel to refer to during the works period to ensure staff can identify common amphibians as well as GCN (in the highly unlikely event that they are encountered on Site at the time of works).

- Any areas of longer vegetation (e.g. scrub, tall grass) present (i.e. above 100 mm) at the time of works will ideally be strimmed/cut in a 2-stage process. The first strimming phase will cut the vegetation to approximately 100- 150 mm above ground level to encourage any animals present to move into suitable off-site habitat away from the works zone. The second strim will take the vegetation down to ground level (or 50 mm as appropriate). The second strim will ideally take place following a one day interim period between the first strim (or an absolute minimum of 2 hours). Arisings should ideally be removed off Site or alternately thinly scattered across the Site.
- Designated areas should be used for on Site storage, e.g. for materials/spoil from excavations during construction. Storage areas should be on hard-standing or bare ground, well away from vegetation. Spoil and other debris from construction should be removed off Site (ideally on the same day) wherever possible to avoid the risk of colonisation by amphibians and other wildlife;
- Where common amphibians are encountered (i.e. common frog, common toad, smooth newt, palmate newt) these may be moved to safety by Site personnel into long vegetation outside the works area.

Badgers

4.5.13 Badgers and their setts are protected under the Protection of Badgers Act 1992. It is an offence under the act to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a currently active badger sett, or to disturb animals within the sett.

4.5.14 No evidence of badgers or badger setts were identified during the survey however the Site contains suitable foraging and sett building habitat in the form of arable land, grassland, ditches and scrub. Habitat loss associated with the development is considered to be of importance to badgers at the site level with an abundance of similar habitat in the local and wider area.

4.5.15 Given there is opportunity for sett creation on Site it is recommended that a pre-commencement badger survey, to identify any newly created setts, is undertaken within 1 month prior to clearance and construction works commencing. This will avoid potential impacts to badger setts should they later be found to be present on Site.

4.5.16 As badgers are a highly mobile species, whilst they are not currently considered to be present on Site it could be considered to form part of a wider foraging or commuting route for this species, and therefore there is scope for badgers to move across the Site from time to time.

4.5.17 Best practice measures therefore should followed during construction whereby all deep excavations (>1 m) should be covered overnight and shallow excavations (<1 m) should have a scaffold board or equivalent placed in them overnight to allow any badgers to exit, should they fall in. Any chemicals or other materials should be stored securely in accordance with best practice guidelines and no open pipework should be left overnight to reduce any risk of badgers taking refuge in them. No litter should be left on the Site during works as this will potentially attract badgers

on to the Site. Should badgers be recorded during works, works should cease and a suitably experience ecologist be contacted for advice.

Bats

4.5.18 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

4.5.19 All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) which makes it an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

4.5.20 Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule and soprano pipistrelle bats are included as priority species under Section 41 of the NERC Act 2006. All bats also feature on the LBAP as key priority.

Roosting Bats

4.5.21 No buildings or structures are present within the Site. Trees were assessed as displaying negligible suitability for roosting bats. As a result, no impacts to roosting bats are anticipated from the development and no mitigation or compensation measures are considered necessary.

4.5.22 This assessment is considered to remain valid for a period of two years and a further inspection of trees to be removed on Site, to reassess their potential to support roosting bats, is recommended if works do not take place within two years of this report (i.e. by October 2023).

4.5.23 As an enhancement for roosting bats it is recommended that long term bat roosting opportunities are incorporated in the new Site design. This should include boxes across a minimum of 30% of newly built properties at the Site. Integral bat boxes such as the Schwegler 1FR Bat Tube or Habibat 3S bat boxes (or similar products) are recommended to be located beneath the eaves (at least 4 m high).

4.5.24 All boxes should be situated so that they are avoiding bright light spill, i.e. security lights, and be located on the south, east and west elevations, preferably facing towards suitable foraging habitat such as newly created greenspace or the retained boundary habitats.

Foraging and Commuting Bats

4.5.25 The habitats on the Site that are considered to be of low suitability for foraging/commuting bats and those of higher value are predominantly on the Site boundaries, including woodland and hedgerows, which are anticipated to be retained. The hedgerow is considered to have low suitability for roosting bats.

4.5.26 To fully assess the level of use by foraging and commuting bats at the Site and allow for recommendations appropriate to the development it is recommended that further nocturnal bat activity transect surveys are carried out in accordance with best practice guidance (Collins, 2016).

4.5.27 For sites with low suitability there should be one transect survey per season (spring –April/May, summer – June/July/August, autumn – September/October) in appropriate weather conditions. Further surveys may be required if these survey visits reveal higher levels of bat activity than predicted by habitat alone.

4.5.28 Transect surveys should be accompanied by the placement one static bat detector per transect which should be left in-situ to record bat activity over five consecutive nights in each of the seasons in suitable weather conditions. The findings of these surveys will inform the need for further mitigation or compensation measures.

Birds

4.5.29 All wild birds, their nests and eggs are protected under the Wildlife & Countryside Act 1981 (as amended) while a nest is in use or occupied. The nesting bird season is typically considered to fall between March and August (inclusive). Species listed under Schedule 1 of the Act receive additional protection against disturbance whilst occupying a nest site.

4.5.30 The arable farmland on Site is considered suitable for ground nesting bird species and the dense scrub, woodland and hedgerow habitats are also considered suitable for use by a range of commonly occurring species. Overall, loss of habitat associated with the development is considered to be of importance to birds at the site level, due to the low numbers of birds recorded during the survey and presence of abundant similar habitat surrounding the Site.

4.5.31 Without mitigation there is potential for active bird nests to be destroyed during Site clearance works (including removal of scrub and soil stripping across the arable farmland) where this is undertaken during March– August (inclusive). It is recommended that clearance of the arable farmland and tree and scrub removal is undertaken outside of the bird nesting season, i.e. to be undertaken between September and February (inclusive).

4.5.32 Where it is not possible to schedule clearance works for these months, a nesting bird check, to be undertaken by a suitably qualified ecologist will be required no more than 48 hours prior to clearance, to check for the presence of active bird nests. An active nest would require an exclusion zone to be established and adhered to until chicks had fledged and/or the nest is no longer in use (to be monitored and confirmed by an ecologist).

4.5.33 It is recommended that a range of bird nesting provision should be included across the development as a positive enhancement for nature conservation. Suitable provision should include boxes incorporated within at least 30% of the newly built properties. Integrated boxes are preferred options as they are robust and are less susceptible to damage however external boxes of a

woodcrete material are also considered suitable.

4.5.34 Recommendations include general bird boxes with 26 mm and 32 mm entrance holes suitable for a range of garden bird species, sparrow terraces, and boxes suitable for swifts and house martins. The bird boxes should be placed at a minimum height of 3 m in a number of locations facing different aspects to maximise the chances of occupation, although full south aspects which receive full sun all day during the summer months present a risk of overheating and should therefore be avoided.

4.5.35 The use of fruit bearing trees and shrubs such as hawthorn, cherry *Prunus* spp., and spindle *Euonymus europaeus* within new habitat creation and soft landscaping works.

Reptiles

4.5.36 Common reptile species including grass snake, common lizard and slow worm are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against intentional killing or injuring.

4.5.37 The majority of the Site supports arable farmland which is not considered suitable for reptiles. With consideration to the small area of suitable habitat on Site and its availability in the wider landscape, in combination with the lack of recent records close to the Site, it is considered that the Site is of value to reptiles at the site level only.

4.5.38 It is recommended that best practice measures should be employed during the works. Any vegetation clearance required should be cleared to approximately 20 cm in height to disturb and move on any reptiles using the habitat, before cutting again to ground level. The second cut may occur on the same day as the first cut but ideally a minimum of 1h should be left between cuts to give animals time to move away safely. The vegetation should be cut in a direction away from the road so that reptiles move towards other suitable habitat. If in the unlikely event a reptile is found which has not moved away from the area , works should stop and the reptile should be allowed to move away of its own volition (or the ecologist contact for advice if the reptile remains on Site).

Water Vole

4.5.39 Water vole are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species and are a LBAP species. It is illegal to intentionally capture, kill or injure water voles; damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care); disturb them in a place of shelter or protection (on purpose or by not taking enough care) or possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

4.5.40 D2 and D3 show suitability for water vole and signs of water vole were identified within these ditches. While the ditches are due to be retained, the surrounding change in land use and potential

for pollution may indirectly impact water vole, further survey will be needed to identify the level of water vole activity on Site.

4.5.41 Further survey should be conducted during the breeding season when latrines are regularly visited and marked. As the suitability of habitat for water voles can change markedly over the course of the breeding season, affecting the distribution and apparent population size, we recommend two survey visits should be undertaken; one in the first half of the season (mid-April to the end of June) and one in the second half of the season (July to September inclusive). These visits should be undertaken at least two months apart and prior to development works commencing onsite. Survey effort may be reduces if the impacts on water vole can be mitigated by using a 5 m buffer from the top of the ditch bank to the development area.

4.5.42 All of the ditches previously identified (D1 – D6) should be surveyed as the ditches that were dry during the initial survey effort may potentially be holding water during the recommended further water vole survey effort at the Site.

Otter

4.5.43 No evidence of otter was identified during the survey. The River Trent is within the dispersal distance of otter and has connectivity to the Site through the ditch network, however, the habitats on Site are of limited value for this species as possible refuge locations along the ditches and field margins are managed and disturbed. Therefore the Site is considered important to otter at site level only.

4.5.44 Otter may travel up the ditches on Site, the ditch buffers described in the water vole section above will reduce any impact of development on otter.

4.5.45 Pollution control measures outlined earlier in this report should be used to reduce any impact of the development on watercourses that otter may be using in the surrounding landscape.

4.5.46 In the unlikely event that an otter is encountered during works it should be allowed to move away of its own volition.

Other Key and Notable Species

<u>Brown Hare</u>

4.5.47 Brown hare are included as a species of principal importance on Section 41 of the NERC Act 2006 and whilst not afforded a high level of protection, they are a species in decline and taking a best practice approach, should be taken into consideration during works.

4.5.48 No hare were observed during the survey but arable farmland and bordering habitats are considered suitable for supporting this species and a precautionary approach is recommended to

avoid killing or injuring brown hare during Site clearance.

4.5.49 Clearance should be undertaken outwith the main breeding season for hares, which falls at a similar time to the breeding bird season (March– August). If clearance at this time cannot be accommodated, then a walkover should be undertaken by an ecologist to flush any hares. This species sometimes 'sit tight' in response to disturbance rather than fleeing therefore, as it cannot be assumed that hares would leave of their own volition and move out of the way of machinery, a thorough walkover is recommended. If young leverets are found, clearance should be delayed until they are old enough to leave the Site. Leverets are typically able to leave their place of birth soon after being born and therefore, were this situation to arise, clearance would likely only be delayed by a period of approximately one week.

Hedgehog

4.5.50 Hedgehog are included as a species of principal importance under Section 41 of the NERC Act 2006, due to recent declines in abundance. Therefore, a best practice approach, avoiding harm to hedgehogs should be taken into consideration during works.

4.5.51 Hedgehogs are highly mobile and inquisitive animals that have potential to move onto Site or be resident within the Site, as evidenced by the hedgehog droppings found during the survey. It is considered that habitat loss associated with the development is of importance to hedgehogs at the site level due to the additional presence of suitable habitat in the surrounding area.

4.5.52 As a precautionary measure, it is recommended that any excavations left overnight should be covered or have a suitable escape ramp, e.g. a long scaffold board, inserted to allow escape should a hedgehog fall in.

4.5.53 Grassland and hedgerows on Site which provide suitable shelter habitat for hedgehogs should be cleared using hand tools, preferably between April and October in milder weather when hedgehogs are not hibernating. Should a hedgehog be discovered when clearing vegetated habitats, it should be moved carefully with gloved hands to a sheltered area away from the footprint of works, such as along the western Site boundary.

4.5.54 The creation and maturing of new garden habitats and additional soft landscaping which includes grassland and introduced shrub will provide suitable foraging and shelter habitat for hedgehogs following completion of the development.

4.5.55 To allow for dispersal between gardens, small gaps beneath or between garden fences should be incorporated across the development if close boarding fencing is to be used. Natural gaps should be left under or around fencing at fence junctions to gardens, or where this is not feasible, gaps measuring a minimum of 13 cm x 13 cm could be created to the base of panels/gravel boards to allow the movement of hedgehogs between gardens across the development. Further information and examples of fencing gaps in practice can be found at:

www.hedgehogstreet.org/pages/linkyour-garden.html. Alternatively, railing and hedgerows provide free passage for hedgehogs.

5. References

Chartered Institute of Ecology and Environmental Management (CIEEM) (2018) *'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater Coastal and Marine'.* CIEEM, Winchester.

Cresswell, P, Harris, S & Jefferies, DJ (1990) *'The history, distribution, status and habitat requirements of the badger in Britain'.* Nature Conservancy Council.

Collins, J. (2016) *'Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)'.* The Bat Conservation Trust, London.

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) '*The Water Vole Mitigation Handbook (The Mammal Society Guidance Series)*'. Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.

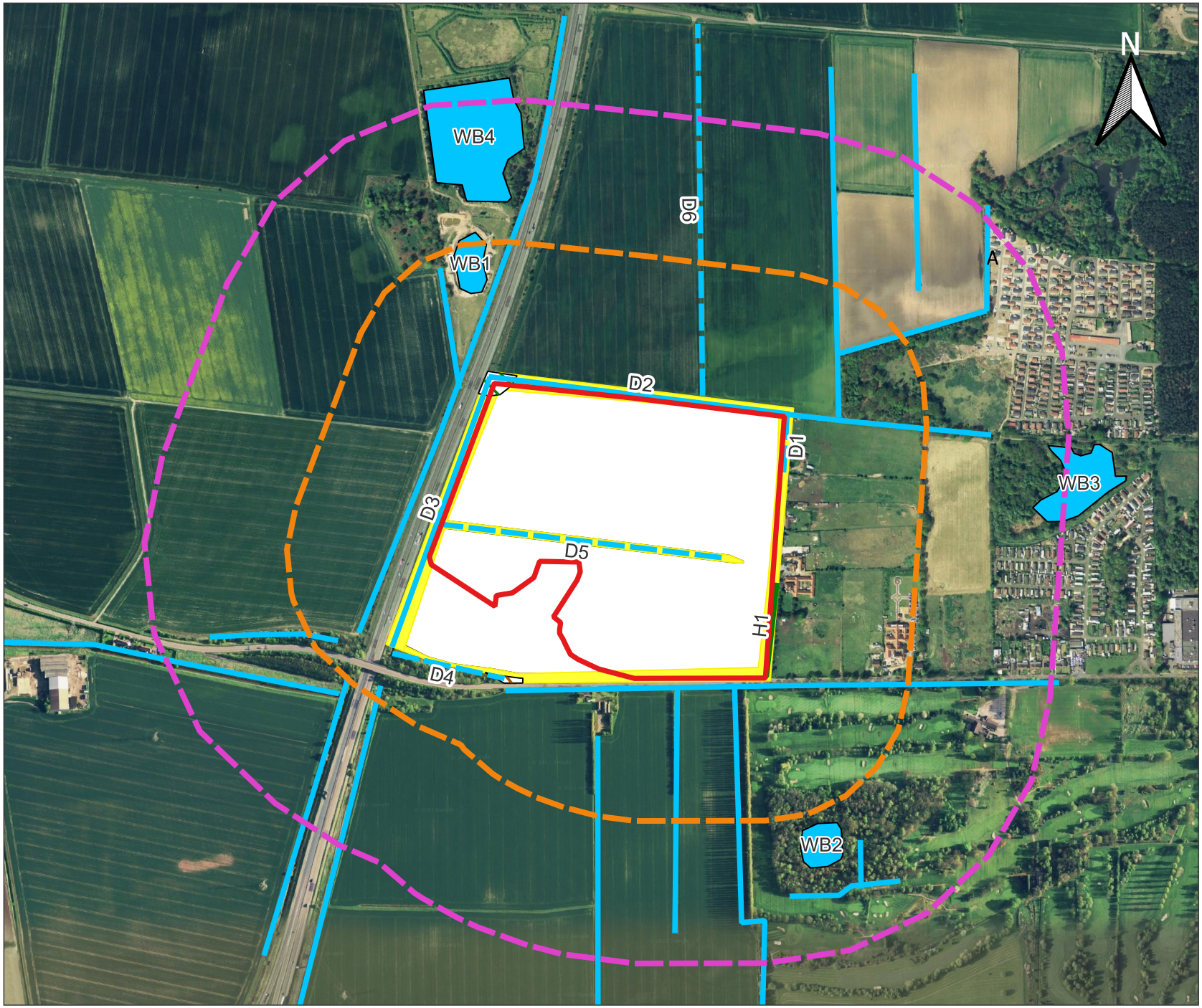
Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) *'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man'*. British Birds 108, 708– 746.

Harris, S., Cresswell, P. and Jefferies, D. (1989) '*Surveying Badgers'*. Mammal Society (Occasional Publication No 9).

Joint Nature Conservation Committee. (JNCC) (2016). '*Handbook for Phase 1 habitat survey – A technique for environmental audit'.* JNCC, Peterborough (ISBN 0 86139 636 7).

Natural England (2010) *'List of habitats and species of principal importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006'.*

Figure 1: Phase 1 Habitat Map



ecus
part of CuraTerrae

Legend

- Site boundary
- Dense scrub
- Tall ruderal
- Hedgerow
- Semi-improved grassland
- Arable
- 250 m buffer
- 500 m buffer
- Pond
- Drain
- Dry Ditch

0 75 150 m

Keepmoat Homes

Lincs Lakes

Figure 1
Phase 1 Habitat Map

Brook Holt 3 Blackburn Road Sheffield s61 2DW
T: 0114 2669292 www.ecusltd.co.uk

Date: August 2022 | Scale 1:9,500 @A3 | Drg.Ref: FT/17942/F1 V2.0

Figure 2: Water Vole Survey Results

ecus
part of CuraTerrae

Legend

- Site boundary
- Drain
- Dry Ditch

Field Signs

- Potential water vole burrow
- Potential feeding sign

0 75 150 m

Keepmoat Homes

Lincs Lakes

Figure 2
Water Vole Survey Results

Brook Holt 3 Blackburn Road Sheffield s61 2DW
T: 0114 2669292 www.ecusltd.co.uk

Date: August 2022

Scale 1:3,500 @A3

Drg.Ref: EA/17942/F2

Appendix 1: Site Photographs

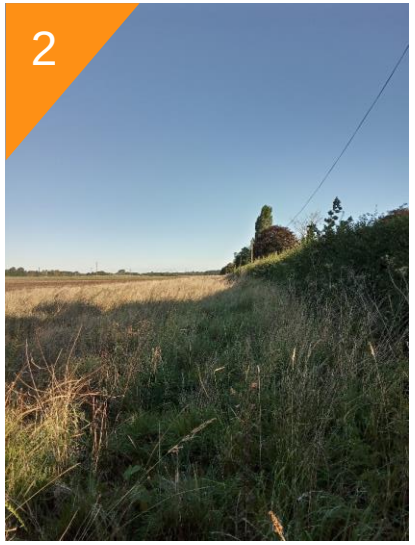


Plate 1 - Arable field and semi-improved grassland on Eastern boarder

Plate 2 - Hedgerow and improved grassland looking north

Plate 3 - D2, looking east

Plate 4 - View of the broadleaved woodland, looking east

Plate 5 - View of D3, looking south.

Plate 6 - View of D5, looking east.

November 2021

Keepmoat Homes

Lincolnshire Lakes Site, Scunthorpe, PEA

Appendix 1: Site Photographs

Ecus Ltd.
Brook Holt, 3 Blackburn Road, Sheffield, S61 2DW

Plate 7 – TN1 Mammal hole with wasps nest

Plate 8 – TN2 Mammal path into D2

Keepmoat Homes

Lincolnshire Lakes Site, Scunthorpe, PEA

November 2021

Appendix 1: Site Photographs

Ecus Ltd.
Brook Holt, 3 Blackburn Road, Sheffield, S61 2DW

Appendix 2: Birds Records within 2 km of the Site

Common name	Latin name	BoCC status
Fieldfare	*Turdus pilaris*	Schedule 1, Red
Redwing	*Turdus iliacus*	Schedule 1, Red
Merlin	*Falco columbarius*	Schedule 1, Red
Ruff	*Philomachus pugnax*	Schedule 1, Red
Black redstart	*Phoenicurus ochruros*	Schedule 1, Red
Whimbrel	*Numenius phaeopus*	Schedule 1, Red
Common Scoter	*Melanitta nigra*	Schedule 1, Red
White-tailed Eagle	*Haliaeetus albicilla*	Schedule 1, Red
Long-tailed Duck	*Clangula hyemalis*	Schedule 1, Red
Greylag Goose	*Anser anser*	Schedule 1, Amber
Whooper Swan	*Cygnus Cygnus*	Schedule 1, Amber
Green Sandpiper	*Tringa ochropus*	Schedule 1, Amber
Wood Sandpiper	*Tringa glareola*	Schedule 1, Amber
Marsh Harrier	*Circus aeruginosus*	Schedule 1, Amber
Pintail	*Anas acuta*	Schedule 1, Amber
Bewick's Swan	*Cygnus columbianus*	Schedule 1, Amber
Goldeneye	*Bucephala clangula*	Schedule 1, Amber
Great Northern Diver	*Gavia immer*	Schedule 1, Amber
Osprey	*Pandion haliaetus*	Schedule 1, Amber
Quail	*Coturnix coturnix*	Schedule 1, Amber
Brambling	*Fringilla montifringilla*	Schedule 1, Green
Woodlark	*Lullula arborea*	Schedule 1, Green
Little Ringed Plover	*Charadrius dubius*	Schedule 1, Green
Barn Owl	*Tyto alba*	Schedule 1, Green
Hobby	*Falco subbuteo*	Schedule 1, Green
Red Kite	*Milvus milvus*	Schedule 1, Green
Goshawk	*Accipter gentilis*	Schedule 1, Green
Serin	*Serinus serinus*	Schedule 1, Green
Tree Sparrow	*Passer montanus*	Red
Linnet	*Carduelis cannabina*	Red
Song Thrush	*Turdus philomelos*	Red
Turtle Dove	*Streptopelia turtur*	Red
Yellow Wagtail	*Motacilla flava*	Red
Corn Bunting	*Emberiza calandra*	Red
Grey Partridge	*Perdix perdix*	Red
Grasshopper Warbler	*Locustella naevia*	Red
Skylark	*Alauda arvensis*	Red
Curlew	*Numenius arquata*	Red
Hawfinch	*Coccothraustes coccothraustes*	Red
Lesser Redpoll	*Carduelis cabaret*	Red
Spotted Flycatcher	*Muscicapa striata*	Red
Ring Ouzel	*Turdus torquatus*	Red

Pochard	*Aythya ferina*	Red
Snipe	*Gallinago gallinago*	Amber
Mute Swan	*Cygnus olor*	Amber
Swift	*Apus apus*	Amber
Redshank	*Tringa totanus*	Amber
Wigeon	*Anas penelope*	Amber
Gadwall	*Anas strepera*	Amber
Pink-footed Goose	*Anser brachyrhynchus*	Amber
Tundra Bean Goose	*Anser serrirostris*	Amber
Pheasant	*Phasianus colchicus*	Green
Rock Dove	*Columba livia*	Green
feral pigeon	*Columba livia feral*	Green
Crossbill	*Loxia curvirostra*	Green
Snow Goose	*Anser caerulescens*	Green
Collared dove	*Streptopelia decaocto*	Green
Red-throated Diver	*Gavia stellata*	Green
Bearded Reedling	*Panurus biarmicus*	Green
Peregrine Falcon	*Falco peregrinus*	Green
Canada Goose	*Branta canadensis*	Schedule 9
Ruddy Duck	*Oxyura jamaicensis*	Schedule 9
Ring-necked Parakeet	*Psittacula krameri*	Schedule 9
Red legged Partridge	*Alectoris rufa*	No Status
Egyptian Goose	*Alopochen aegyptiaca*	No Status
Rosy Starling	*Pastor roseus*	No Status
Black Stork	*Ciconia nigra*	No Status
Little Owl	*Athene noctua*	No Status
Lanner Falcon	*Falco biarmicus*	No Status
Eurasian Eagle Owl	*Bubo bubo*	No Status

Annex 1: Great Crested Newt Habitat Suitability Index

		N.B. Dry at time of survey - expected to have been dry for a considerable amount of time (although overflow from D2 may occur if heavy rainfall event).		N.B. Dry at time of survey - but expected to be wet at some point in the year due to reeds and bulrush presence.	N.B Dry at time of survey - expected to have been dry for a considerable amount of time.		N.B. Dry at time of survey - but expected to be wet at some point in the year due to small number of reeds and bulrush presence.	N.B. Not Accessed conducted with aerial photography	N.B. Not Accessed, conducted with aerial photography
	Pond Name	D1	D2	D3	D4	D5	D6	WB1	WB2
	Grid Ref	SE 86506 08802	SE 86276 08861	SE 85896 08661	SE 85845 08396	SE 86211 08596	SE 86359 09002	SE 85941 09096	SE 86565 08450
SI No	SI Description	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value
1	Geographic location	1	1	1	1	1	1	1	1
2	Pond area	0.1	0.98	1	0.2	1	1	Omitted as >2000 m²	0.6
3	Pond permanence	0.1	1	1	0.1	0.1	0.1	0.9	0.1
4	Water quality	0.01	0.67	0.67	0.01	0.01	0.01	0.33	0.33
5	Shade	0.2	1	1	0.2	1	1	1	0.3
6	Water fowl effect	1	1	1	1	1	1	0.67	1
7	Fish presence	1	1	1	1	1	1	0.01	1
8	Pond Density	0.7	0.7	0.7	0.65	0.7	0.75	0.9	1
9	Terrestrial habitat	0.01	0.01	0.01	0.01	0.01	0.01	0.33	0.33
10	Macropyhyte cover	0.3	1	0.3	0.3	0.8	0.7	0.5	0.5
HSI Score		**0.18**	**0.58**	**0.52**	**0.19**	**0.30**	**0.30**	**0.40**	0.50
Pond suitability		Poor	Below Average	Below Average	Poor	Poor	Poor	Poor	Poor

ecus

part of CuraTerrae

www.ecusltd.co.uk

Appendix B Landscape Plan

Lincolnshire Lakes, Scunthorpe

Landscape Plan

PDP Associates

12 April 2024

Specification for Soft and Hard Landscape Works.

All landscape works shall comply with BS 4428:1989.

Unless where otherwise specified:-

A. Setting Out

1. Planting shall be set out exactly as shown on the drawing and measured from existing fixed points. Curved beds shall be set out using radii scribed on the ground using two pointed stakes and a line between, or with site marker paint. The junction between convex and concave curves shall be cut to form a smooth and even flowing line. Check that all setting out conforms to the plan before cultivation and planting works are carried out. Failure to do so may result in rejection of the work by the landscape architect and may require amendment at the contractor's expense.
2. All planting beds shall be a minimum of 1 metre wide, except where there is insufficient space, due to the constraints of walls and path edgings and their foundations. With narrow beds between walls/fences and path edgings, ensure that the bed has space free from concrete footings before planting. If the bed is sealed with concrete, then the landscape contractor shall contact the site manager or landscape architect to determine if footings are excessive and can be reduced or else, the bed can be paved. The width of all beds will be checked by the inspecting landscape architect and where the width is not as drawn, the contractor shall re-cultivate them to the specified width at his own expense.

B. Ground Preparation.

1. Pre-planting herbicide application shall be applied by suitable spraying apparatus using an approved translocated systemic herbicide to manufacturer's instructions and to 1997 Control of Pesticides Regulations and 2003 COSHH regulations on all beds, except those which are both weed free and are to receive geotextile sheet mulch. Spray immediately if any weeds are present. If none are showing, but there may be a delay before planting, or the area is to be seeded, spray after one month following cultivation, to allow dormant seed to germinate. All spraying shall be carried out by skilled and qualified operatives, using protective clothing, in suitable weather (no wind) and any damage caused by spray drift, from incorrect usage or spillage, shall be rectified at the contractor's own cost. Repeat as necessary to ensure complete kill and rake off all dead material from site.
2. Carry out the following works to the existing topsoil on site to ensure it conforms to BS 3882:2015, being free from rocks larger than 50m diameter, concrete, all roots, wire, brick, and have less than 20% clay. Allow for pre-application of herbicide as above. Fertilise with 100g per metre square of Fisons "Neutrocote" slow release fertilizer, in accordance with the manufacturer's instructions. For beds less than 5 meters in width, fork over thoroughly or machine rotovate soil to a depth of 300mm, ensuring that the subgrade and topsoil are completely broken up and free draining, relieving any compaction. For beds greater than 5 metres in width, break up the subgrade and topsoil using a tractor mounted subsoiler or ripper at 500mm centres to a depth of 500mm, except where there are services, or within 10 meters of tree stems or 3 meters of existing hedges. Do not rip areas where roots greater than 10mm diameter are encountered. Do not break up soil within the root protection zone of any retained tree. Refer to All About Trees Arboricultural Implications Assessment for further information.
3. Determine before submitting a tender, the extent of support from the site manager with ground preparation: ensure soil of all planting beds is graded to a level 65mm below adjacent grass or paved surfaces, (90mm below where agro-textile set mulch is not specified), within 400-600mm of edges to ensure bark or wood chip mulches are retained. Where grass is proposed, then the soil level shall be flush (maximum 10mm below - but never proud) of adjacent paved surfaces, to receive rain water run-off. The landscape contractor is responsible for ensuring that the final product conforms to the specification even where the developer and/or main contractor have failed to supply and spread topsoil to the recessed level. The landscape contractor shall allow for adjustment of levels, as specified above, including for re-grading subsoil and topsoil. Where beds are sloping, ensure that topsoil is graded to the specified levels below pavement & grass surfaces within 400mm of the edges of the bed. This is to allow for sheet mulch and bark or wood chip mulch so that mulch does not spill out on to pavements and also to allow surface water to drain from paths on to planted areas.
4. For sloping areas to be turfed adjacent to paved areas, topsoil levels shall be graded flush with the finished pavement level (or up to 10mm below), to allow surface water to drain from pavements to soft areas. Soil of grass areas should therefore never be proud of paved areas. Soil levels more than 10 mm below pavement edges will cause mower damage on cutting.
5. Imported topsoil (where specified and sanctioned by the employer) for making up ground, shall conform to BS 3882: 2007, and be free from rocks (over 50mm diameter), concrete, roots, wire and brick, and have less than greater than 20% clay. Such soil shall be cultivated as set out above. Representative samples shall first be approved by the landscape architect before being supplied to site. No imported soil shall be supplied to site without a written instruction.

C. Planting

1. All planting must be carried out in accordance to the specification and schedule of quantities accompanying these drawings. Refer to the specification for the preparation of existing topsoil and required depths for planting, turfing, and standard trees, and also for maintenance requirements.
2. No substitutions will be accepted without the prior agreement of the inspecting landscape architect. The contractor shall replace at once at his own cost any stock size, species or variety of plant which has not been specified on the planting plan and schedule, unless prior agreement to a substitution by the landscape architect has been received. All plants shall be true to size specified in the schedule of plants and associated notes, (3L pots are 19cm diameter and 15cm deep). All shrubs, (other than ground cover), shall be 400-600mm height and spread, or otherwise specified for the pot size by the HTA National Plant Specification and be bushy, healthy, disease free stock, not pot bound, leggy or spindly. There should be a minimum of 5 breaks per shrub. This specification is the minimum standard required and any stock falling below this standard, in the sole opinion of the inspecting landscape architect, shall be lifted and replaced at the contractor's expense.
3. Refer to accompanying Landscape Management Plan for watering details.
4. Proposed large feathered or standard trees to be true to the species, variety and size as specified on the planting plan, to include 1.6m chestnut stake 600mm above ground and 1000mm below ground) and 1No.tie with spacing device positioned 25mm maximum from the top of the post.
5. Turf to be of cultivated grade such as Rowlawn "Medalion", or other of similar quality and source, approved by the landscape architect. The contractor shall replace at once any turf rejected by the landscape architect at his own cost.
6. Self-clinging climbing shrubs or wall shrubs shall be trained to the wall/fence with heavy duty, plastic coated garden wire. Training wires shall be attached vertically to the wall/fence by means of 125mm long stainless steel eye screw fittings. Position 1No. at 250mm from ground, and 1No. 250mm from top of the wall/fence, and string the wire tightly between the fixings. Train the climber to the wire with plastic coated garden wire tags.
7. Twining varieties of climber shall be trained to walls/fences by mounting ready-made trellis panels 1.8 x 1.8m generally (but 1.8 x 0.6m for corners or where space is restricted). Include for adapting any panels for locations where walls or fences are lower than 1.8m. Fix trellis panels to the walls/fences using non rusting screws 125mm long (to be approved), incorporating 50mm cube wood spacing blocks to ensure that the panel is mounted sufficiently far from the wall/ fence to allow twining of stems. Ensure that all timber is pressure impregnated with a non phyto-toxic preservative and then painted with a dark brown non phyto-toxic preservative wood stain such as Sadolin "Classic" walnut or similar and approved. Ensure that the trellis is not in contact with the ground. Train the climbing shrub to the trellis with plastic coated garden wire tags.
8. Climbers specified outside proposed shrub beds shall have specially prepared climber pits. Climber pits shall be 400mm x 400mm and 600mm deep (minimum size), and be backfilled with topsoil (from site - unless otherwise agreed). Ensure the base of the pit is thoroughly broken up and free draining before back filling with topsoil. Ensure no damage to foundations and services, and make good all structures and surfaces disturbed. Fertilise with 50g of Fisons "Neutrocote" slow release fertiliser. Water with 15 litres of water per climber pit.

D. Mulch

1. When specified by the additional specification notes on this plan, supply and spread agrotextile "Weedstop Fabric" sheet mulch over planting beds, previously, cultivated, graded and fertilized topsoil before planting, and peg down with Weedstop pegs at a minimum of 500mm centres, (300mm at edges) and beds less than 1m wide. Pegging this densely is essential to prevent flaps of material becoming exposed. Refer to the specification for "Weedstop Fabric" sheet mulch on plan.
2. Following planting supply and spread evenly Melcourt Industries "Rustic Biomulch" to a depth of 50mm, (75mm if no sheet mulch specified), over all planted areas. Finished mulch levels shall be no higher than 15mm below pavement or grass levels to avoid any spillage onto pavements or lawns. N.B. no substitution of mulch type will be acceptable. It is essential to have a no-fines, large particled, brown wood chip to reduce weed growth, reduce wind blow and prevent rapid break down.

E. BS Codes

1. All workmanship and materials shall conform to the following codes:-
   - General landscape operations (excluding hard surfaces) - BS 4428:1989.
   - Trees in relation to construction- BS 5837:2012.
   - BS 3998:2010 (recommendations for tree works) unless otherwise specified.
   - Arboricultural Association - GN 8 Framework for tree work contracts - standard conditions of contract and specification for tree works 2008.
   - BS 8545:2014 Trees: from nursery to independence in the landscape. Recommendations
   - Nursery stock in accordance with latest horticultural trade association nursery stock specification entitled "National Plant Specification 2001 ".
   - Turf - BS 3969:1998- recommendations for turf for general purposes.
   - Seeding - EEC Regulations 1974. Use blue labelled certified varieties to EC purity and germination regulations. When requested, submit an official seed Testing Station Certificate of germination, purity and composition.
   - Topsoil - BS 3882:2007
   - Pesticides: Control of Pesticides Regulations 1997; The Health and Safety at Work Act 1974; the COSHH Regulation 2003, the product COSHH sheet Water Supply (Water Quality) Regulations amended 1991;Control of Pollution Act 1974; Hedgerow ACT 1997; Wildlife and Countryside Act 1981.

F. General Notes for the Developer.

1. Tree Protection
   - Please refer to All About Trees' tree protection information. No digging to take place within the root protection zones of protected trees.
2. Ground Work
   - Soil levels for shrub beds and grass areas should have any compacted subgrade thoroughly broken up by machine before instructing the ground worker to spread topsoil or the landscape contractor to commence work or the beds will become waterlogged in wet weather and the plants and turf.
   - Top soil spread from on site should be to the following minimum depths:- Shrub beds: 350mm. Grass areas 150mm. allow for excavation of 415mm of the subgrade for shrub beds to leave beds 65mm below finished pavement or grass areas in order to receive sheet and bark mulch, (90mm below where sheet mulch is not to be used). Tree pits will be as per BS 8545:2014. Top soil shall be spread for grass areas flush with any areas of paving and after settlement, the soil level should be no greater than 10mm below paved areas to allow for turf. For areas to be grass seeded, the soil level shall be flush with any finished paved surfaces after settlement (or to a maximum of 5mm below) to allow for rain water to drain onto soft surfaces. Settlement shall be no greater than the tolerances given or problems will be encountered with mowing (the blades in danger of touching concrete edgings) or where soil is proud of pavements, then drainage problems will be encountered.
   - Existing topsoil and imported soil shall conform to BS 3882:2007, and be free from compaction, rocks/bricks greater than 50mm diameter, concrete, wire, roots, debris, oil, cement and builders rubble. Soil shall have a clay content of less than 20%.
3. Hardworks
   - Hard works, unless otherwise agreed, shall be carried out by the developer or main contractor. All materials and workmanship shall be in accordance with the construction details and the layout plan.
   - All paths and edgings shall be set out properly to lines and radii, with all curves scribed on the ground using pointed pegs and string or site marker paint, achieving flowing natural arcs. Setting out shall be agreed with the landscape contractor and subsequently the landscape architect.
   - Hard surfaces shall be constructed after suitable base courses have been laid, taking full account of local site conditions, soft spots and substrate. The indicative depths of base courses are minimum depths assuming suitable substrate conditions.
   - All metalwork shall be finished hot dipped galvanized in accordance with BS EN ISO1460. The galvanizer shall be responsible for the thorough removal of all galvanizing smuts (fettling) to the complete satisfaction of the Landscape Architect. The decorating contractor shall prepare the galvanized surface by washing with detergent and water and scrubbing with a scouring pad until all dirt, grease, white rust & sulphates have been removed & then allowed to dry thoroughly. Supply and paint 'Icosit 6630' from Sika Ltd (tel. 01707 374444) applied with a turkhead brush strictly in accordance with the manufacturer's instructions, COSHH regulations and the product COSHH sheet. Apply 2No. coats of paint with a dry film thickness of 100 microns per coat. Apply paint only when galvanized surface is thoroughly dry at temperatures above five degrees Celsius and in any event above the current dew point temperature. Paint work will be subject to inspection by experts and if found wanting, shall be stripped off, re-prepared and applied entirely at the decorating contractors own cost.
   - All wood work to use ACQ water based wood preservative applied by vacuum pressure by Permawood or other similar and approved company. The timber shall then be stained with 3No. coats of Sadolin 'Classic,' colour 'Walnut' strictly in accordance with the manufacturer's instructions, COSHH Regulations 2003 and product COSHH sheet.

Extra heavy standard tree planting in grassed areas with protection offered to adjacent highways/swale construction, as per drawing c-1987-17. Tree pits as per BS 8545:2014. To include single 1.6m timber stake, 600mm above ground, spacer and biodegradable tie.

Extra heavy standard tree planting in grassed or planted areas. Tree pits as per BS 8545:2014. To include single 1.6m timber stake, 600mm above ground, spacer and biodegradable tie.

Heavy standard tree planting in grassed or planted areas. Tree pits as per BS 8545:2014. To include single 1.6m timber stake, 600mm above ground, spacer and biodegradable tie.

Ornamental shrub planting, including 50mm depth no-fines bark mulch. Individual species to be planted in groups of no more than 7 plants.

Ornamental hedge planting, including 50mm depth no-fine bark mulch.

Native hedge planting. Plants to be pit planted at 0.33m spacing in a double staggered row (6 plants per linear metre). Shelters to all plants. Species to be planted in random, single species groups of no more than 5 plants.

Areas to be turfed.

Areas of amenity grass seed mix or existing grassland, made good.

Areas of species-rich acid meadow grass seeding, such as Emorsgate Mix EM4, or similar and approved.

New native planting at 1m (shrub species) and 2m (tree species) centres, including tubular guards and stakes.

Proposed native marginal planting.

Proposed native reed/grass planting within swale base.

Proposed sensory planting to play area.

Sand/gravel margin to edge of lake.

Hoggin paths.

PDP Associates

Great Asby
Appleby in Westmorland
Cumbria
CA16 6HD

017683 54130

info@pdpcumbria.co.uk

Client
Keepmoat Homes

Project
Lincolnshire Lakes, Scunthorpe

Drawing title
Landscape Masterplan

Scale	Drawn by	Date
1:1000 @ A1	PDP	Aug 2022

Drawing No.
c-1987-01 Revision G

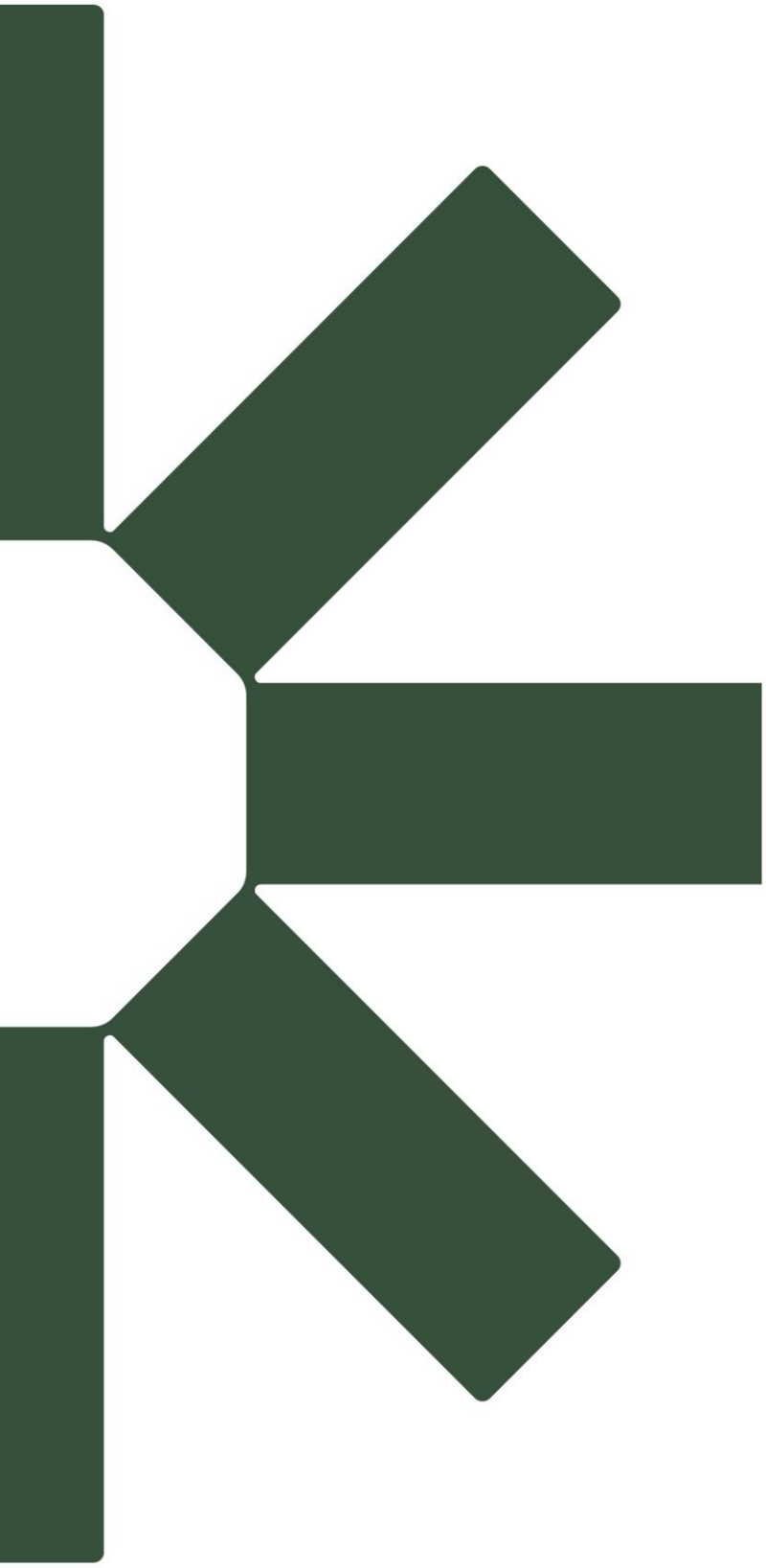
Appendix C Statutory Biodiversity Metric Final Calculator and Condition Assessments (Supplied Separately)

Lincolnshire Lakes, Scunthorpe

Statutory Biodiversity Metric Final Calculator and Condition Assessments (Supplied Separately)

SLR Consulting Ltd

19 April 2024



Making Sustainability Happen