



Proposed Storage & Distribution Unit

**Bridge Road North, Wrexham
Industrial Estate**

Phase 2 Ecology Surveys

Produced for:



September 2024

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APPENDIX A

Butterfly Transect

Extent of Spiny Restharrow

Butterfly Transects

Proposed Development Layout

APPENDIX B

Site Photographs

Prepared by: Russell Grey
Date: 12th September 2024
Version: 1.0

1 INTRODUCTION

1.1 The Scheme

- 1.1.1 Etive Ecology was commissioned by Caulmert Ltd to undertake a Phase 2 botanical survey and a series of butterfly transects for a plot of land off Bridge Road North, Wrexham, LL13 9XQ. The application site is centred on National Grid Reference SJ 38293 49917.
- 1.1.2 The site has previously been subject to a Preliminary Ecological Appraisal (Etive Ecology Ltd, June 2023) and bat detector surveys. An application for planning permission to develop the site for a storage and distribution unit with associated infrastructure was submitted in June 2023 (P/2023/0446). Following feedback from the Wrexham County Ecologist, further survey work was deemed necessary in order to further inform the application.
- 1.1.3 This report provides the results of more detailed botanical assessment of the site and a series of butterfly transects that were undertaken. Further information relating to GCN is presented separately in a GCN Mitigation Strategy document.

1.2 Scope of this Report

- 1.2.1 This report builds on the baseline information already provided in the PEA Report. The scope of further surveys has been specified by the Wrexham County Ecologist following a conversation on 31st October 2023. Wrexham's ecologist indicated that the site has previously been known to support grizzled skipper and dingy skipper butterflies (Section 7 listed), and that the grassland has been recorded to support spiny restharrow; an uncommon grassland plant listed in The Vascular Plant Red Data List for Great Britain (2021) as being of *Least Concern*.
- 1.2.2 A Phase 2 botanical survey of the grassland habitat within the red line application site was therefore undertaken to establish a species list and to confirm the presence/absence and distribution of spiny restharrow. A series of butterfly transects was also undertaken, comprising 6 visits during the peak summer season.
- 1.2.3 The findings of these surveys have been used to feed into the proposed layout for the development of the site. According to Chapter 6 of Planning Policy Wales, a step-wise approach to development must be taken to ensure that biodiversity is considered throughout the design process. The mitigation hierarchy is to avoid, minimise, mitigate and compensate impacts. A revised site layout is provided in **Appendix A** of this report.

2 METHODOLOGY

2.1 Botanical Survey

- 2.1.1 The Phase 2 botanical survey was undertaken by experienced field ecologist Russell Grey on 20th June 2024. The weather conditions were 17°C, dry, 3mph south-westerly breeze and 20% cloud cover.
- 2.1.2 The survey effort comprised a walkover of the site to identify all species of vascular plant present within the grassland sward. All species were assigned an abundance rating based on the DAFOR scale; dominant, abundant, frequent, occasional or rare.
- 2.1.3 All occurrences of spiny retharrow were recorded and a distribution map has been prepared and appended to this report.

2.2 Butterfly Transects

- 2.2.1 Butterfly transects were undertaken on the following dates in 2024:
- 29th May; 15°C, dry, Beaufort Scale (BS) 5 and 40% cloud cover
 - 6th June; 15°C, dry, BS 4 and 40% cloud cover
 - 12th June; 14°C, dry, BS 2 and 0% cloud cover
 - 20th June; 17°C, dry, BS 1 and 20% cloud cover
 - 25th June; 21°C, dry, BS 3 and 10% cloud cover
 - 4th July; 16°C, dry, BS 5 and 40% cloud cover
- 2.2.2 The survey effort comprised a walked transect of the site, as shown on Figure 1 (Appendix A). The surveyor followed the guidance provided by the UK Butterfly Monitoring Scheme for transects. Transects were timed to correspond to the core flight season for dingy and grizzled skipper, generally taken to be June. Survey visits were made between the hours of 1000 and 1700 and during suitable weather conditions; warm (13-17°C), bright (>60% sunshine), dry and not more than a gentle breeze (5 on Beaufort Scale).
- 2.2.3 During each survey visit, all of the target butterflies encountered were recorded. Wherever possible, other species of butterfly encountered were also recorded.

2.3 Assessment of Ecological Value

- 2.3.1 The value and sensitivity of the site for butterflies and semi-improved grassland was determined based on the guidance given in *Guidelines on Ecological Impact Assessment* (CIEEM, 2019). Individual ecological receptors (habitats and species that could be affected by the development) were assigned levels of importance for nature conservation in one of the following categories:
- International
 - UK
 - National
 - County
 - District;
 - Local, or
 - within the immediate zone of influence or site only.

- 2.4.2 For a given receptor, determination of value includes consideration of the size, secondary or supporting value/function, conservation status and quality of the species or feature.

2.4 Limitations

- 2.4.1 Access was permitted to all land within the proposed development footprint. Access beyond the site boundary was restricted but much of the adjacent land was at least visible to the surveyor.
- 2.4.2 The timing of the botanical survey was within the core/optimal period for vegetation surveys. The majority of species were well-established and in flower, meaning that identification of all species present was possible.
- 2.4.3 The butterfly surveys were timed to match the core/optimal flight period for the target species. This was agreed with the Wrexham County Ecologist to be the month of June. Surveys were scheduled to comprise weekly visit over a six-week spell, overing May, June and July. Weather conditions during this period were mixed and unsettled at times but visits were scheduled to coincide with the most suitable weather each week.

3 RESULTS

3.1 Botanical Survey

Grassland Composition

3.1.1 The grassland was found to comprise the following species:

Common Name	Abundance (DAFOR)
Spiny retharrow	LD
Sweet vernal grass	A
Crested dogtail	A
Glaucous sedge	A
Ribwort plantain	A
Birdsfoot trefoil	A
Common fleabane	A
Lesser knapweed	F
Yarrow	F
Common spotted orchid	F
Tormentil	F
Primrose	F
Ox eye Daisy	F
Cocksfoot	F
False oat grass	F
Bramble	F
Creeping buttercup	O
Perennial rye-grass	O
Meadow foxtail	O
Fox sedge	O
Common hawksbeard	O
Hogweed	O
Field horsetail	O
Red clover	O
Silverweed	O
Quaking grass	O
Dog rose	O
Hawthorn (self seeded)	O
Blackthorn (self seeded)	O
Dogwood (self seeded)	O
Goat willow (self seeded)	O
Greater willowherb	R
Ragwort	R
Zig-zag clover	R
Grass pea	R
Bush vetch	R
Common mallow	R
Oak (self seeded)	R
Ash (self seeded)	R

3.1.2 The grassland covers an area of approximately 1.5ha. There is a small section along the front of the site adjacent to Bridge Road North which is managed by regular mowing to maintain visibility at the site entrance and comprises a uniform sward dominated by grasses but with

frequent flowering species such as buttercup and ox-eye daisy. To the rear of the existing Coolpoint building is the main body of the site. This area is characterised by encroaching scrub and self-seeded trees along the eastern side, bramble and ruderals encroaching from the northern boundary and an open/sparse sward in the central and southwest portion of the site.

- 3.1.3 The grassland comprises a mix of fine grasses, forbs and ruderals, with patches of encroaching scrub and trees. The sward is full of sedges in the southern half, with spiny retharrow dominating the eastern portion. To the north there is a greater abundance of hogweed, bramble and dog rose, whilst sweet vernal and crested dogstail are abundant in the central and southwest areas of the site. There are self-seeded hawthorn, blackthorn, dogwood and goat willow along the eastern edge of the site and at the northeast corner, to a height of 1m and occasional stems up to 2m.
- 3.1.4 The site appears to be largely unmanaged. The site is known to be cut every few years, to control the woody vegetation and to keep it under control. The encroaching trees and scrub are coming from adjacent parcels of woodland and scrub, which form part of the Strategic Ecological Network identified within the Wrexham Local Development Plan (LDP).
- 3.1.5 The grassland is considered to be a species-rich neutral grassland, largely unimproved and unmanaged, making it a locally uncommon habitat type. Based on its floral composition, **the grassland is assessed to be of significance/value at the Local Scale.**

Spiny Restharrow

- 3.1.6 Spiny retharrow is a shrubby perennial native to the UK. It is usually found growing naturally as part of infertile, chalky or calcareous meadows. It's UK distribution is mainly central and southeast, with pockets known to be established on former industrial and brownfield sites elsewhere, including northeast Wales. The species is listed in The Vascular Plant Red Data List for Great Britain (2021) as being of Least Concern. Its flowers are also known to be attractive to many native pollinators.
- 3.1.7 Spiny retharrow was found to be locally dominant within the grassland sward along the eastern part of the site. In these areas the plant was well established, growing to a height of 60-80cm as well-formed shrubs. The plant accounted for >50% of the sward in these areas, as shown in Figure 2 (Appendix A).
- 3.1.8 It is acknowledged that spiny retharrow is locally uncommon. Therefore, **the extent of spiny retharrow within the grassland sward is assessed to be of significance/value at the Local Scale.**

3.2 Butterfly Transects

- 3.2.1 A summary of the survey findings is shown in the table below. All survey findings are also mapped per survey visit in Figure 3a-3f (**Appendix X**).

Species	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6
Dingy Skipper						
Grizzled Skipper						
Small Heath	X	X	X	X	X	X
Meadow Brown	X	X	X	X	X	X
Holly Blue	X			X		
Ringlet		X		X		

-
- 3.2.2 In summary, none of the target species; dingy skipper or grizzled skipper were identified on site during any of the site surveys in 2024. Small heath was the only Section 7 listed species of butterfly recorded on site during the 2024 survey effort.
- 3.2.3 It is understood that both grizzled skipper and dingy skipper have been recorded on the site, including from 2023. Although it is noted that permission for any surveyor to access the site has never been granted by the current landowner, so it is unclear how any such records have been made. However, given the presence of suitable habitat for grizzled and dingy skipper, **the site is considered to be of significance/value at the Local Scale for butterflies.**

4 DISCUSSION

4.1 Proposed Scheme

The Development

- 4.1.1 The potential development proposal outline scheme is illustrated on **Figure 4**. This revised layout has been designed following the survey results reported herein. The design takes into account the following ecological considerations:
- The Strategic Ecological Network (SEN) identified in the Wrexham LDP. This currently covers the eastern part of the site and continues in a northeast direction, off-site. The proposed layout will improve the continuity of the SEN by retaining, enhancing and protecting this corridor within the application site boundary.
 - The prevalence of spiny retharrow in the eastern portion of the site.
 - The distribution of butterfly encounters around eastern, northern and western edges, with few in the centre of the site.
- 4.1.2 The proposed layout also considers the practical requirements of the end-user post-development. Factors such as access, drainage, parking, the size of the yard, turning circles and the size of the warehouse facility itself. The proposed development is considered to be appropriate and proportionate for a variety of storage and distribution users.

4.2 Likely Impacts

Grassland

- 4.2.1 The proposed scheme will result in the permanent loss of approximately 6000m² of grassland habitat, comprising of the central and western portions of the site. This represents approximately 45% of the existing grassland habitat present on site.
- 4.2.2 The development of the site poses a risk of disturbance and degradation of the retained areas of grassland. Impacts are likely to arise during construction from the use of machinery, lay-down of materials and impacts from littering or dusting. Impacts are likely to arise during the operational phase as a result of human activities such as littering or trampling.
- 4.2.3 The scheme also poses a risk of inappropriate management of the grassland. Developed sites are often managed for their visual amenity or landscape value, resulting in heavily managed and manicured habitats, improved through nutrient enrichment or drainage. Any such management activities would degrade and simplify the existing grassland sward in terms of its biodiversity value. The scheme therefore provides an opportunity to establish a management regime that will enhance the value of the retained grassland.

Spiny Restharrow

- 4.2.4 The proposed scheme will result in the permanent loss of approximately 20% of the existing extent of spiny retharrow, from the development footprint.
- 4.2.5 As described above, there would be potential impacts associated with the construction period and the operational phase of the scheme, which could affect the future coverage of the species on site.

Butterflies

- 4.2.6 The proposed scheme will result in the permanent loss of 45% of the area of semi-natural habitat available for butterflies on site. It is noted that the proposed scheme seeks to avoid the area where butterflies have been recorded most frequently, i.e. the margins of the site.
- 4.2.7 It is noted that not all of the site is ideally suited to support butterflies. There is encroaching scrub and self-seeded trees around the northern and eastern parts of the site, which are out-competing grassland species of greater value to butterflies as both food plants for young (larvae/caterpillars) and as nectar sources for adults. Therefore, the proposed scheme also poses the potential for habitats to be enhanced.

4.3 Recommendations

Protection Measures

- 4.3.1 It is recommended that protection measures are put in place prior to the start of any works on site, to ensure that construction related activities do not cause adverse impacts on retained areas of grassland.
- 4.3.2 Heras fencing or similar will be installed around the retained areas of grassland, as indicated on the submitted layout plan (Figure 4). No construction activities will be permitted to enter the retained areas of grassland during the construction phase.
- 4.3.3 A Construction Environmental Management Plan (CEMP) should be prepared to detail the measures required to be undertaken by all contractors on site, to protect the retained areas of grassland. The CEMP should include the fencing design/layout, material storage areas, traffic routes, measures to suppress dust/litter, pollution prevention measures and weekly litter picking.
- 4.3.4 It may be necessary to record the implementation of this CEMP through an ecological auditing process.

Scrub Control

- 4.3.5 During the construction works, it is recommended that scrub clearance is undertaken by a suitably experienced ecological contractor. All encroaching bramble, hawthorn, blackthorn, dogwood and willow will be cut back. Where necessary, stems/stumps will be treated with a suitable herbicide to prevent regrowth. All cutting will be removed from site.
- 4.3.6 The two existing mature oak trees should be retained.

Translocation

- 4.3.7 To mitigate the loss of 20% of the spiny retharrow extent to the development footprint, it is recommended that turf translocation is undertaken to retain as much of the plant as possible. Turves would be carefully selected and moved to areas where scrub clearance has been undertaken and vegetation coverage is relatively bare as a result.

Long Term Habitat Management

- 4.3.8 A long-term Habitat Management Plan (HMP) will be prepared and implemented for the site. This will commence immediately upon commencement of development activities. Details of

the HMP should be secured by way of a suitably worded planning condition but would include the following outline measures:

- A mix of scattered native trees will be planted along the northern and western boundaries, comprising oak, silver birch and alder. Trees will be managed by way of an annual inspection and undertaking of any necessary works to retain good tree health, growth and form.
- Annual management of scrub through strimming outside of the nesting bird season. Strimming should aim to maintain bramble and other scrub to not more than 10% of the grassland area. The retained 10% should be rotated so that there is an age range to scrub vegetation.
- The grassland will be cut annually in August to a sward height of 150mm, with the exception of the small section of mown grassland adjacent to Bridge Road North which is managed by regular mowing to maintain visibility at the site entrance. All cuttings will be collected and removed from the site.
- A permanent fence will be installed around the edge of the grassland to deter impacts from trampling or littering of the habitat during the operational life of the development. Fencing will be maintained as required.
- There will be an annual litter pick of the retained grassland, undertaken by the ecological contractor.
- Four hibernacula will be created on site to provide suitable sheltering and over-wintering opportunities for amphibians.
- All of these features will be subject to ecological monitoring, in Years 1, 2, 3, 5, 10, 15 and 25 post-development.
- The GCN license will be linked to the ownership of the site. In the event of the site being sold, the license would be transferred to the new owner. The licensee will be solely responsible for the implementation of the GCN License requirements, including habitat management, monitoring and maintenance.

Monitoring

- 4.3.9 Monitoring of the site will be undertaken in Years 1, 2, 3, 5, 10 and every five years thereafter, by a suitably experienced ecologist. A monitoring report will be issued to Wrexham County Ecologist, using a format to be specified within the HMP.
- 4.3.10 Monitoring will assess the grassland habitat (extent, condition, species-richness, etc), the presence of spiny retharrow and the butterfly population on site. However, as the ecological monitoring will comprise just a single visit, access will be made available upon request for further butterfly monitoring visits if approved or instructed by Wrexham County Ecologist.

5 CONCLUSION

- 5.1 Etive Ecology Limited was commissioned by Caulmert Ltd to undertake a suite of ecological surveys on a plot of land off Bridge Road North, Wrexham Industrial Estate. The site is proposed for a single storage and distribution unit.
- 5.2 A planning application was submitted for the development in June 2023. Following feedback from Wrexham's County Ecologist, it was advised that further surveys were required to inform the design of the scheme, in line with the revised Chapter 6 of Planning Policy Wales.
- 5.3 The existing grassland on site was subject to a botanical survey, with particular focus given to the presence and extent of spiny retharrow. A total of six butterfly surveys were also carried out to establish presence/absence of grizzled skipper and dingy skipper.
- 5.4 The surveys confirmed that the grassland is species-rich and unimproved. Spiny retharrow is locally abundant in parts of the site. However, neither of the two target species of butterfly were recorded during any of the survey visits. All of these ecological receptors – unimproved grassland, spiny retharrow and butterflies – are assessed to be of significance at the Local Scale.
- 5.5 The proposed development will result in the permanent loss of 45% of the existing grassland on site. There are also risks of adverse impacts caused during the construction phase and the operational phase of the scheme.
- 5.6 The proposed layout of the scheme has been redesigned as a result of the 2024 surveys. The scheme has been reduced in footprint and shifted towards the western side of the site, to reduce impacts on spiny retharrow. The layout also takes into account the Strategic Ecological Network (SEN) that is identified within the Wrexham LDP and which runs across the eastern portion of the site. The SEN has been observed and will be enhanced through the protection and long-term security of additional areas of grassland that will improve the connectivity of the SEN across and around the application site.
- 5.7 It is recommended that retained grassland areas are protected during construction with physical barriers and a CEMP. The retained habitat on site should be enhanced through scrub control and turf translocation of spiny retharrow that would otherwise be lost to the development footprint. A long-term HMP should be prepared and agreed for the site. Aimed at protecting the grassland long-term and enhancing its value for butterflies and its botanical interest.

Appendix A - Figures

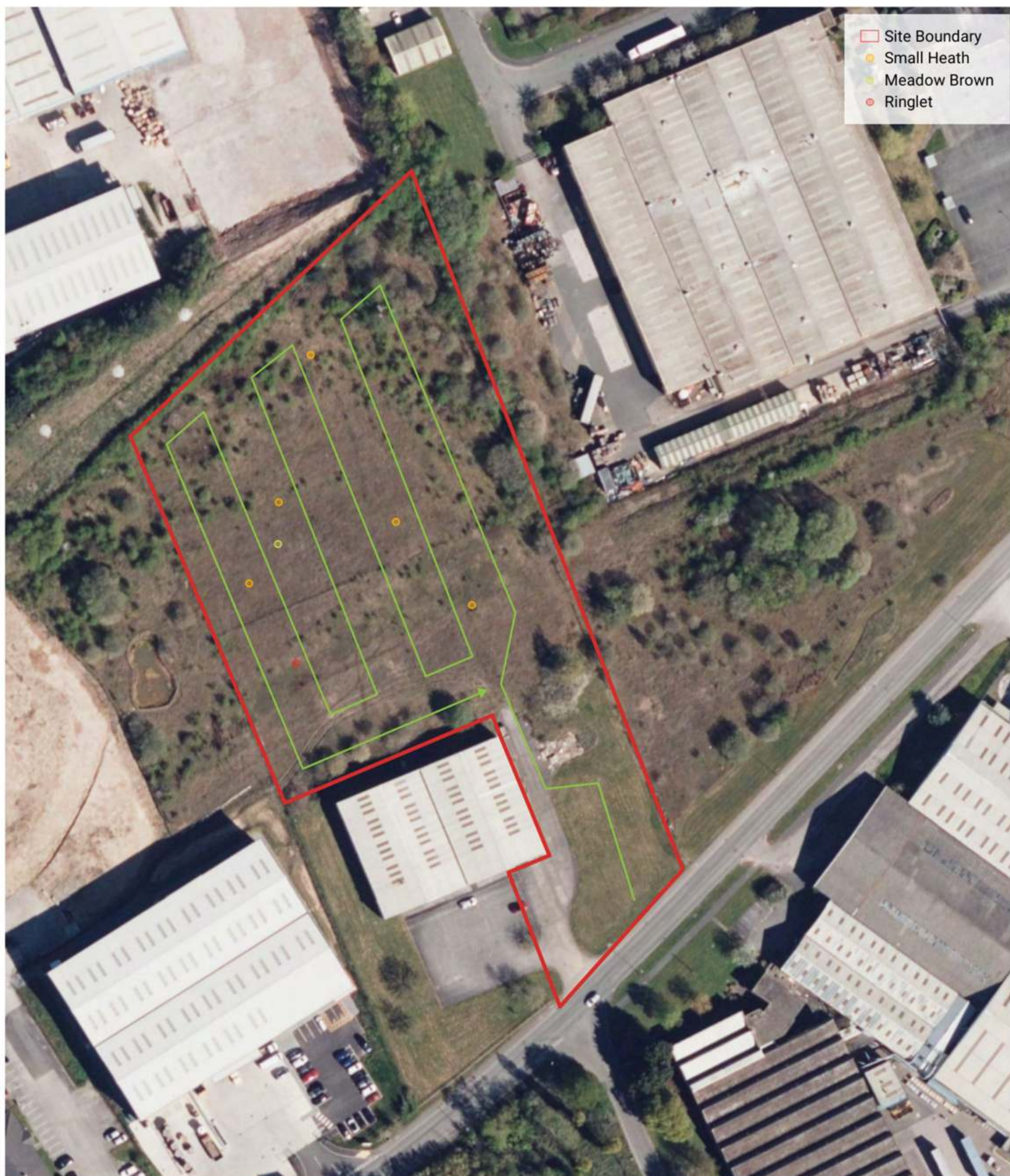
1. Butterfly Transect
2. Extent of Spiney Restharrow
3. Butterfly Transect Results
4. Proposed Site Layout

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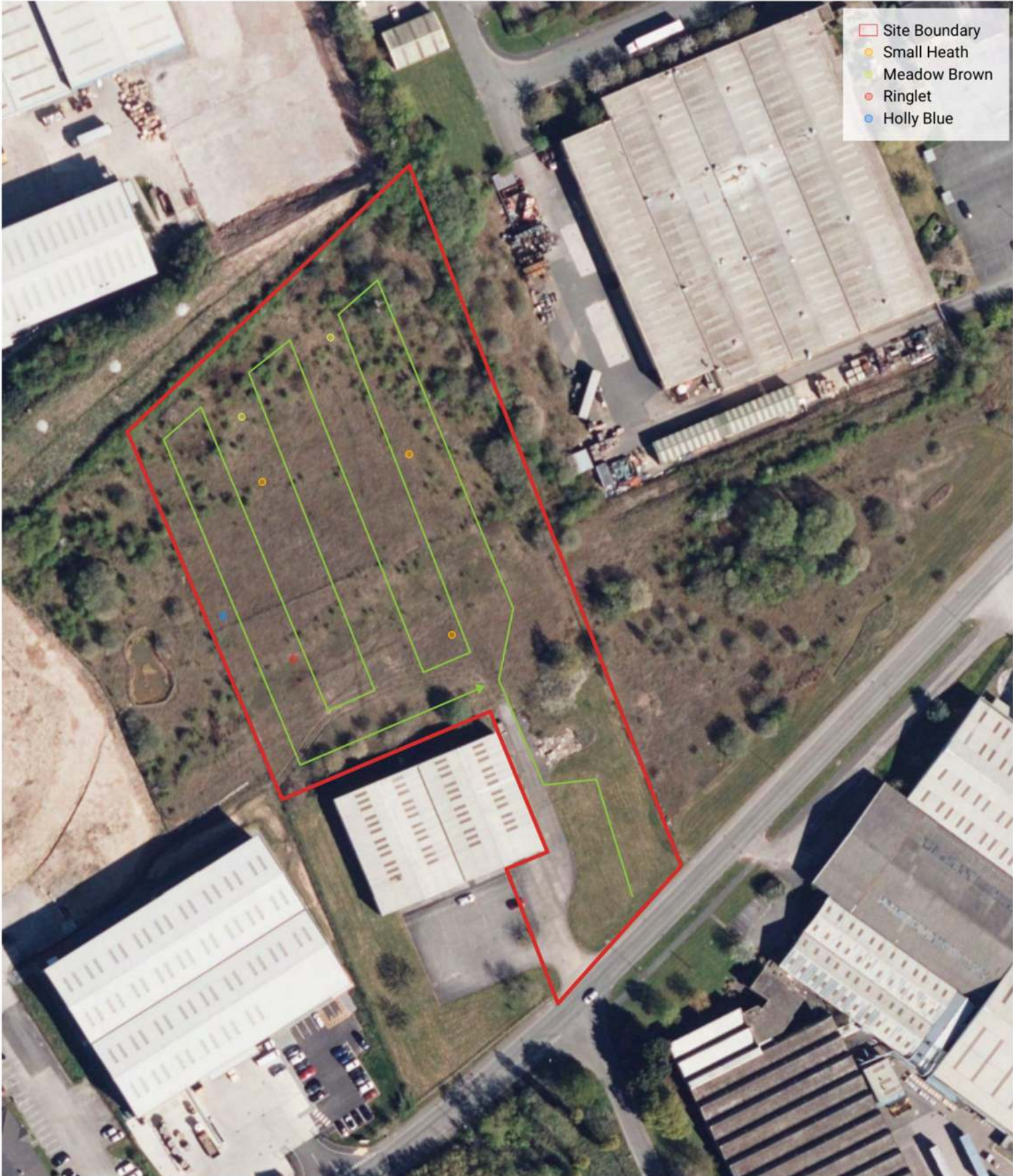
















1

PROPOSED SITE PLAN

1 : 500

ECOLOGICAL MITIGATION

Gross Site Area	15,000m2
Area of Mitigation (shown green)	7,340 (49% of application area)
Developed Area	7,660m2 (51% of application area)
Building Footprint	3,393m2
Hardstanding	4,267m2

PARKING PROVISION

Gross Internal Area	3,275m2
Parking Provisions	
Car Parking Bays	33 Total spaces (average 1/100m2)
Disabled Bays	4 spaces (10% of Provision)
Cycles	6 sheltered spaces

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BS 5266 (2016) - Emergency Lighting - Code of practice for the emergency lighting of premises
BS 5499 (2014) - Guidance for the selection and use of safety signs and fire safety notices



REVISION	DETAILS	DATE
A	Reduced to single unit	Jan 2023
B	Reduced footprint - ecological corridor	Aug 2024



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PROJECT
Proposed Storage & Distribution Unit

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PROPOSED SITE PLAN

CLIENT
JCP Investments Ltd

DRAWN BY
nc

CHECKED BY
HJ

DATE
27.04.23

SCALE (@ A1)
1 : 500

PROJECT NUMBER
2002

DRAWING NUMBER
2002.P.003(B)

REV
B

Appendix B – Site Photographs

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Grassland alongside Bridge Rd North



Grassland in southeast sector



Existing oak tree and scrub in northeast sector



Sparse sward in centre of the site



Scattered scrub along western boundary



Southern boundary



View across the body of the site



Existing oak and scrub in southeast corner