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DINGY SKIPPER SURVEY

At

Plot 3A

Wrexham Industrial Estate
Wrexham
Wrexham County Borough
L22 3XS

NGR: SJ 39272 50416

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EXECUTIVE SUMMARY

This report is written by Robert Mooney MSc, Graduate Ecologist at United Environmental Services Ltd (UES). During the preliminary ecological appraisal (PEA) survey carried out at Plot 3A, Wrexham Industrial Estate in August 2021, a significant number of butterfly species were observed. This included multiple records of dingy skipper *Erynis tages* and grizzled skipper *Pyrgus malvae*, and suitable habitat for these species was identified on the site. Both species are listed in Section 7 of the Environment (Wales) Act 2016. As such, further survey work was recommended and walkover surveys of the relevant areas of the site were conducted over May and June 2022.

The objective of the surveys was to establish which butterfly species are using the site, assess the quality of the site for butterflies, and identify any species that may be protected and / or require mitigation.

The surveys focused on an area of high quality habitat to the south of the site, which comprises open mosaic, rough grassland, sandy banks and scrub. The presence of common bird's-foot trefoil *Lotus corniculatus* (the primary larval food plant for the dingy skipper) in this area makes this section of the site of particular interest to the species. The remainder of the site is broadly unsuitable to support dingy skipper due to a lack of their larval foodplants.

A peak count of two dingy skipper butterflies were identified in the open mosaic habitat to the south of site during the survey. Two other Section 7 butterfly species, grizzled skipper and small heath *Coenonympha pamphilus*, were recorded in the same area.

The southern section of the site will be retained and enhanced as part of the proposed development, including the management of existing open mosaic habitat, and the creation of new open mosaic habitat. The proposed ecological compensation area will also be subject to signification habitat creation and enhancement, including species rich grassland creation and beetle and butterfly banks. These measures will ensure that habitats suitable for use by dingy skipper are retained and enhanced onsite.

The report should be read in conjunction with appendices 1 to 4, which provide visual representations of the survey results and statutory and planning context.



1 INTRODUCTION

1.1 Author, surveyors and qualifications

This report is compiled and written by Robert Mooney MSc, UES Graduate Ecologist.

Other surveyors include:

- Toby Hart BSc MCIEEM PIEMA, UES Managing Director
- Tom Kenwright BSc MSc, UES Senior Ecologist
- Mark Halliwell MBiol, UES Ecologist.
- Alasdair Grubb BSc, UES Ecologist.

1.2 Survey objectives

UES was commissioned in May 2022 to conduct site surveys which include the following activities:

- Establish whether dingy skipper, and any other butterflies of conservation concern, are present on site.
- Evaluate the potential impacts of the development on dingy skippers and associated habitats (if present).
- Provide advice on any potential requirement for mitigation or compensation.

1.3 Proposed development

The development proposals are for the construction of three industrial units with associated parking and access roads.

1.4 Structure of the report

This report sets out the methodology, results, and recommendations in relation to a specific butterfly survey. Recommendations are in line with statutory legislation and planning policy objectives.

The report should be read in conjunction with appendices 1 to 4, which provide visual representations of the survey results and statutory and planning context. It should also be read in conjunction with the PEA (UES03448/01) and Ecological Impact Assessment (UES03448/22) prepared for the site.



2 METHODOLOGY

2.1 Field survey

The methodology of the field survey broadly follows that detailed in Butterfly Conservation's Monitoring Butterflies by Annual Timed Counts. A total of four surveys were conducted over May and June.

Surveyors walked slowly across areas of the site identified as containing suitable dingy skipper habitat, over a period of two hours. All observed butterfly species were recorded.

2.2 Timings and weather conditions

Table 1 – Survey dates and weather conditions

SITE VISIT N ^o	DATE	TIMINGS	TEMP. (°C)	CLOUD COVER (%)	WIND	RAIN
1	13/05/22	12:20-14:20	18	30	Light	Dry
2	15/05/22	13:30-15:30	23	80	Moderate	Dry
3	08/06/22	13:45-15:45	18	50	Moderate	Dry
4	21/06/22	09:00-11:00	21	0	Light	Dry

2.3 Survey limitations

Moderate wind was recorded during two of the surveys, however as the ground flora was relatively sheltered due to scrub and as butterflies were recorded, this is not considered to have significantly affected results.



3 RESULTS

3.1 Habitat assessment

Plot 3A is found at the north-eastern edge of Wrexham Industrial Estate, east of the city of Wrexham. Habitats within the development boundary include semi-improved grassland, continuous scrub, broadleaved semi-natural woodland, scattered scrub and trees, hedgerows, tall ruderal vegetation, amenity grassland, ponds and ditches. Rough semi-improved grassland and continuous scrub comprise the majority of the development site area.

The majority of the site is broadly unsuitable to support dingy and grizzled skipper due to a lack of sufficient quantities of their larval foodplants; common bird's-foot trefoil, greater bird's-foot trefoil *Lotus pedunculatus* and horseshoe vetch *Hippocrepis comosa* (completely absent from the site) for dingy skipper, and common agrimony *Agrimonia eupatoria*, creeping cinquefoil *Potentilla reptans* and wild strawberry *Fragaria vesca* for grizzled skipper. However, the southernmost section of the site contains an area of open mosaic habitat that supports an abundance of common bird's-foot trefoil, creeping cinquefoil and wild strawberry. In addition, this area contains exposed areas and banks of bare ground and rubble which will provide basking habitat and supports an array of wildflowers for adults to feed. The adjacent area of lowland meadow also contains bird's-foot trefoil and an abundance of wildflowers to support adults.

All areas of grassland on site have some suitability to support small heath butterflies due to their preferred larval food plants of bent grasses, meadow grasses and fescues being widespread across the site. However, the southern section of the site is considered to be the area of highest value for this species due to the abundance of larval food plants, the abundance and diversity of adult food plants and the availability of basking opportunities.

The wider surrounding area comprises arable and pasture fields to the north, east and south with interconnecting field boundary hedgerows, interspersed with broad-leaved trees. Wrexham Industrial Estate and Wrexham Industrial Estate Wildlife Site lie to the south-west. Numerous records of dingy skipper and grizzled skipper butterflies were returned from within 2km of the site, the closest of which are located approximately 100m south-east of the site within the Wrexham Industrial Estate Wildlife Site.

3.2 Survey results

3.2.1 Section 7 species

Table 2 – Section 7 butterfly survey results

SITE VISIT N ^o	DINGY SKIPPER COUNT	GRIZZLED SKIPPER COUNT	SMALL HEATH COUNT
1	2	7	1
2	0	3	4
3	1	0	0
4	0	0	0

A peak count of two dingy skippers was recorded during the first survey on 13th May 2022.



3.2.2 Other butterfly species

Other butterfly species recorded during the surveys include common blue *Polyommatus icarus*, meadow brown *Maniola jurtina*, holly blue *Celastrina argiolus*, ringlet *Aphantopus hyperantus*, large skipper *Ochlodes sylvanus*, red admiral *Vanessa atalanta*, and small tortoiseshell *Aglaia urticae*.

See also Appendix 1 – Site plan and Appendix 3 – Photographs.



4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

The majority of the site is broadly unsuitable for dingy skipper. However, high quality habitat is present to the south of the site, which comprises open mosaic, rough grassland, sandy banks and scrub. The presence of common bird's-foot trefoil (the primary larval food plant for the dingy skipper) in this area makes this section of the site of particular interest to the species.

The surveys recorded peak counts of two dingy skipper, four small heath and seven grizzled skipper. All three butterflies were observed using both the unimproved grassland and the open mosaic area; however, all three species showed a greater affinity for the open mosaic habitat. Despite the low number of individuals observed using the site, they may form part of a larger colony which spreads across pockets of suitable habitat within the Wrexham Industrial Estate, encompassing the known population at Wrexham Industrial Estate Wildlife Site.

All three are listed as species of principal importance under Section 7 of the Environment (Wales) Act 2016, indicating that they are species of national importance.

4.2 Mitigation, compensation and enhancement measures

4.2.1 Mitigation and compensation

The layout for the proposed development has been designed to avoid and reduce impacts on dingy and grizzled skipper by retaining all areas of lowland meadow, unimproved grassland and open mosaic habitat. As such, there will be no direct habitat loss for these species as a result of the proposals and no mitigation or compensation measures are required.

The grassland areas on site that are due to be lost to facilitate the development have some limited suitability to support small heath butterflies, however the highest quality section of the site for this species is also due to be retained and they were not observed using any other sections of the site that are due to be lost. Therefore, no mitigation or compensation measures are required.

4.2.2 Enhancement

The southern section of the site will be retained and enhanced as part of the proposed development. Proposed long-term management includes:

- Scrub clearance and ground disturbance within the open mosaic habitat to maintain a dynamic and heterogeneous landscape;
- An annual hay cut of the improved grassland to halt the encroachment of scrub and to impede the growth of coarse grasses and tall ruderal species;
- The breaking up of areas of existing hardstanding to be left as a loose substrate for natural colonisation by wildflowers and shrubs.

These proposed management measures will ensure that these habitats continue to support the larval foodplants for these species and will provide an abundance of nectar resources for foraging adults.



The proposed ecological compensation area will also be subject to signification habitat creation and enhancement. Measures that will directly benefit these butterfly species include the enhancement of the current agricultural grassland to a species rich grassland, and the creation of a series of beetle and butterfly banks that will be sown with a seed mix containing common bird's-foot trefoil.



5 CONCLUSION

The southern section of the site provides high quality butterfly habitat in the form of open mosaic habitat, featuring dingy skipper's larval foodplant common bird's-foot trefoil. In addition, this section contains exposed areas and banks of bare ground and rubble which will provide basking habitat and supports an array of wildflowers for adults to feed. The adjacent area of lowland meadow also contains bird's-foot trefoil and an abundance of wildflowers to support adults. Two other Section 7 species, grizzled skipper and small heath, were recorded in the same area, alongside a number of other butterfly species.

The southern section of the site will be retained and enhanced as part of the proposed development, as detailed in Section 4.2 of this report. Scrub clearance and ground disturbance will ensure this area is maintained as open mosaic habitat. Additional open mosaic habitat will also be created through the breaking up of the existing hardstanding. The proposed ecological compensation area will be subject to signification habitat creation and enhancement, including species rich grassland creation and beetle and butterfly banks. These measures will ensure that habitats suitable for use by dingy skipper are retained and enhanced onsite.



6 REFERENCES

UK Butterfly Monitoring Scheme. *Ng2: Monitoring Butterflies by Annual Timed Counts*.

Butterfly Conservation. *Dingy Skipper Priority Species Factsheet*

Butterfly Conservation. *Grizzled Skipper Priority Species Factsheet*

Department for Communities and Local Government (2021). *National Planning Policy Framework*.

National Assembly for Wales. *Environment (Wales) Act 2016*.



APPENDICES

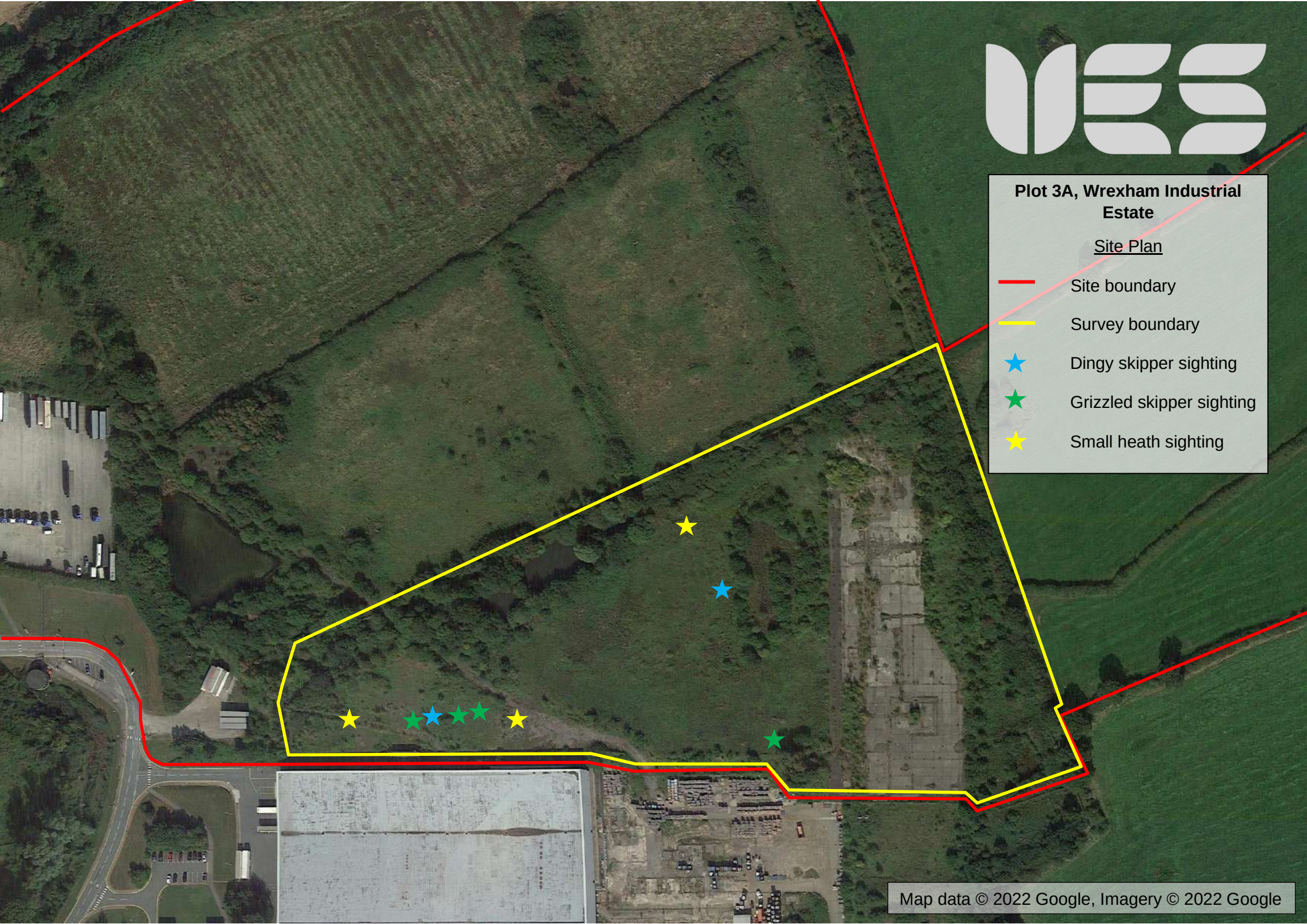
Appendix 1 – Site plan



Plot 3A, Wrexham Industrial Estate

Site Plan

-  Site boundary
-  Survey boundary
-  Dingy skipper sighting
-  Grizzled skipper sighting
-  Small heath sighting





Appendix 2 – Aerial photographs



Plot 3a – Wrexham Industrial Estate

Close aerial photograph

— Site boundary



Plot 3a – Wrexham Industrial Estate

Wide aerial photograph

 Site location





Appendix 3 – Photographs



Photograph 1 – Example of the open mosaic habitat in the south of the site.



Photograph 2 – Example of rough grassland and scrub in the south of the site.



Photograph 3 – The existing hardstanding in the south-eastern corner of the site.



Photograph 4 – One of the sand and gravel banks present on the hardstanding.



Photograph 5 – Pair of dingy skippers.



Photograph 6 – Grizzled skipper.



Photograph 7 – Small heath.



Appendix 4 – Statutory and planning context

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. Dingy skipper is listed as a species of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.