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DINGY SKIPPER SURVEY

At

The Oaks
Oak Road
Wrexham Industrial Estate
Wrexham
LL13 9RG

NGR: SJ 38732 49284

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EXECUTIVE SUMMARY

This report is written by Tom Kenwright, Senior Ecologist at United Environmental Services Ltd (UES). A Preliminary Ecological Appraisal (PEA) was undertaken of the site by UES in November 2022 (see report reference UES03918/02), which included a record search of protected or otherwise notable species. Records of dingy skipper *Erynis tages*, grizzled skipper *Pyrgus malvae* and small heath *Coenonympha pamphilus* butterflies were returned from the site itself and from within the wider Wrexham Industrial Estate. Whilst the majority of the site is considered to be largely unsuitable support these species due to the density of scrub and lack of larval foot plants, small areas of potentially suitable habitat for all three species was identified on site. All three species are listed as species of principle importance (priority species) under Section 7 of the Environment (Wales) Act 2016. As such, further survey work was recommended to determine the presence / absence of these butterfly species.

The objective of the survey 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 involved walking transects across the entire site with stopping points throughout, focussing on areas of higher quality habitat.

The majority of the site is considered to be unsuitable or of low suitability for dingy and grizzled skipper due to a lack of sufficient quantities of their larval foodplants. Grassland and ephemeral / open mosaic habitats are generally limited across the site, which is largely dominated by dense scrub. The site has significantly reduced in quality with regards to these butterfly species and their habitat preferences since its initial designation as a Wildlife Site due to a lack of management and the subsequent encroachment of dense scrub and loss of grassland habitats.

No dingy skipper, small heath, or grizzled skipper butterflies were recorded on site during the surveys or during the suite of other ecological surveys undertaken of the site by UES across 2023. As such it is considered that the site is very unlikely to used by any of the three species for breeding and is likely only used on a very occasional basis for foraging or commuting, if at all. As such, the development of part of the site will not have a significant adverse impact on these butterfly species and no further specific mitigation or compensation is required with regards to butterflies. Despite this, areas of existing grassland, particularly those containing the largest concentrations of common bird's-foot trefoil *Lotus corniculatus* and greater bird's-foot trefoil *Lotus pedunculatus* should be prioritised for retention where possible (see Appendix 1 – Site Plan).

Details are not currently available, however the proposals will be limited to a relatively small proportion of the site. The wider site will be retained and subject to ecological enhancements and ongoing management, to maximise the ecological value of the site and ensure its longevity. These proposed habitat creation, enhancement and management measures should ensure that the site supports the larval foodplants for all three species and provides an abundance of nectar resources for foraging adults. Given the close proximity of the site to known populations, and the ability for butterflies to colonise new sites, it is considered likely that all three species will colonise the future in the site following the successful implementation of the landscaping scheme. Given the recent decline in the quality of the site due to a lack of management, coupled with the extensive area of the site that will be retained and managed, partly for the benefit of these species, it is considered that the proposed development will result in a significant positive outcome for these three butterfly species of principle importance.

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 has been compiled and written by Tom Kenwright BSc MSc ACIEEM, UES Senior Ecologist.

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Additional surveyors included:

- Mark Halliwell MBiol, UES Senior Ecologist.

1.2 Survey objectives

UES was commissioned in March 2023 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

At this stage, no detailed proposals have been submitted to UES.

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 prepared for the site (see report reference UES03918/02).

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 June and July 2023.

Surveyors walked slowly across all accessible areas of the site over a period of at least two hours. The transect was paused for at least 5 minutes to allow for sufficient observation at all areas identified as containing suitable dingy skipper or grizzled skipper habitat (larval food plants or nectar resources for adults). 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	06/06/23	13.00-15.00	16	50	F1	None
2	21/06/23	12.15-14.45	22	40	F2	Very light rain for 5 minutes at 13:30.
3	07/07/23	11.30-13.30	15	30	F2	None
4	24/07/23	12.30-15.00	17	60	F3	None

2.3 Survey limitations

Light rain was present for five minutes during the second survey, however there was high levels of butterfly activity both before and afterwards. As such, this is not considered to have significantly affected the results.

Some parts of the site could not be fully accessed due to the density of scrub. This is not considered to be a significant limitation as these areas are considered to be unsuitable to support the target butterfly species due to a lack of larval food plants and nectar resources for foraging adults. The majority of the site could be surveyed, including all areas of suitable habitat.

3 RESULTS

3.1 Desk study

The proposed development site comprises one of three land parcels within the Wrexham Industrial Estate, which together form the Wrexham Industrial Estate Wildlife Site. The site itself is known as Cefn Park and other two land parcels are known as Bryn Road (450m to the north) and Erlas Black Wood (830m to the north-west).

The following has been taken from the citation as the reason for the incorporation of the Cefn Park parcel within the Wildlife Site designation: "The derelict land known as Cefn Park, on the southern edge of the Industrial Estate, consists of a complex mosaic of scrub, grassland and tall herb. Species-rich grassland occurs where there is rabbit grazing with cowslip *Primula veris*, restharrow *Ononis repens*, yellow-wort *Blackstonia perfoliata*, common centaury *Centaurium erythraea* and common bird's-foot trefoil. Other species of interest include dyer's greenweed *Genista tinctoria* in among scrub and grass vetchling *Lathyrus nissolia* in rank grassland. Worn paths and motorbike tracks criss-cross the site and many species present such as prickly lettuce *Lactuca serriola*, smith's pepperwort *Lepidium heterophyllum* and bristly oxtongue *Helminthotheca echioides* typify disturbed ground. A mosaic of woodland and damp grassland occurs adjacent to the River Clywedog. The woodland is dominated by mature hawthorn *Crataegus monogyna* with alder *Alnus glutinosa* and crack willow *Salix fragilis* along the river. The ground flora is sparse but dog's mercury *Mercurialis perennis*, hart's-tongue fern *Asplenium scolopendrium* and male fern *Dryopteris filix-mas* do occur. Meadowsweet *Filipendula ulmaria*, great willowherb *Epilobium hirsutum* and canary reed-grass *Phalaris arundinacea* occur in the damper patches."

A record search of protected or otherwise notable species within 2km of the proposed development was undertaken through Cofnod as part of the PEA undertaken of the site by UES in November 2022. Records of dingy skipper, grizzled skipper and small heath butterflies were all returned from within the site itself, dating from 2021. Records of these species were also returned from within the wider Wrexham Industrial Estate, which is known to support populations of all three species. Surveys undertaken by UES to inform a planning application of a development site located 850m north of the site identified the presence of a small population of dingy skipper, grizzled skipper and small heath butterflies.

Ecological surveys, including specialist invertebrate surveys were undertaken of the site in 2016, to inform a previous and unrelated planning application. These surveys recorded the presence of multiple small heath butterflies, a small population of dingy skipper butterflies (peak count of 6-8) and a single grizzled skipper butterfly. The survey report details that at the time, the site probably supported a fragile breeding population of dingy skipper due to a lack of significant habitat. It could not be determined if grizzled skipper were breeding on site, however the report detailed that if so, then it would likely be very susceptible to site loss in the future due to a lack of management, scrub encroachment and loss of habitat and larval food plants.

3.2 Habitat assessment

The Oaks is located at the Wrexham Industrial Estate to the East of the city of Wrexham. Habitats within the development boundary include large areas of mixed species dense scrub, broadleaved semi-natural woodland, and broadleaved trees with pockets of semi-improved neutral grassland, marshy grassland, species-poor grassland and tall ruderal vegetation. Other habitats present include ponds (both ephemeral and permanent), watercourses,

ephemeral / short perennial vegetation, fence lines, walls, buildings, areas of bare ground and hardstanding.

The majority of the site is considered to be 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 and horseshoe vetch *Hippocrepis comosa* for dingy skipper, and common agrimony *Agrimonia eupatoria*, creeping cinquefoil *Potentilla reptans* and wild strawberry *Fragaria vesca* for grizzled skipper.

Grassland and ephemeral / open mosaic habitats are generally limited across the site due to the encroachment of scrub over recent years. Despite this, several areas containing potentially sufficient quantities of common bird's-foot trefoil and a single area containing greater bird's-foot trefoil are present, albeit in small and generally isolated patches (see Appendix 1).

Common agrimony, and creeping cinquefoil are present across the site, however these are scattered across small areas of grassland and at the margins of the scrub, with no larger aggregations of either species anywhere on site.

Horseshoe vetch and wild strawberry are completely absent from the site.

All areas of grassland on site have some suitability to support small heath butterflies due to their preferred larval food plants of bent grasses *Agrostis spp*., meadow grasses *Poa spp*. and fescues *Festuca spp*. being abundant within these areas. However, grassland is limited across the site due to the cover and ongoing encroachment of dense scrub.

Whilst the majority of the site is dominated by dense scrub, the edges of the scrub and some small stands of semi-improved grassland and ephemeral / short perennial vegetation are present, providing an array of flowering species that are suitable to support feeding adults of dingy skipper, grizzled skipper and small heath. Additionally, the site contains some, albeit scattered areas of bare ground and open / short-swarded grassland suitable for basking.

It is considered that the site has significantly reduced in its suitability to support all three butterfly species since the initial site designation and the previous ecology surveys in 2016. This is due to a lack of management and the subsequent encroachment of scrub and loss of grassland and open mosaic / disturbed areas, resulting in a reduction in larval food plants and nectar resources for foraging adults.

The wider surrounding area comprises arable and pasture fields to the south and east, with interconnecting field boundary hedgerows interspersed with broadleaved trees. Wrexham Industrial Estate lies to the north and west, the majority of which is urbanised or intensively managed, however pockets of higher quality habitat are present throughout.

3.3 Survey results

3.3.1 Butterfly species of principle importance

Table 2 – Butterfly species of principle importance survey results

SITE VISIT N^{O}	DINGY SKIPPER COUNT	GRIZZLED SKIPPER COUNT	SMALL HEATH COUNT
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

No dingy skipper, grizzled skipper or small heath butterflies were observed on site during the surveys. Additionally, these species were not observed on site during the suite of other ecology surveys undertaken on site by UES across 2023.

3.3.2 Other species

Other butterfly species observed during the surveys included:

- Brimstone *Gonepteryx rhamni*
- Speckled wood *Pararge aegeria*
- Essex skipper *Thymelicus lineola*
- Small skipper *Thymelicus sylvestris*
- Orange-tip *Anthocharis cardamines*
- Small white *Pieris rapae*
- Large white *Pieris brassicae*
- Green-veined white *Pieris napi*
- Common blue *Polyommatus icarus*
- Ringlet *Aphantopus hyperantus*
- Gatekeeper *Pyronia Tithonus*
- Meadow brown *Maniola jurtina*
- Red admiral *Vanessa Atalanta*
- Comma *Polygonia c-album*
- Peacock *Aglais io*
- Small tortoiseshell *Aglais urticae*

Numerous other invertebrate species were observed during the survey, particularly moths, bees, hoverflies, true bugs, dragonflies and damselflies. Additional, species recorded include but are not limited to: Silver Y *Autographa gamma*, magpie moth *Abraxas grossulariata*, brown China-mark moth *Elophila nymphaeata*, burnet companion moth *Euclidia glyphica*, common darter *Sympetrum striolatum*, southern hawker *Aeshna cyanea*, banded demoiselle *Calopteryx splendens*, azure blue damselfly *Coenagrion puella* and large red damselfly *Pyrrhosoma nymphula.*

4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

Most of the site is considered to be broadly unsuitable for dingy skipper and grizzled skipper due to the dominance of scrub, isolation of potentially suitable grassland and areas of ephemeral / short perennial vegetation, and the lack of large quantities of larval food plants. This is reflected by the survey results recording no counts of dingy skipper, small heath, and grizzled skipper. However, the site does host populations of other, more common butterfly species.

The site was previously known to support all three species when first designated as a local nature reserve. At the time, the site contained large areas of short-sward grassland that will have provided a greater larval food plant resource and hence breeding opportunities for all three species.

The ecological records search returned some, albeit limited records of all three species from within the site in 2021. However, all three species are known to be present within the local area, as evidenced by ecological surveys undertaken by UES of other land parcels within the wider Wrexham Industrial Estate. As such, it is considered that all three species may use the oaks site on a very occasional basis for foraging or commuting. There remains some, albeit very limited potential for the three species, particularly small heath, to use the site for breeding. However, given the survey results and the ongoing reduction of quality due to encroachment of scrub, the site is not considered to support viable populations and is not considered to be of notable value for any of the three species.

Despite there currently being no evidence of the site being of importance for any of the three butterfly species, it was previously of significant importance and was used by all three species, likely for breeding. Given the close proximity of populations of all three species within the wider Industrial Estate and the dispersal abilities of butterflies, it is considered that the site, or sections of the site, could be restored to provide sufficient breeding opportunities for all three species and there are no significant barriers to prevent future colonisation from the nearby populations. The proposed development provides an opportunity to facilitate the enhancement of large sections of the site secure its long-term management.

4.2 Mitigation, compensation and enhancement measures

4.2.1 Mitigation and compensation

Details of the proposed development location and layout have not been determined this stage. Given the lack of evidence of small heath, dingy and grizzled skipper use of the site and the limited availability of larval food plants and breeding opportunities, it is considered that the development of any areas of the site will not have a significant adverse impact on these butterfly species. There will be no direct habitat loss for these species as a result of the proposals and therefore no mitigation or compensation measures are required. Despite this, areas of existing grassland, particularly those containing the largest concentrations of common bird’s-foot trefoil and greater bird’s-foot trefoil should be prioritised for retention where possible.

4.2.2 Enhancement

The proposed development will be limited to a relatively small section of the site, with the wider site retained and subject to ecological enhancements and an ongoing management to maximise the ecological value and ensure its longevity. Habitat creation and enhancement works within the wider site will be designed to benefit several different ecological receptors, some of which will require conflicting habitat management compared to the requirements of dingy and grizzled skipper. However, given the historic designation features of the Wildlife Site designation, the historic presence of both species and their potential to recolonise from nearby populations, dingy skipper, grizzled skipper and small heath will be key receptors in the design and long-term management of the wider site.

The proposed landscaping scheme is yet to be determined at this stage, however key principles should be to prioritise the creation of both species-rich wildflower grassland and open mosaic habitat. Proposed habitat creation and enhancement measures should include:

- Scrub clearance and replacement with wildflower grassland and short-swarded open areas.
- Sowing of wildflower grassland mixes or green hay that contain larval foodplants of dingy and grizzled skipper, mainly common bird's-foot trefoil and common agrimony.
- Creation of open mosaic habitats through the removal of scrub, disturbance of ground and provision of additional and varied substrates including loose substrate and sand.
- The breaking up of areas of existing hardstanding to be left as a loose substrate for natural colonisation by wildflowers and shrubs.
- The creation and maintenance of a dynamic and heterogenous landscape, with high floristic diversity.

These proposed habitat creation, enhancement and management measures will ensure that the site supports the larval foodplants for all three species and will provide an abundance of nectar resources for foraging adults. Given the close proximity of the site to known populations of small heath and dingy and grizzled skipper butterflies, and ability for butterflies to colonise new sites, it is considered likely that all three species will colonise the future in the site following the successful implementation of the landscaping scheme. Given the recent decline in the quality of the site due to a lack of management, coupled with the extensive area of the site that will be retained and managed, partly for the benefit of these species, it is considered that the proposed development will result in a significant positive outcome for these three butterfly species of principle importance.

Full details of the proposed landscaping and ongoing management measures can be detailed within a detailed landscaping scheme and a Landscape and Ecology Management Plan (LEMP), which can be prepared once further details of the proposed development location and layout have been determined.

5 CONCLUSION

Most of the site is considered to be broadly unsuitable for small heath, dingy skipper and grizzled skipper. This is due to the dominance of scrub, isolation of potentially suitable grassland and areas of ephemeral / short perennial vegetation and the lack of large quantities of larval food plants. This is reflected by the surveys recording no counts of dingy skipper, small heath, or grizzled skipper. However, the site does host populations of other, more common butterfly species.

Given the lack of evidence of use of the site and the limited availability of larval food plants and breeding opportunities, it is considered that the development of any area of the site will not have a significant adverse impact on any of these three butterfly species.

Whilst a relatively small section of the site will be developed, the wider site will be retained and subject to habitat creation and enhancement measures, in addition to the long-term management of retained and newly created habitats. These proposed habitat creation, enhancement and management measures will ensure that the site supports the larval foodplants for these species and will provide an abundance of nectar resources for foraging adults. Given the close proximity of the site to known populations of small heath and dingy and grizzled skipper butterflies and ability for butterflies to colonise new sites, it is considered likely that all three species will colonise the future in the site following the successful implementation of the landscaping scheme. Given the recent decline in the quality of the site due to a lack of management, coupled with the extensive area of the site that will be retained and managed, partly for the benefit of these species, it is considered that the proposed development will result in a significant positive outcome for these three butterfly species of principle importance.

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*

Welsh Government (2024). *Planning Policy Wales, Edition 12.*

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

APPENDICES

Appendix 1 – Site plan


The Oaks, Wrexham Industrial Estate
Butterfly survey site plan
Survey boundary
Areas containing abundant common bird's-foot trefoil
Area containing abundant greater bird's-foot trefoil
Map data © 2023 Google, Imagery © 2023 Google

Appendix 2 – Aerial photographs


The Oaks, Wrexham Industrial Estate
Close aerial photograph
Survey boundary
Map data © 2023 Google, Imagery © 2023 Google


The Oaks, Wrexham Industrial Estate
Wide aerial photograph
Site location
Map data © 2023 Google, Imagery © 2023 Google

Appendix 3 – Photographs



Photograph 1 – Sporadic common bird’s-foot trefoil along grass path.



Photograph 2 – Small area of abundant common bird's-foot trefoil within the south-western section of the site (large quantities of the yellow-flowered melilot are also visible).



Photograph 3 – Area of abundant common bird's-foot trefoil within the south-western section of the site.



Photograph 4 – Example of floristically diverse area used as a stop-point during the transect survey.



Photograph 5 – Speckled wood.



Photograph 6 – Essex skipper.



Photograph 7 – Meadow brown.



Photograph 8 – Ringlet.

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, grizzled skipper and small heath are all listed as a species of principal importance (or priority species) for the purpose of maintaining and enhancing biodiversity in relation to Wales. 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.

Awareness of the presence of any priority habitat or priority species identified on these lists is of importance within the local authority planning process when land is considered for development. Along with legally protected species, as well as statutory and non-statutory sites, knowledge of the presence of priority habitats and priority species is required if the impact of future development is to be avoided or mitigated. Planning Policy Wales indicates that, when determining planning applications, the existence of priority habitats and species are of greater status than others. By fully considering all these features in the decision-making process, a planning authority will have demonstrated that it has discharged its duty to conserve biodiversity.