



Invertebrate Survey Report

Margam, National Grid

November 2025

Prepared for:
National Grid

Prepared by:
Stantec UK Limited

Project Number:
331201497

Invertebrate Survey Report

Revision	Description	Date	Author	Quality Check	Independent Review
V1	First Issue	August 25	DG	HM	HE
V2	Second Issue	November 25	DG	HE	JG

Invertebrate Survey Report

The conclusions in the Report titled **Invertebrate Survey Report** Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the surveys were conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from National Grid (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Prepared by:

Signature
Dave Goddard

Printed Name

Reviewed by:

Signature
Helen Evriviades and Jamie Glossop

Printed Name

Approved by:

Signature
Hilal Uflaz

Printed Name

Contents

Executive Summary	iii
1 Introduction	1
1.1 Overview	1
1.2 Project Context	1
1.3 Purpose of Report	1
2 Legislation	3
3 Methods	4
3.1 Overview	4
3.2 Desk Study	4
3.3 Survey Area	4
3.4 Survey Methods	4
3.5 Invertebrate Identification	7
3.6 Evaluation of Study Area Importance	7
3.7 Surveyor Qualifications and Experience	7
3.8 Report Qualification	8
4 Results	9
4.1 Overview	9
4.2 Desk Study	9
4.3 Field Survey	9
5 Evaluation and Conclusion	15
6 References	17
7 Figures	20

Figures

Figure 1 Site Location Plan	20
-----------------------------------	----

Tables

Table 3-1. Survey Dates and Weather Conditions	4
Table 3-2: Aquatic Invertebrate Survey Locations and Photographs	6
Table 5-1: Pantheon Output: Specific Assemblage Type Condition Assessment (whole Survey Area)	15

Appendices

Appendix A	Invertebrate Species Recorded & Status
Appendix B	Protected or Notable Species and their Location

Executive Summary

Stantec UK Ltd was commissioned by National Grid to undertake invertebrate surveys of land owned by National Grid (hereafter ‘the Site’) and BOC Ltd. (hereafter ‘the BOC land’) (together referred to in this report as “the Study Area”) at Margam, Port Talbot, Wales, proposed for a sub-station extension and associated cable route. This survey work was undertaken in 2025 to determine ecological constraints and opportunities for the proposed development associated with the presence of protected or notable invertebrates.

This report describes and assesses the terrestrial and aquatic invertebrate features of ecological value present in the Study Area following the surveys undertaken during May, June, July and August 2025. The field surveys are supported by a desk study including a review of local records within 2km of the Site and survey reports undertaken for the Site in 2009, and in 2022 for Tata Steel land, located to the west of the BOC Ltd land, west of the railway line.

The desk study returned numerous records of International Union for Conservation of Nature (IUCN) Red List invertebrate species and SPI species within 2 km of the Study Area. The surveys undertaken in 2009 on the Site identified the presence of 402 species of invertebrate, many of these were common and widespread species, with a large proportion being associated with the wetland habitats present at the Site. Two Priority Species were found: the brown-banded carder bee *Bombus humilis* and the shrill carder bee *Bombus sylvarum*. An invertebrate assessment conducted at the Tata Steel site in 2022 recorded a total of 414 species, of which 28 species are recorded to have national status including scarce butterfly and bee species. Species with the greatest conservation concern recorded were the wall butterfly *Lasiommata megera* and the shrill carder bee. The assessment concluded that the area surveyed was of regional importance for invertebrate assemblages.

The surveys undertaken of the Study Area in May, June, July and August 2025, recorded 436 species in total; of which the following 29 species are protected and/or notable:

- A solitary wasp *Argogorytes fargeii* Notable A
- Musk beetle *Aromia moschata* IUCN GB Post 2001 LC, Notable B
- Brown-banded carder bee *Bombus humilis* Env (Wales) Act S7
- Bulrush veneer *Calamotropha paludella* Notable B
- Musk-thistle blacklet *Cheilosia cynocephala* NS
- Latticed heath *Chiasmia clathrate* Env (Wales) Act S7
- Square spot deerfly *Chrysops viduatus* IUCN GB Post 2001 LC, NS
- Small heath *Coenonympha pamphilus* IUCN GB Post 2001 NT, Env (Wales) Act S7
- A whirligig beetle *Gyrinus suffriani* IUCN GB Post 2001 VU
- The crescent *Helotropha leucostigma* Env (Wales) Act S7
- Rosy rustic *Hydraecia micacea* Env (Wales) Act S7
- Lobe-spurred furrow bee *Lasioglossum pauxillum* Notable A
- Wall butterfly *Lasiommata megera* IUCN GB Post 2001 NT, Env (Wales) Act S7

Invertebrate Survey Report

- Silvery leafcutter bee *Megachile leachella* Notable B
- Fen snout *Nemotelus pantherinus* IUCN GB Post 2001 LC, NS
- The interrupted burying beetle *Nicrophorus interruptus* IUCN GB Post 2001 LC, NS, Notable B
- Bleeding heart spider *Nigma puella* IUCN GB Post 2001 LC, NS
- Six-spotted wasp-cuckoo *Nysson trimaculatus* Notable B
- A rove beetle *Paederus fuscipes* Notable B
- A wolf spider *Pardosa tenuipes* IUCN GB Post 2001 LC, NS
- A weevil *Polydrusus formosus* Notable A
- Scarce cardinal beetle *Schizotus pectinicornis* IUCN GB Post 2001 LC, NR
- A rove beetle *Sepedophilus constans* IUCN GB Post 2001 LC, NS, Notable B
- A rove beetle *Stenus nigrutilus* Notable B
- A jumping spider *Synageles venator* IUCN GB Post 2001 LC, NS
- Blood vein *Timandra comae* Env (Wales) Act S7
- Cinnabar moth *Tyria jacobaeae* Env (Wales) Act S7
- A money spider *Walckenaeria kochi* IUCN GB Post 2001 LC, NS
- A rove beetle *Stenus ater* Notable B

The 2025 assessment found that the Site and the BOC land combined are of at least regional importance for invertebrates, based on Plant's assessment criteria.

Further analysis of the recorded species within Natural England's online tool Pantheon found that two of the identified habitat assemblages met the assessment criteria for Favourable condition, these being Open Habitats – Rich Flower Resource and Open Habitats – Scrub Edge. The remaining habitat assemblages identified were all considered to be in Unfavourable condition. As the Pantheon tool was partly developed from a predecessor tool which was used to determine the condition of SSSIs with respect to their invertebrate interest, the Study Area could potentially be considered of National importance, with respect to Open Habitats – Rich Flower Resource and Open Habitats – Scrub Edge.

1 Introduction

1.1 Overview

- 1.1.1 Stantec UK Limited (Stantec) was commissioned by National Grid to undertake invertebrate surveys of the area of land owned by National Grid at Margam, Neath Port Talbot; hereafter referred to as 'the Site' and the land to the south of the Site, owned by BOC Ltd, hereafter referred to as 'the BOC land'.

1.2 Project Context

Site Location and Description

- 1.2.1 The Site is located in Margam Port Talbot, at approximate central grid reference NGR SS780850, and comprises an existing substation to the east of the Tata Steel Works and Network Rail railway line; the Site also lies to the south of the Tata Steel Sports and Social Club (golf course), to the west of woodland and to the north of the BOC Ltd. works area and fields owned by BOC Ltd. Beyond the immediate Site surroundings, the M4 corridor lies to the east, Swansea Bay lies to the west, Eglwys Nunydd Reservoir to the south and Margam town to the north.
- 1.2.2 The BOC land considered in this report lies immediately to the south of the Site, between the Site and the road to the north of the Eglwys Nunydd Reservoir, Heolcae'r Bont. The location of the Site and the BOC land is shown in **Figure 1**. Together the Site and the BOC land are referred to in this report as the Study Area.
- 1.2.3 The Study Area was subject to habitat surveys completed in 2024 and 2025 which identified that the Study Area comprises a mosaic of reedbed, scrub, grassland and small areas of open water associated with a number of ditches.

Description of Works

- 1.2.4 The Site and the BOC land are proposed for an extension to the existing substation and associated cabling works, with the substation extension proposed to the east of the existing substation within the Site and cabling works passing through the Site and the BOC land. The proposed substation extension and associated works within the Site will be progressed under a planning application and the cable and associated works will be progressing under National Grid's Permitted Development rights.

Historic Project Understanding and Ecological Context

- 1.2.5 The Site was subject to a previous successful planning application for a new substation within National Grid land which received planning consent in 2009. However, the development was not progressed by National Grid. A suite of ecological surveys was completed to inform that previous planning application and the results were presented within the Margam 275kV Substation Environmental Report (National Grid 2009).

1.3 Purpose of Report

- 1.3.1 The purpose of this invertebrate report is to:
- (i) identify historic records of protected and notable species within 2km of the Study Area boundary;

Invertebrate Survey Report

- (ii) identify the presence and distribution of protected and notable species using suitable habitats within the Site and the BOC land;
- (iii) evaluate the value of the Study Area for invertebrates.

2 Legislation

- 2.1.1 This section outlines legislation relevant to invertebrates in Wales.
- 2.1.2 The Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. In total the list includes 24 invertebrate species.
- 2.1.3 European Protected Species (EPS), which include invertebrates such as large blue butterflies, are protected under both the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017 (as amended). Taken together, these make it an offence to:
- Deliberately capture, injure or kill a EPS;
 - Deliberately disturb any EPS, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.
 - To be in possession or control of any live or dead EPS or any part of, or anything derived from a EPS;
 - Damage or destroy a breeding site or resting place of a EPS;
 - Intentionally or recklessly obstruct access to any place that a EPS uses for shelter or protection;
 - Intentionally or recklessly disturb a EPS while it is occupying a structure or place that it uses for shelter or protection.
- 2.1.4 Section 7 of the Environment (Wales) Act 2016 also lists 188 species of invertebrates, which requires these species to be considered in planning and development processes to ensure that their habitats are not adversely affected.

3 Methods

3.1 Overview

- 3.1.1 The section below sets out the methods used to inform the assessment of the Site and the BOC land in relation to invertebrates. This includes a desk study, detailed surveys, evaluation approach and survey limitations.

3.2 Desk Study

- 3.2.1 The following reports were consulted for ecological information about the Study Area, surrounding areas, and records of reptiles.
- Conops Entomology Ltd. (2022) Tata Steel, Port Talbot An Invertebrate Assessment
 - National Grid (2009) Margam 275kV Substation Environmental Report - Technical Appendix 2 - Invertebrate Survey Report.
- 3.2.2 In addition, a search of invertebrate records within 2km of the Site was requested from South East Wales Biodiversity Records Centre (SEWBRc).

3.3 Survey Area

- 3.3.1 The survey area encompassed all suitable habitats accessible within the Site and the BOC land boundaries ("Study Area") (**Figure 1**).

3.4 Survey Methods

- 3.4.1 Wherever appropriate a wide range of best practice guidance on survey methods was used (see Section 3.4.4). However, the professional judgement and expertise of the surveyors is always important when determining the site conditions and when undertaking detailed assessments. As such, this may require adopting a bespoke approach, which may differ from the published guidance - where this is considered necessary, detailed justification has been provided, as appropriate.
- 3.4.2 A terrestrial and aquatic invertebrate scoping survey was undertaken by David Goddard and Meg Skinner on the 21st and 22nd May 2025. A further three invertebrate surveys were undertaken on 23rd and 24th June by David Goddard and Meg Skinner, 23rd and 24th July by Meg Skinner and Michael Davis and 5th August by David Goddard and Michael Davis.
- 3.4.3 The survey conditions are shown in **Table 3-1**.

Table 3-1. Survey Dates and Weather Conditions

Date	Start Time	End Time	Temperature °C	Cloud Cover (Oktas)	Wind Speed (Beaufort)	Wind Direction	Rain
21/05/25	11:30	16:40	15-20	5/8 – 4/8	2-3	NNW	Nil
22/05/25	09:06	15:05	15-21	1/8 – 0/8	2	N	Nil
23/06/25	12:12	16:40	17	7/8 – 5/8	3	W	Nil
24/06/25	08:21	13:42	17-19	8/8	3	WSW	Drizzle

Invertebrate Survey Report

							with occasional light showers
23/07/25	09:52	16:33	20-21	4/8 – 6/8	2-1	N	Nil
24/07/25	09:39	12:29	20-22	2/8 – 5/8	1	N	Nil
05/08/25	09:05	16:32	16-19	4/8 – 3/8	4-3	NW	Nil

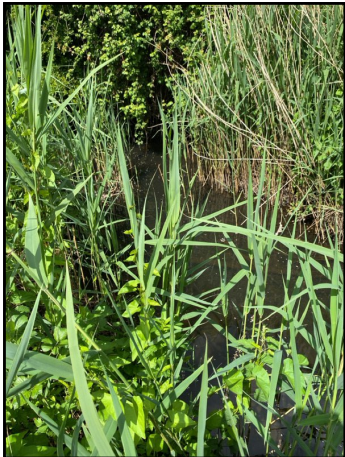
3.4.4 The methodology during all site visits involved a walkover survey of the Study Area (Site and BOC Land) sampling the invertebrates using a range of several different techniques described below, as per Eyre, 1996; Hill et al., 2006 & Sutherland, 2006. The invertebrate survey methods followed standard guidance for terrestrial species (JNCC 2008; English Nature 2005):

- **Sweep netting:** this involves netting invertebrates in low vegetation using a stout-handled net which was moved vigorously through the vegetation to dislodge resting invertebrates. This method can be considered to be quantitative, when carried out using a standardised amount of effort. This method was undertaken within the grassland areas of the Study Area for 10 sweeps on each occasion.
- **Aerial Netting:** netting and capturing for identification any flying invertebrate species. This technique was undertaken in suitable habitats throughout the Study Area. Aerial netting was undertaken throughout the Study Area where flying invertebrates were found.
- **Beating tray:** beating trees and bushes with a stick using a sharp tap to dislodge the invertebrates which then fall onto the beating tray held beneath. This technique was effective in sampling arboreal invertebrate species. This technique was undertaken in suitable habitats throughout the Study Area - along the scrub edges for example.
- **Grubbing:** looking for invertebrates in suitable habitats or microhabitats for example, under stones, logs, under bark, in crevices within walls and rocks, leaf litter, around the base of plants, dead and decaying fungi, dung and carrion. All suitable debris within the Study area was investigated for any invertebrates hiding underneath.
- **Vacuum sampling:** using a battery-powered suction sampler on tussocky vegetation and areas of short turf to target surface-running invertebrates such as ground beetles, spiders and heteropteran bugs.
- **Direct searching:** looking for invertebrates in the suitable habitats or microhabitats for species known or considered likely to occur within the Study Area.
- **Aquatic sampling:** sampling the aquatic invertebrates using a 'D' shaped pond net within a water body, taking care to sample from the different habitat types within the water body to gain as complete a range of invertebrates as possible.
- **Nocturnal moth trapping:** A 20W, battery-powered Heath moth-trap was left out overnight on the 23rd July and positioned at approximately SS78645 86499. This is a light-trap that attracts and traps nocturnal moths and other nocturnally active invertebrates. Specimens caught in the trap were identified and then released the following morning.

3.4.5 Aquatic invertebrate samples were also taken at three locations, see **Table 3-2**.

Invertebrate Survey Report

Table 3-2: Aquatic Invertebrate Survey Locations and Photographs

Sample Point No.	OS Grid Ref.	Photograph of Sample Point
1	SS7866386607	
2	SS7864786621	
3	SS7860086622	

3.5 Invertebrate Identification

- 3.5.1 The invertebrate identification work was completed by David Goddard, Meg Skinner and Michael Davis, using microscopes and appropriate identification books and reference papers for the species being identified.

3.6 Evaluation of Study Area Importance

- 3.6.1 Criteria as set out in Plant (*Undated*) has been used to assess the significance of the Study Area for invertebrates. Plant gives the regional importance criteria as “*Habitat that is scarce or threatened in the region or which has, or is reasonably expected to have, the presence of an assemblage of invertebrates including at least ten Nationally Notable species or at least ten species listed as Regionally Notable for the English Nature region in question in the Recorder database or elsewhere or a combination of these categories amounting to ten species in total*”.
- 3.6.2 Furthermore, the Pantheon tool (database version 3.7.6) was used to analyse the invertebrate species list recorded from the Study Area. The recorded species list was entered into Pantheon and from this, the species and their associated habitats was generated for 385 of the 410 species analysed. Note that the species recorded from both the Site (National Grid land) and the BOC land were entered into Pantheon and analysed as a single data set.
- 3.6.3 The Pantheon (database version 3.7.6) is an online tool developed by Natural England and the Centre for Ecology and Hydrology to analyse invertebrate sample data (Webb *et al.* 2018). This was developed from the ISIS (Invertebrate Species-habitat Information System tool) which was used by Natural England to determine whether SSSIs were in a “Favourable” condition. Note that Pantheon is an analytical tool developed to analyse invertebrate data. The information can be used to determine site quality by revealing whether the species list is indicative of good quality habitat and assists in management decisions by determining key ecological resources (habitats of highest interest) (Webb *et al.*, 2018). Outputs from Pantheon are one tool that can be considered in determining whether a site is suitable for SSSI designation, amongst a number of other criteria, as described in JNCC’s Guidelines for the Selection of Biological SSSIs (Curson *et al.*, 2019)

3.7 Surveyor Qualifications and Experience

- 3.7.1 Senior Invertebrate Ecologist David Goddard BSc (Hons) MCIEEM, Mem.RES has over 16 years’ consultancy experience of undertaking bird and invertebrate surveys and also holds Natural England survey licences for great crested newt, white-clawed crayfish, barn owl and dormouse. David undertook the site surveys assisted by Meg and Michael; David has authored this report.
- 3.7.2 Invertebrate Ecologist Meg Skinner BSc (Hons) MSc ACIEEM, Mem.RES has over 6 years’ consultancy experience of undertaking invertebrate surveys and also holds a Natural England survey license for great crested newts. Meg has also contributed over 2300 invertebrate records of over 800 species to national databases and runs the Harvestman Recording Scheme as part of the British Arachnological Society.
- 3.7.3 Ecologist Michael Davis has an MSc in entomology and has worked in ecological consultancy for two years carrying out invertebrate surveys on a variety of projects. These include invertebrate assemblage assessments for nationally significant infrastructure projects and other planned developments. He has also been involved in numerous species-specific invertebrate assessments (e.g. a grizzled skipper butterfly population and habitat assessment for Natural Resources Wales), SSSI site condition monitoring for Natural England and site invertebrate baseline assessments for rewilding projects.

3.8 Report Qualification

- 3.8.1 The survey described here was undertaken in accordance with the best practice methodologies current at the time of commissioning. Site circumstances, scientific knowledge or methodological requirements can change during the course of a project, and these external factors may impact on the scope of subsequent work requirements.
- 3.8.2 All survey work and reporting were undertaken by experienced and qualified ecologists, in accordance with the Code of Professional Conduct of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 3.8.3 All ecological surveys have an expected validity period owing to the tendency of the natural environment to change over time. This validity period varies from receptor to receptor and is also dependent on the degree of change in a site's management and overall landscape ecology. Where the potential for change is considered to be relevant to the site, this is highlighted in the appropriate section.
- 3.8.4 This report does not purport to provide detailed, specialist legal advice. Where legislation is referenced, the reader should consult the original legal text, and/or the advice of a qualified environmental lawyer.
- 3.8.5 Whilst every effort was made in the field survey to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment. Also, natural and semi-natural habitats are subject to change, species may colonise the site after surveys have taken place and results included in this report may become less reliable over time.
- 3.8.6 Survey data is generally only considered valid if it is from the current or previous active season. In some cases, surveys up to 3 years old may be considered acceptable by consultees if the habitats have not significantly changed in the intervening period.
- 3.8.7 The unseasonably dry spring / summer conditions may have significantly reduced the number of many invertebrate species during 2025, as the terrestrial invertebrates may have been affected by the plants not flowering for very long and the aquatic due to ditches and ponds drying out. Thus, the results of these surveys should be considered in light of this and that the true diversity and number of species present in the Study Area is likely to have been under-recorded this year.

4 Results

4.1 Overview

- 4.1.1 Results of the desk study and field survey are detailed below. Note that the desk study details the relevant records returned from the SEWBRc in 2025, and also summarises the results from the past survey surveys within the study area.

4.2 Desk Study

- 4.2.1 No national or international designated sites designated for invertebrate species were recorded within 2km of the Study Area.
- 4.2.2 The data search from SEWBRc returned numerous records of endangered International Union for Conservation of Nature (IUCN) Red List invertebrate species and SPI species within 2km of the Study Area boundary. The records of most relevance to the Study Area are those from previous survey reports from the Study Area and from the adjacent Tata Steel site, as summarised below. The surveys reported in the 2009 for the Site identified the presence of 402 species of invertebrate, many of these were common and widespread species, with a large proportion being associated with the wetland habitats present at the Site. However, two Priority Species were found: the brown-banded carder bee *Bombus humilis* and the shrill carder bee *Bombus sylvarum*.
- 4.2.3 An invertebrate assessment at the Tata Steel site (to the west of the Survey Area) in 2022 recorded a total of 414 species, of which 28 species are recorded to have national status including scarce butterfly and bee species. The species with the greatest conservation concern were the wall brown butterfly *Lasiommata megera* and the shrill carder bee. That assessment concluded that the area surveyed was of regional importance for its overall invertebrate assemblage.

4.3 Field Survey

- 4.3.1 During this 2025 survey, 436 invertebrate species were recorded within the Study Area. A full list of the species recorded within the Study Area along with their status is provided in **Appendix A**. The location of the protected or notable species are provided in the table at Appendix B.
- 4.3.2 Of the 436 species which could be identified, the following species of importance were present:
- x8 are Environment (Wales) Act (2016) Section 7 (Env (Wales) Act S7) listed species
 - x3 are Nationally Notable A
 - x9 are Nationally Notable B
 - x1 is Nationally Rare
 - x9 are Nationally Scarce
 - x2 are International Union for Conservation of Nature (IUCN) GB Red List Post 2001 Near Threatened
 - x1 is IUCN GB Red List Post 2001 Vulnerable

- x161 are IUCN GB Red List Post 2001 Least Concern
- x1 is IUCN GB Pre 1994 Insufficient information

Protected/Notable Invertebrate Species Recorded

- 4.3.3 The following protected and/or notable species were recorded from the Study Area. A summary of their key behaviours and habitat preferences is provided for each.

A solitary wasp *Argogorytes fargeii* Notable A

- 4.3.4 Occurs in a variety of open habitats on light soils, including heaths, quarries and gravel pits, river corridors featuring clay or sandy river banks, fixed coastal dunes and soft rock cliffs. Within these it requires features such as vertical earth banks or sparsely vegetated dry ground for nesting, in combination with areas of tall grass or herbs for hunting. Univoltine, flying from late May to early August. This wasp preys on frog-hopper nymphs *Homoptera: Cercopidae*, especially *Philaenus spumarius* and *Aphrophora alni*. Nests occur in vertical cliffs or sparsely vegetated slopes of sand, clay or gravel, often in the company of eumenid wasps (*Odynerus* species). Specific nesting locations noted in Britain include river banks, the bases of coastal cliffs and the sides of quarries. Nests can occur in small aggregations. The main nest tunnel runs for 10-20 cm, giving rise to 6-9 cells. These are typically stocked with 18-25 prey items. Flowers visited are umbellifers such as wild parsnip *Pastinaca sativa* and hogweed *Heracleum sphondylium*, also spurges *Euphorbia* spp. On the Continent, Kullenberg states that males are important pollinators of the fly orchid *Ophrys insectifera* (Falk, 2001).

Musk beetle *Aromia moschata* IUCN GB Post 2001 LC, Notable B

- 4.3.5 This scarce beetle is widespread in the Cambridgeshire fens and otherwise very locally distributed throughout Britain. The typical habitats are wetland and marginal situations with an abundance of the host; various species of willow *Salix*, and often found visiting umbel flowers (*Apiaceae*) (Duff, 2016).

Brown-banded carder bee *Bombus humilis* Env (Wales) Act S7

- 4.3.6 This species is strongly associated with areas of tall, but open, grasslands supporting a good proportion of perennial plants, especially those in the families *Fabaceae*, *Lamiaceae* and *Scrophulariaceae*. Overwintered queens search for nesting sites during May and early June. Workers fly between June and September; males during August and September. *Bombus humilis* queens found nests on the surface of the ground in moderately tall, open grassland. They may well use an old mouse nest as a base. The nest is covered with fragments of dead grass and moss which are gathered, initially by the queen and later by the workers (BWARS, undated a).

Bulrush veneer *Calamotropha paludella* Notable B

- 4.3.7 Sexually dimorphic, the males are slightly smaller and darker than the females. Both sexes have bright white hindwings. Scarce and locally distributed in marshes, fens and other wet habitats in south and south-east England, with some records as far north as Cheshire and Lancashire. The adults fly in July and August and are attracted to light. The slender larva mines the leaves, stems and upper rootstock of bulrush *Typha* spp. from September to May, pupating there in June and July (UK Moths, undated a).

Musk-thistle blacklet *Cheilosia cynocephala* NS

- 4.3.8 The larva tunnels the stems of Musk Thistles *Carduus nutans* but an association with Welled Thistle *C. crispus* has also been noted in Warwickshire. Adults are usually found in

unimproved calcareous grassland where the larval food plant occurs, often near rivers, streams or flushes. Adults fly low amongst the vegetation and visit a range of flowers including white umbels and yellow composites (Hoverfly Recording Scheme, undated).

Latticed heath *Chiasmia clathrate* Env (Wales) Act S7

- 4.3.9 Found around lucerne crops, but occurs elsewhere in open ground, including gardens, waste ground, calcareous grassland, fens, open woodland, heathland and moorland. Caterpillars feed on clovers *Trifolium* sp., trefoils *Lotus* sp. and lucerne *Medicago sativa* (UK Moths, undated b; Butterfly Conservation, undated a).

Square spot deerfly *Chrysops viduatus* IUCN GB Post 2001 LC, NS

- 4.3.10 Most records come from south of a line between the wash and the River Seven, although there are a few records from Wales and near the coast in south Cumbria. It can be found in a variety of habitats but most frequently in wet grasslands, mires, at water margins and in wet woods. Adults are recorded from May to September, peaking in July (Stubbs and Drake, 2014).

Small heath *Coenonympha pamphilus* IUCN GB Post 2001 NT, Env (Wales) Act S7

- 4.3.11 The small heath occurs on grassland where there are fine grasses, especially in dry, well-drained situations where the sward is short and sparse. Typical habitats include; heathland, downland and coastal dunes, but it is also found on road verges, moorland and in woodland rides. The caterpillar feeds on fine grasses, especially fescues *Festuca* spp., meadow-grasses *Poa* spp., and bents *Agrostis* spp. (Butterfly Conservation, undated b)

A whirligig beetle *Gyrinus suffriani* IUCN GB Post 2001 VU

- 4.3.12 Adults usually occur in small numbers and seem to prefer well-vegetated marginal areas of still and slow-moving water, sometimes open areas of flooded reed bed margins or fen ditches, and are notably fast moving on the surface although they probably spend much of their time submerged. The predaceous larvae develop among aquatic vegetation but leave the water to pupate in a cell constructed of plant debris (Foster and Friday 2011).

The crescent *Helotropha leucostigma* Env (Wales) Act S7

- 4.3.13 Locally widespread throughout Britain, this is a species of damp, marshy woodland and moorland. In addition to the typical form there is a well-marked variation, ab. *fibrosa*, which is just as frequent, as well as several intermediate forms. It flies in August and September, the eggs overwintering and hatching in spring when the larvae feed on the stems of marshland plants, such as yellow flag *Iris pseudacorus* (UK Moths, undated c).

Rosy rustic *Hydraecia micacea* Env (Wales) Act S7

- 4.3.14 Common and widespread throughout the British Isles, this species has a wide variation both in colour and size. It is on the wing from August to October and frequents waste ground, marshy areas, and other places where the foodplants grow. The larvae live on a range of low plants, but especially dock *Rumex* spp., feeding beneath the ground on the roots (UK Moths, undated d).

Lobe-spurred furrow bee *Lasioglossum pauxillum* Notable A

- 4.3.15 This bee is found mainly in open sites, including chalk grassland and woodland where it nests in small to large aggregations, mainly on level, sparsely vegetated soil. It has been recorded visiting plants include bramble *Rubus fruticosus* agg., common fleabane *Pulicaria*

dysenterica, dandelion *Taraxacum* agg. and hogweed *Heracleum sphondylium* (BWARS, undated b).

Wall *Lasiommata megera* IUCN GB Post 2001 NT, Env (Wales) Act S7

- 4.3.16 This species is now found primarily in coastal areas, especially unimproved grassland, wasteland, cliff edges and hedgerows. The caterpillar feed on various grasses, including tor-grass *Brachypodium pinnatum*, false brome *Brachypodium sylvaticum*, cock's-foot *Dactylis glomerata*, bents *Agrostis* spp., wavy hair-grass *Deschampsia flexuosa* and Yorkshire-fog *Holcus lanatus* (Butterfly Conservation, undated c).

Silvery leafcutter bee *Megachile leachella* Notable B

- 4.3.17 Mainly found on coastal sand dunes. There are, however, a few inland sites, most of which are on sandy soils. For example, in June 2005, D Baldock encountered an extensive nesting aggregation in a sand pit at Wrecclesham, Surrey, and there are confirmed records from localities well inland in Hertfordshire and Suffolk. Univoltine, flying from June to late August. Nest burrows are excavated in the soil. Occasionally nests occur in compact and extensive aggregations. Cut leaf sections from numerous species of plants have been reported, including petals of common bird's-foot-trefoil *Lotus corniculatus*. Flowers visited common and greater bird's-foot-trefoil *Lotus corniculatus* & *Lotus pedunculatus*, brambles *Rubus fruticosus* agg., white bryony *Bryonia dioica*, wild carrot *Daucus carota*, creeping cinquefoil *Potentilla reptans*, hare's-foot clover *Trifolium arvense*, white clover *Trifolium repens*, cowbane *Cicuta virosa*, bloody crane's-bill *Geranium sanguineum*, germanders *Teucrium* spp., hawk's-beards *Crepis* spp., lizard orchid *Himantoglossum hircinum*, bog pimpernel *Anagallis tenella*, ragwort *Senecio jacobaea*, restharrow *Ononis* sp., sea-holly *Eryngium maritimum*, sheep's-bit *Jasione montana*, squill *Scilla* sp., English stonecrop *Sedum anglicum*, thyme *Thymus* sp., viper's-bugloss *Echium vulgare*. Males have been found sheltering within the corollas of sea bindweed *Calystegia soldanella* (BWARS, undated c).

Fen snout *Nemotelus pantherinus* IUCN GB Post 2001 LC, NS

- 4.3.18 The typical long-faced form of the species is fairly widespread in the southern half of England and Wales but scarce in the north. All Irish specimens belong to the short-faced form which is also known from East Anglia. Adults are most closely associated with seepages, including damp fen and meadows where there is no obvious surface water in the summer. Sometimes they are found beside calcareous streams, ponds and ditches. Larvae have been found at seepages in moss covered by a veneer of flowing water and in fen. Adults are present from June to August (Stubbs and Drake, 2014).

The interrupted burying beetle *Nicrophorus interruptus* IUCN GB Post 2001 LC, NS, Notable B

- 4.3.19 The species is often recorded from open sites on light sandy or chalky soils but more generally it may occur at carrion in almost any situation from woodland, parkland, moorland and coastal dunes to shaded woodland and wetland margins. Adults are strongly attracted to carrion, and upon arrival a single male or female will defend it against others of the same sex until a suitable partner arrives, at which time they will mate and begin to bury the host material. If necessary, they will remove parts of the carcass before crawling beneath it and excavating until it is buried, they will then form it into a food ball by removing fur or feathers and moulding it into a ball before spreading preserving excretions across the surface. The female will then lay eggs, either on top of the food ball or in the soil nearby, and both adults will remain until the larvae emerge and make their way to the host material (Lane, Lucas & Whiffin, 2021).

Bleeding heart spider *Nigma puella* IUCN GB Post 2001 LC, NS

- 4.3.20 The bleeding heart spider occurs on low broad-leaved bushes and shrubs in hedgerows and gardens, but also sometimes in scrub and open woodland. It spins a small web on the surface of leaves. The excessive trimming and loss of hedgerows is likely to threaten this species. Where the species occurs on hedgerows between arable fields the spider and its potential prey are presumably threatened by spray drift from pesticides (British Arachnological Society, updated a).

Six-spotted wasp-cuckoo *Nysson trimaculatus* Notable B

- 4.3.21 Recorded from a variety of open habitats on light soils, including heathland, dry grassland and scrub, open woodland, coastal landslips and soft rock cliffs, quarries and other post-industrial sites and occasionally heavily urbanised locations. Three specimens were even obtained from a roadside hedge in central London. Usually observed running on sparsely-vegetated ground or low herbage. Flying from early June to early September. Specimens have occasionally been observed running over sycamore *Acer pseudoplatanus* leaves, presumably attracted by honeydew (BWARS, undated d).

A rove beetle *Paederus fuscipes* Notable B

- 4.3.22 This species occurs around plant roots in wetlands and permanently wet situations, including saltmarshes and mires, and adults are usually common where they occur. They have been found among sedges in peat bogs in Somerset and among sphagnum in South Hampshire (Duff, 2024).

A wolf spider *Pardosa tenuipes* IUCN GB Post 2001 LC, NS

- 4.3.23 *Pardosa tenuipes* can be found in a variety of sparsely vegetated habitats but typically occurs in moist and marshy places. The species is most likely to be found at coastal sites including earthy cliffs, saltmarsh, dune slacks and in streamside habitats including exposed riverine sediments. *P. tenuipes* has also been recorded from lowland heaths and gardens (British Arachnological Society, updated b).

A weevil *Polydrusus formosus* Notable A

- 4.3.24 Hosts includes a wide range of broadleaf trees e.g. *Quercus*, *Corylus*, *Crataegus*, *Populus* and *Prunus* etc. but they are mostly found on *Betula*, the typical habitats are wooded areas but they may occur wherever suitable hosts are established. Adults occur from April or May until July or a little later, they browse on leaf and flower buds, young leaves and open blossom. Oviposition occurs in the spring after a period of maturation feeding; eggs are laid singly or in small batches in the soil and larvae develop through the spring and summer feeding upon roots, they are fully developed by late summer or autumn and remain in the soil to overwinter, pupation occurs in a subterranean cell in the spring (Duff, 2016).

Scarce cardinal beetle *Schizotus pectinicornis* IUCN GB Post 2001 LC, NR

- 4.3.25 The typical habitat is deciduous woodland where the adults may be seen on low herbaceous vegetation or fallen timber, especially birch *Betula*. They are active in bright sun and disperse by flight although they rarely occur far from their breeding sites. Larvae develop beneath bark feeding on organic detritus and dead insects etc (Duff, 2020).

A rove beetle *Sepedophilus constans* IUCN GB Post 2001 LC, NS, Notable B

- 4.3.26 Habitats: woodland in upland, moorland, river valleys. Under bark, in fungi and ground layer. Distribution: Mainly northern and western (Lane, 2019).

A rove beetle *Stenus nigrutilus* Notable B

- 4.3.27 At plant roots in richly vegetated ditches, salt marshes, and the banks of lakes and rivers. Adults from January to December. Very local in England, Wales, south Scotland and Ireland. Rare (Duff, 2024).

A jumping spider *Synageles venator* IUCN GB Post 2001 LC, NS

- 4.3.28 *Synageles venator* occurs in sand dunes on the coast, usually low down among marram, and among similar tussocky vegetation in fens. More recently it has been found in two old brick-pits, in one case on a fairly steep bank with *Phragmites* and partial vegetation cover near the margin of a pool and in traps set in weathered PFA 'dune' with nearby areas of *Phragmites* and 'fen' vegetation. It has also been recorded from scrub on a number of occasions and found on a gatepost and post-and-rail fencing. The spider is an ant-mimic, usually found in association with ants (British Arachnological Society, updated c).

Blood vein *Timandra comae* Env (Wales) Act S7

- 4.3.29 The blood-vein moth can be seen during the day around low vegetation. They overwinter as larvae which can be seen in July and from September to the following April. They pupate near the ground among plant debris. The caterpillar feeds on low lying plants such as docks, common sorrel *Rumex acetosa* and knotgrass *Polygonum aviculare*. The habitats that the blood-vein moth is found in includes hedgerows, ditches, wet meadows, gardens and woodland (UK Moths, undated e; Butterfly Conservation, undated d).

The cinnabar *Tyria jacobaeae* Env (Wales) Act S7

- 4.3.30 The cinnabar moth it is generally nocturnal, but is quite often disturbed during the day from long grass, low herbage. The caterpillar feeds gregariously on ragwort *Senecio jacobaea* and other related plants (UK Moths, undated f).

A money spider *Walckenaeria kochi* IUCN GB Post 2001 LC, NS

- 4.3.31 The spider occurs at the roots of vegetation, generally in moorland, marshes and bogs, or on river banks and wet areas on the coast including saltmarsh and brackish grassland (British Arachnological Society, updated d).

A rove beetle *Stenus ater* Notable B

- 4.3.32 In haystack refuse, straw stacks etc., usually on dry calcareous soils. Adults in January, March to September, November to December. Very local in England and Wales, declining. Rare (Duff, 2024).

5 Evaluation and Conclusion

- 5.1.1 Based on the data collected from the four survey visits, as assessing against the criteria set out in Plant (*undated*), the Site and the BOC land (the Survey Area) together have been assessed as being of at least Regional importance for invertebrates, due to the total number of protected and/or notable species that were recorded.
- 5.1.2 With specific regard to dragonflies and damselflies and the identification of priority sites for these species, the British Dragonfly Society states that for Vice County 41 Glamorganshire, a total of 13 species should be present for a site to be regarded as a locally important site for dragonflies (BDS, 2022). Eleven species were recorded within the Study Area during the surveys and it is considered that in another year, with more typical temperatures and rainfall levels, the Study Area has the potential to contain a further five species and thus it could meet the threshold for a priority site in Glamorganshire.
- 5.1.3 Further analysis of the recorded species from the Survey Area within Natural England's online tool Pantheon (Webb *et al.* 2018) resulted in the identification of the following habitat assemblages and their associated condition within the Study Area (covering both the Site and the BOC land) (see **Table 5-1**). Two of the identified habitat assemblages met the assessment criteria for Favourable condition, these being *Open Habitats – Rich Flower Resource* and *Open Habitats – Scrub Edge*. The remaining habitat assemblages identified were all considered to be in Unfavourable condition.
- 5.1.4 As the Pantheon tool was partly developed from a predecessor tool to determine the condition of SSSIs with respect to their invertebrate interest, the Survey Area could potentially be considered of National importance, with respect to *Open Habitats – Rich Flower Resource* and *Open Habitats – Scrub Edge*. However, the footprint of the Proposed Development largely falls within the "Wetland" broad biotype which does not meet Favourable condition. The "open habitats" which were found to be Favourable were mostly associated with the more floristically diverse grassland along the edge of existing tracks and associated scrub edge habitats.

Table 5-1: Pantheon Output: Specific Assemblage Type Condition Assessment (whole Survey Area)

Broad biotype	Habitat	Specific Assemblage Type	No. of Species	Condition
Open habitats	N/A	Rich flower resource	27	Favourable (27 species, 15 required)
Open habitats	N/A	Scrub edge	16	Favourable (16 species, 11 required)
Tree associated	Decaying wood	Bark & sapwood decay	15	Unfavourable (15 species, 19 required)
Open habitats	Short sward & bare ground	Open short sward	10	Unfavourable (10 species, 13 required)
Wetland	Acid & sedge peats	Reed-fen & pools	5	Unfavourable (5 species, 11 required)
Open habitats	Short sward & bare ground	Bare sand and chalk	5	Unfavourable (5 species, 19 required)
Tree associated	Decaying wood	Heartwood decay	2	Unfavourable (2 species,

Invertebrate Survey Report

				6 required)
Open habitats		Scrub heath and moorland	1	Unfavourable (1 species, 9 required)
Wetland	Marshland	Undisturbed fluctuating marsh	1	Unfavourable (1 species, 4 required)
Wetland	Acid & sedge peats	Moss & tussock fen	1	Unfavourable (1 species, 6 required)

6 References

British Arachnological Society (updated a) Spider and Harvestman Recording Scheme website Summary for *Nigma puella* (Araneae) [Online] Available at:

<https://srs.britishspiders.org.uk/portal.php/p/Summary/s/Nigma+puella>

British Arachnological Society (updated b) Spider and Harvestman Recording Scheme website Summary for *Pardosa tenuipes* (Araneae) [Online] Available at:

<https://srs.britishspiders.org.uk/portal.php/p/Summary/s/Pardosa+tenuipes>

British Arachnological Society (updated b) Spider and Harvestman Recording Scheme website Summary for *Synageles venator* (Araneae) [Online] Available at:

<https://srs.britishspiders.org.uk/portal.php/p/Summary/s/Synageles+venator>

British Arachnological Society (updated b) Spider and Harvestman Recording Scheme website Summary for *Walckenaeria kochi* (Araneae) [Online] Available at:

<https://srs.britishspiders.org.uk/portal.php/p/Summary/s/Walckenaeria+kochi>

British Dragonfly Society (BDS)(2022) Priority Site Assessment Instructions Guidance on assessing the value of a site for Dragonflies [Online] Available at: <https://british-dragonflies.org.uk/wp-content/uploads/2019/04/Priority-Site-Assessment-Instructions-2.pdf>

Butterfly Conservation (undated a) Latticed Heath *Chiasmia clathrate* [Online] Available at: <https://butterfly-conservation.org/moths/latticed-heath>

Butterfly Conservation (undated b) Small Heath *Coenonympha pamphilus* [Online] Available at: <https://butterfly-conservation.org/butterflies/small-heath>

Butterfly Conservation (undated c) Wall *Lasiommata megera* [Online] Available at: <https://butterfly-conservation.org/butterflies/wall>

Butterfly Conservation (undated d) Blood-vein *Timandra comae* [Online] Available at: <https://butterfly-conservation.org/moths/blood-vein>

BWARS (undated a) *Bombus humilis* Illiger, 1806 [Online] Available at: <https://bwars.com/bee/apidae/bombus-humilis>

BWARS (undated b) *Lasioglossum pauxillum* (Schenck, 1853) [Online] Available at: <https://bwars.com/bee/halictidae/lasioglossum-pauxillum>

BWARS (undated c) *Megachile leachella* Curtis, 1828 [Online] Available at: <https://bwars.com/index.php/bee/megachilidae/megachile-dorsalis>

(BWARS, undated d) *Nysson trimaculatus* (Rossi, 1790) [Online] Available at: <https://bwars.com/wasp/crabronidae/nyssoninae/nysson-trimaculatus>

Conops Entomology Ltd. (2022) Tata Steel, Port Talbot an Invertebrate Assessment

Invertebrate Survey Report

Curson J., Howe, M, Webb, J., Heaver D. & Tonhasca, A. 2019. Guidelines for the Selection of Biological SSSIs Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 20 Invertebrates. Joint Nature Conservation Committee, Peterborough.

Duff, A.G. (2016). Beetles of Britain and Ireland. volume 4: Cerambycidae to Curculionidae. West Runton: AG Duff publishing

Duff, A.G. (2020) Beetles of Britain and Ireland volume 3: Geotrupidae to Scaptiidae. West Runton, Norfolk.

Duff, A.G. (2024) Beetles of Britain and Ireland volume 2: Staphylinidae. West Runton, Norfolk.

English Nature (2005). Organising Surveys to Determine Site Quality for Invertebrates: A Framework Guide for Ecologists. English Nature, Peterborough.

Eyre, M.D. (1996) Environmental monitoring, surveillance and conservation using invertebrates. EMS publications, Newcastle upon Tyne.

Falk, S J (2001) *Argogorytes fargeii* (Shuckard, 1837) Bees Wasps & Ants Recording Society [Online] Available at: [Argogorytes fargeii | BWARS](#)

Foster, G.N. & Friday, L.E. (2011). Keys to the adults of the water beetles of Britain and Ireland (Part 1). Field Studies Council: Shrewsbury

Hill, D., Fasham, M., Tucker, G., Shewry, M. and Shaw, P. (2006) Handbook of biodiversity methods survey, evaluation and monitoring. Cambridge university press, Cambridge.

Hoverfly Recording Scheme (undated) *Cheilosia cynocephala* Loew, 1840 [Online] Available at: <https://hoverfly.uk/hrs/taxonomy/term/460>

Joint Nature Conservation Committee (2008). Common Standards Monitoring Guidance for Invertebrates, Version March 2008. JNCC, Peterborough.

Lane, S.A., 2019. A review of the status of the beetles of Great Britain – The Staphylinidae: Tachyporinae beetles. Natural England Commissioned Reports No. 265

Lane S.A., Lucas C.B.H., Whiffin A.L. (2021) The Histeridae, Sphaeritidae and Silphidae of Britain and Ireland. Field Studies Council, 2021.

National Grid (2009) Margam 275kV Substation Environmental Report - Technical Appendix 2 - Invertebrate Survey Report.

Plant, C. (undated) Criteria used to define significance of invertebrate habitat. Colin Plant Associates, consultant entomologists.

Stubbs, A. and Drake, M. (2014) British soldierflies and their allies. British entomological and natural history society, Reading.

Sutherland W J (ed.) 2006. Ecological Census Techniques 2nd edition. A Handbook. CUP

UKMoths (undated a) *Calamotropha paludella* [Online] Available at:
<https://www.ukmoths.org.uk/species/calamotropha-paludella>

UKMoths (undated b) Latticed Heath *Chiasmia clathrata* [Online] Available at:
<https://www.ukmoths.org.uk/species/chiasmia-clathrata>

UKMoths (undated c) The crescent *Helotropha leucostigma* [Online] Available at:
<https://www.ukmoths.org.uk/species/helotropha-leucostigma/>

UKMoths (undated d) Rosy rustic *Hydraecia micacea* [Online] Available at:
<https://www.ukmoths.org.uk/species/hydraecia-micacea/>

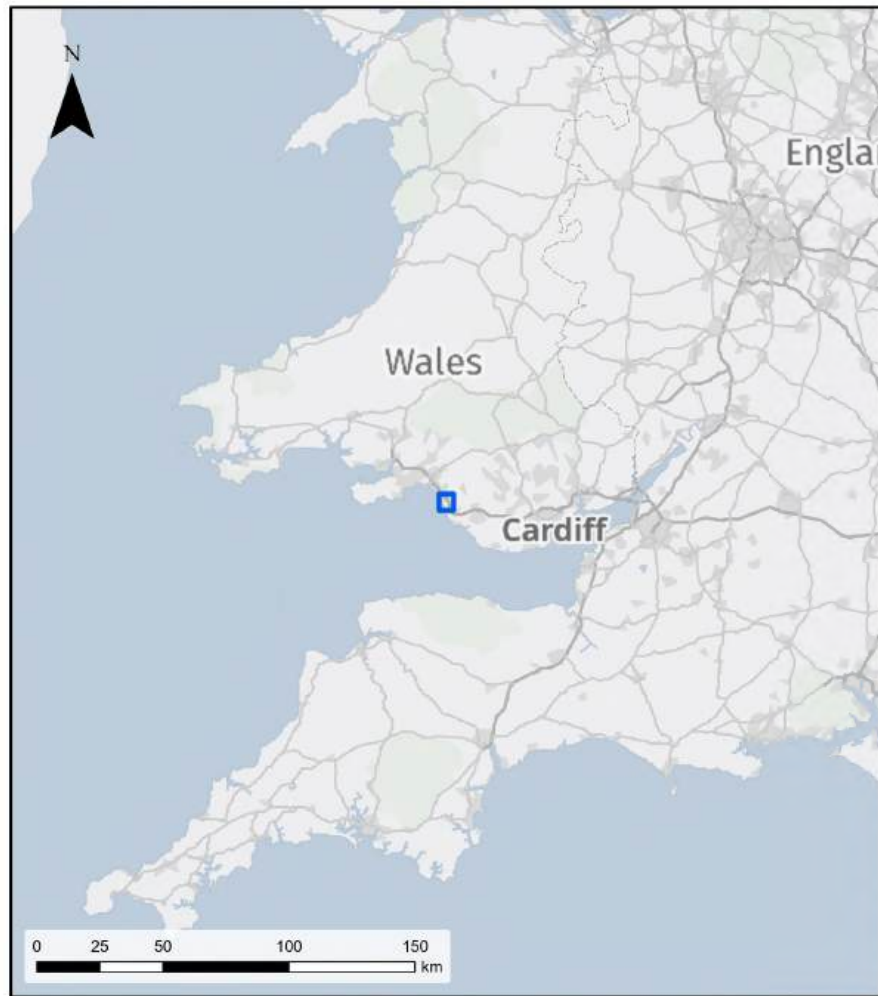
UKmoths (undated e) blood-vein *Timandra comae* [Online] Available at:
<https://www.ukmoths.org.uk/species/timandra-comae/>

UKMoths (undated f) The Cinnabar *Tyria jacobaeae* [Online] Available at:
<https://www.ukmoths.org.uk/species/tyria-jacobaeae>

Webb, J., Heaven, D., Lott, D., Dean, H.J., van Breda, J., Curson, J., Harvey, M.C., Gurney, M., Roy, D.B., van Breda, A., Drake, M., Alexander, K.N.A. and Foster, G. (2018) Pantheon - database version 3.7.6 [Online] Available at: <https://pantheon.brc.ac.uk/>

7 Figures

Figure 1 Site Location Plan



Appendix A Invertebrate Species Recorded & Status

KEY:

EnvW S7	Env (Wales) Act S7 listed species
IUCN GB Post 2001 NT	IUCN GB Red List Post-2001 Near Threatened
IUCN GB Post 2001 VU	IUCN GB Red List Post 2001 Vulnerable
IUCN GB Post 2001 LC	IUCN GB Red List Post-2001 Least Concern
IUCN GB Pre 1994 Insu	IUCN GB Red List Pre 1994 Insufficient information
Notable A	Nationally Scarce A – species occurring in 16-30 hectads in Great Britain
Notable B	Nationally Scarce B – species occurring in 31-100 hectads in Great Britain
NR	Nationally rare
NS	Nationally scarce

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Acupalpus dubius</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Acupalpus parvulus</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Adelphocoris lineolatus</i>	Lucerne bug	-	T
<i>Aelia acuminata</i>	Bishop's mitre shieldbug	IUCN GB Post 2001 LC	T
<i>Aeshna cyanea</i>	Southern hawkler	IUCN GB Post 2001 LC	T
<i>Agelena labyrinthica</i>	Labyrinth spider	IUCN GB Post 2001 LC	T
<i>Agelenatea redii</i>	An orb-web spider	-	T
<i>Aglais io</i>	Peacock	IUCN GB Post 2001 LC	T
<i>Aglais urticae</i>	Small tortoiseshell	IUCN GB Post 2001 LC	T
<i>Agonum fuliginosum</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Agrotis puta</i>	Shuttle-shaped dart	-	T
<i>Agrypnus murinus</i>	A click beetle	-	T
<i>Altica sp.</i>	A leaf beetle	-	T
<i>Amblyteles armatorius</i>	An ichneumon wasp	-	T
<i>Anax imperator</i>	Emperor dragonfly	IUCN GB Post 2001 LC	T
<i>Anchomenus dorsalis</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Andrena nigroaenea</i>	Buffish mining bee	-	T
<i>Aneurus avenius</i>	A flatbug	-	T
<i>Anisus vortex</i>	Whirlpool ramshorn	IUCN GB Post 2001 LC	A
<i>Anthocomus rufus</i>	Red malachite beetle	IUCN GB Post 2001 LC	T
<i>Anthocoris nemorum</i>	Common flower bug	-	T
<i>Anthophila fabriciana</i>	Nettle moth	-	T
<i>Antistea elegans</i>	Marsh combtail spider	IUCN GB Post 2001 LC	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Apamea monoglypha</i>	Dark arches	-	T
<i>Aphomia sociella</i>	Bee moth	-	T
<i>Aphthona lutescens</i>	A flea beetle	IUCN GB Post 2001 LC	T
<i>Aphthona nonstriata</i>	Iris flea beetle	IUCN GB Post 2001 LC	T
<i>Apis mellifera</i>	Honeybee	-	T
<i>Apolygus spinolae</i>	A mirid bug	-	T
<i>Araneus diadematus</i>	Garden cross spider	IUCN GB post 2001 LC	T
<i>Araneus quadratus</i>	Four-spotted orb weaver	IUCN GB Post 2001 LC	T
<i>Araniella cucurbitina</i>	Cucumber spider	IUCN GB Post 2001 LC	T
<i>Arctosa leopardus</i>	A bear spider	IUCN GB Post 2001 LC	T
<i>Arge pagana</i>	Common rose fusehorn sawfly	-	T
<i>Argiope bruennichi</i>	Wasp spider	IUCN GB Post 2001 LC	T
<i>Argogorytes fargeii</i>	A solitary wasp	Notable A	T
<i>Armadillidium nasatum</i>	A pill woodlouse	IUCN GB Post 2001 LC	T
<i>Armadillidium vulgare</i>	Common pill woodlouse	IUCN GB Post 2001 LC	T
<i>Aromia moschata</i>	Musk beetle	IUCN GB Post 2001 LC, Notable B	T
<i>Asellus aquaticus</i>	Water hog louse	IUCN GB Post 2001 LC	A
<i>Athalia cordata</i>	Bugle tigress	-	T
<i>Athalia rosae</i>	Turnip sawfly	-	T
<i>Autographa gamma</i>	Silver Y	-	T
<i>Bactra sp.</i>	A moth	-	T
<i>Balea perversa</i>	Tree snail	IUCN GB Post 2001 LC	T
<i>Balea sarsii</i>	A snail	IUCN GB Post 2001 LC	T
<i>Bathyphantes gracilis</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Bembidion articulatum</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Bembidion properans</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Beris vallata</i>	Common orange legionnaire fly	IUCN GB Post 2001 LC	T
<i>Bithynia tentaculata</i>	Common bithynia	IUCN GB Post 2001 LC	T
<i>Bombus hortorum</i>	Garden bumblebee	-	T
<i>Bombus humilis</i>	Brown-banded carder bee	EnvW S7	T
<i>Bombus lapidarius</i>	Red tailed bumblebee	-	T
<i>Bombus lucorum agg.</i>	White tailed bumblebee	-	T
<i>Bombus pascuorum</i>	Common carder bumblebee	-	T
<i>Bombus pratorum</i>	Early bumblebee	-	T
<i>Bombus terrestris</i>	Buff-tailed bumblebee	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Brachytron pratense</i>	Hairy dragonfly	IUCN GB Post 2001 LC	T
<i>Bruchus loti</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Cabera exanthemata</i>	Common wave	-	T
<i>Cabera pusaria</i>	Common white wave	-	T
<i>Calameuta filiformis</i>	Dark-legged stem-sawfly	-	T
<i>Calamotropha paludella</i>	Bulrush veneer	Notable B	T
<i>Callimorpha dominula</i>	Scarlet tiger	-	T
<i>Calopteryx splendens</i>	Banded demoiselle	IUCN GB Post 2001 LC	T
<i>Cantharis pallida</i>	A soldier beetle	IUCN GB Post 2001 LC	T
<i>Capsus ater</i>	Black plant bug	-	T
<i>Carabus granulatus</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Carpophilus marginellus</i>	A beetle	-	T
<i>Cassida vibex</i>	A tortoise beetle	IUCN GB Post 2001 LC	T
<i>Celypha lacunana</i>	Common marble	-	T
<i>Cepaea hortensis</i>	White lipped banded snail	IUCN GB post 2001 LC	T
<i>Cepaea nemoralis</i>	Brown-lipped banded snail	IUCN GB Post 2001 LC	T
<i>Cephus spinipes</i>	Angled stem-sawfly	-	T
<i>Ceratapion onopordi</i>	A weevil	-	T
<i>Cetema sp.</i>	A grass fly	-	T
<i>Cheilosia bergenstammi</i>	A hoverfly	-	T
<i>Cheilosia cynocephala</i>	Musk-thistle blacklet	NS	T
<i>Cheilosia fraterna</i>	A hoverfly	-	T
<i>Cheilosia illustrata</i>	Bumblebee blacklet	-	T
<i>Cheliosia vulpina</i>	A hoverfly	-	T
<i>Chiasmia clathrata</i>	Latticed heath	EnvW S7	T
<i>Chorthippus brunneus</i>	Field grasshopper	IUCN GB Post 2001 LC	T
<i>Chrysogaster cemiteriorum</i>	A hoverfly	-	T
<i>Chrysolina polita</i>	Knotgrass leaf beetle	IUCN GB Post 2001 LC	T
<i>Chrysomela populi</i>	Red poplar leaf beetle	IUCN GB post 2001 LC	T
<i>Chrysoperla carnea</i>	Common green lacewing	-	T
<i>Chrysopilus cristatus</i>	Black snipefly	IUCN GB Post 2001 LC	T
<i>Chrysops relictus</i>	Twin lobed deerfly	IUCN GB Post 2001 LC	T
<i>Chrysops viduatus</i>	Square spot deerfly	IUCN GB Post 2001 LC, NS	T
<i>Chrysotoxum bicinctum</i>	Two-banded spearhorn	-	T
<i>Chrysotoxum sp.</i>	A hoverfly	-	T
<i>Cicadella viridis</i>	Green leafhopper	-	T
<i>Cleigastra apicalis</i>	Reedbed dungfly	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Clogmia albipunctata</i>	A drain fly	-	T
<i>Closterotomus norvegicus</i>	Potato capsid bug	-	T
<i>Clubiona phragmitis</i>	A spider	IUCN GB Post 2001 LC	T
<i>Clytus arietis</i>	Wasp beetle	IUCN GB Post 2001 LC	T
<i>Coccidula rufa</i>	red marsh ladybird	-	T
<i>Coccinella septempunctata</i>	7 spot ladybird	-	T
<i>Cochlicopa lubrica</i>	Slippery moss snail	-	T
<i>Cochylis hybridella</i>	White-fronted straw	-	T
<i>Coelositona cambricus</i>	A weevil	-	T
<i>Coelostoma orbiculare</i>	A beetle	-	T
<i>Coenagrion puella</i>	Azure damselfly	IUCN GB Post 2001 LC	T
<i>Coenonympha pamphilus</i>	Small heath	IUCN GB Post 2001 NT, EnvW S7	T
<i>Coenosia tigrina</i>	A muscid fly	-	T
<i>Collembola sp.</i>	A springtail	-	T
<i>Collita griseola</i>	Dingy footman	-	T
<i>Conocephalus discolor</i>	Long winged conehead	-	T
<i>Conocephalus dorsalis</i>	Short winged conehead	IUCN GB Post 2001 LC	T
<i>Conops quadrifasciatus</i>	Four banded bee grabber	-	T
<i>Contacyphon padi</i>	A marsh beetle	-	T
<i>Cordilura ciliata</i>	A fly	-	T
<i>Coreus marginatus</i>	Dock bug	IUCN GB Post 2001 LC	T
<i>Coriomeris denticulatus</i>	Denticulate leatherbug	IUCN GB Post 2001 LC	T
<i>Corizus hyoscyami</i>	Cinnamon bug	IUCN GB Post 2001 LC	T
<i>Cornu aspersum</i>	Garden snail	IUCN GB Post 2001 LC	T
<i>Crepidodera aurata</i>	Willow flea beetle	IUCN GB Post 2001 LC	T
<i>Crocallis elinguaris</i>	Scalloped oak	-	T
<i>Crossocerus podagricus</i>	A boxhead wasp	-	T
<i>Cryptocephalus aureolus</i>	Green pot beetle	IUCN GB Post 2001 LC	T
<i>Cryptocephalus fulvus</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Cteniopus sulphureus</i>	Sulphur beetle	IUCN GB Post 2001 LC	T
<i>Cymus melanocephalus</i>	A ground bug	-	T
<i>Demetrias atricapillus</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Deraeocoris flavilinea</i>	A plant bug	-	T
<i>Deraeocoris ruber</i>	Red-spotted plant bug	-	T
<i>Dicranopalpus ramosus</i>	A harvestman	-	T
<i>Dilophus febrilis</i>	Common fever fly	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Diplocephalus permixtus</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Dolerus sp.</i>	A sawfly	-	T
<i>Dolichopus griseipennis</i>	A long-legged fly	-	T
<i>Dolichopus latilimbatus</i>	A long-legged fly	-	T
<i>Dolichovespula saxonica</i>	Saxon wasp	IUCN GB Pre 1994 Insu	T
<i>Dolichovespula sylvestris</i>	Tree wasp	-	T
<i>Dolycoris baccarum</i>	Hairy shieldbug	IUCN GB Post 2001 LC	T
<i>Drusilla canaliculate</i>	A rove beetle	-	T
<i>Dryomyza anilis</i>	A fly	-	T
<i>Dysdera crocata</i>	Woodlouse spider	IUCN GB Post 2001 LC	T
<i>Ectemnius continuus</i>	A sand wasp	-	T
<i>Elaphrus cupreus</i>	Copper peacock beetle	IUCN GB Post 2001 LC	T
<i>Enallagma cyathigerum</i>	Common blue damselfly	IUCN GB Post 2001 LC	T
<i>Ennomos alniaria</i>	Canary-shouldered thorn	-	T
<i>Enoplognatha latimana</i>	Candy-stripe Spider	IUCN GB Post 2001 LC	T
<i>Episyrphus balteatus</i>	Marmalade hoverfly	-	T
<i>Erigone atra</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Eriothrix rufomaculata</i>	Red-sided parasite fly	-	T
<i>Eristalinus sepulchralis</i>	Small spot-eye hoverfly	-	T
<i>Eristalis abusiva</i>	A hoverfly	-	T
<i>Eristalis arbustorum</i>	Plain-faced Dronefly	-	T
<i>Eristalis intricaria</i>	Furry dronefly	-	T
<i>Eristalis nemorum</i>	A hoverfly	-	T
<i>Eristalis pertinax</i>	Tapered drone fly	-	T
<i>Eristalis tenax</i>	A hoverfly	-	T
<i>Euclidia mi</i>	Mother Shipton	-	T
<i>Euleia heraclei</i>	Celery fly	-	T
<i>Euophrys frontalis</i>	A jumping spider	IUCN GB Post 2001 LC	T
<i>Eupeodes latifasciatus</i>	A hoverfly	-	T
<i>Eupeodes luniger</i>	A hoverfly	-	T
<i>Eupithecia sp.</i>	A pug moth	-	T
<i>Euproctis similis</i>	Yellow-tail moth	-	T
<i>Eupteryx aurata</i>	Potato leafhopper	-	T
<i>Eurydema oleracea</i>	Brassica shieldbug	IUCN GB Post 2001 LC	T
<i>Eurygaster testudinaria</i>	Tortoise shieldbug	IUCN GB Post 2001 LC	T
<i>Euthrix potatoria</i>	Drinker	-	T
<i>Furcula bicuspis</i>	Alder kitten	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Galerucella calmariensis</i>	A leaf beetle	IUCN GB Post 2001 LC	T
<i>Galerucella lineola</i>	Brown willow beetle	IUCN GB Post 2001 LC	T
<i>Gammarus pulex</i>	A freshwater shrimp	-	A
<i>Gasteruption sp.</i>	A wasp	-	T
<i>Gastrophysa viridula</i>	Green dock beetle	IUCN GB post 2001 LC	T
<i>Geomyza tripunctata</i>	A fly	-	T
<i>Gnathonarium dentatum</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Gorytes quadrifasciatus</i>	Four-banded digger wasp	-	T
<i>Graphomya maculata</i>	Painted graph fly	-	T
<i>Gyrinus suffriani</i>	A whirligig beetle	IUCN GB Post 2001 VU	A
<i>Haematopota pluvialis</i>	Notch-horned cleg fly	IUCN GB Post 2001 LC	T
<i>Halictus rubicundus</i>	Orange-legged furrow bee	-	T
<i>Halictus tumulorum</i>	Bronze furrow bee	-	T
<i>Harmonia axyridis</i>	Harlequin ladybird	-	T
<i>Harpalus affinis</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Helina sp.</i>	A muscid fly	-	T
<i>Heliophanus flavipes</i>	A jumping spider	IUCN GB Post 2001 LC	T
<i>Heliophanus sp.</i>	A jumping spider	-	T
<i>Helophilus pendulus</i>	The footballer hoverfly	-	T
<i>Helotropha leucostigma</i>	The crescent	EnvW S7	T
<i>Herina lugubris</i>	A picture-wing fly	-	T
<i>Hermia grisealis</i>	Small fan-foot	-	T
<i>Himacerus mirmicoides</i>	Ant damsel bug	-	T
<i>Hydrachnidiae sp.</i>	A water mite	-	A
<i>Hydraecia micacea</i>	Rosy rustic	EnvW S7	T
<i>Hydrotaea diabolus</i>	A blowfly	-	T
<i>Hylaeus brevicornis</i>	Short horned yellow face bee	-	T
<i>Hylaeus communis</i>	Common yellow-face bee	-	T
<i>Hylaeus confusus</i>	White-jawed yellow-face bee	-	T
<i>Hylaeus dilatatus</i>	Chalk yellow-faced bee	-	T
<i>Hylaeus hyalinatus</i>	Hairy yellow-face bee	-	T
<i>Hypomma bituberculatum</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Ichneumon sarcitorius</i>	An ichneumon wasp	-	T
<i>Ichneumon sp.</i>	An ichneumon wasp	-	T
<i>Idaea aversata</i>	Riband wave	-	T
<i>Ilione albiseta</i>	A snailkiller fly	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Ilione lineata</i>	A snailkiller fly	-	T
<i>Ischnodemus sabuleti</i>	European chinchbug	-	T
<i>Ischnopterapion loti/modestum</i> agg.	A weevil	-	T
<i>Ischnura elegans</i>	Blue tailed damselfly	IUCN GB Post 2001 LC	T
<i>Julus scandinavicus</i>	A millipede	IUCN GB Post 2001 LC	T
<i>Kateretes rufilabris</i>	A beetle	-	T
<i>Kleidocerys resedae</i>	Birch catkin bug	-	T
<i>Larinioides cornutus</i>	A spider	IUCN GB Post 2001 LC	T
<i>Larinioides sclopetarius</i>	Bridge orbweb spider	IUCN GB Post 2001 LC	T
<i>Larinioides cornutus</i>	An orb-web spider	-	T
<i>Lasiocampa quercus</i>	Oak eggar	-	T
<i>Lasioglossum albipes</i>	Bloomed furrow bee	-	T
<i>Lasioglossum calceatum</i>	Common furrow bee	-	T
<i>Lasioglossum fratellum</i>	Smooth-faced furrow bee	-	T
<i>Lasioglossum leucozonium</i>	White-zoned furrow bee	-	T
<i>Lasioglossum morio</i>	Green furrow bee	-	T
<i>Lasioglossum pauxillum</i>	Lobe-spurred furrow bee	Notable A	T
<i>Lasioglossum villosulum</i>	Shaggy furrow bee	-	T
<i>Lasioglossum zonulum</i>	Bull-headed furrow bee	-	T
<i>Lasiommata megera</i>	Wall	IUCN GB Post 2001 NT, EnvW S7	T
<i>Lasius flavus</i>	Yellow meadow ant	-	T
<i>Lasius fuliginosus</i>	Jet ant	-	T
<i>Lasius niger</i>	Black garden ant	-	T
<i>Lathrobium elongatum</i>	A rove beetle	-	T
<i>Leiobunum blackwalli</i>	A harvestman	-	T
<i>Leiobunum rotundum</i>	A harvestman	-	T
<i>Lejogaster metallina</i>	Green marsh hoverfly	-	T
<i>Leptogaster cylindrica</i>	Striped slender robberfly	IUCN GB Post 2001 LC	T
<i>Leptophyes punctatissima</i>	Speckled bush cricket	IUCN GB Post 2001 LC	T
<i>Leptura quadrifasciata</i>	Four banded longhorn beetle	IUCN GB Post 2001 LC	T
<i>Libellula depressa</i>	Broad-bodied chaser	IUCN GB Post 2001 LC	T
<i>Libellula quadrimaculata</i>	Four-spotted chaser	IUCN GB Post 2001 LC	T
<i>Limnephilus lunatus</i>	A caddisfly	IUCN GB Post 2001 LC	T
<i>Limnia unguicornis</i>	A snailkiller fly	-	T
<i>Liocoris tripustulatus</i>	A plant bug	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Lithobius forficatus</i>	Common centipede	IUCN GB Post 2001 LC	T
<i>Lophomma punctatum</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Lycaena phlaeas</i>	Small copper	IUCN GB Post 2001 LC	T
<i>Macrophya annulata</i>	A sawfly	-	T
<i>Macrophya ribis</i>	Drab elder strider	-	T
<i>Macropsis prasina</i>	A leafhopper	-	T
<i>Malachius bipustulatus</i>	Common malachite beetle	IUCN GB Post 2001 LC	T
<i>Mangora acalypha</i>	Cricket bat spider	IUCN GB Post 2001 LC	T
<i>Maniola jurtina</i>	Meadow brown	IUCN GB post 2001 LC	T
<i>Mecinus pascuorum</i>	A weevil	-	T
<i>Megachile centuncularis</i>	Patchwork leafcutter bee	-	T
<i>Megachile leachella</i>	Silvery leafcutter bee	Notable B	T
<i>Melangyna umbellatarum</i>	A hoverfly	-	T
<i>Melanostoma mellinum</i>	A hoverfly	-	T
<i>Meliscaeva cinctella</i>	A hoverfly	-	T
<i>Metellina mengei</i>	A long-jawed orbweb spider	IUCN GB Post 2001 LC	T
<i>Microcara Testacea</i>	A marsh beetle	-	T
<i>Microlestes maurus</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Microlinyphia pusilla</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Micropeza corrigiolata</i>	A stilt-legged fly	-	T
<i>Mimas tiliae</i>	Lime hawk moth	-	T
<i>Minettia fasciata agg.</i>	A lauxinid fly	-	T
<i>Misumena vatia</i>	White crab spider	IUCN GB Post 2001 LC	T
<i>Mitopus morio</i>	A harvestman	-	T
<i>Myathropa florea</i>	Batman hoverfly	-	T
<i>Myrmica rubra</i>	An ant	-	T
<i>Nanophyes marmoratus</i>	Loosestrife weevil	-	T
<i>Nemastoma bimaculatum</i>	A harvestman	-	T
<i>Nemotelus pantherinus</i>	Fen snout	IUCN GB Post 2001 LC, NS	T
<i>Neoascia meticulosa</i>	Yellow-kneed clubtail	-	T
<i>Neoascia podagrica</i>	Smudge-veined clubtail	-	T
<i>Neoascia tenur</i>	A hoverfly	-	T
<i>Neocrepidodera transversa</i>	A beetle	IUCN GB Post 2001 LC	T
<i>Nicrophorus interruptus</i>	The interrupted burying beetle	IUCN GB Post 2001 LC, NS, Notable B	T
<i>Nigma puella</i>	Bleeding heart spider	IUCN GB Post 2001 LC, NS	T
<i>Nigrotipula nigra</i>	A crane fly	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Nomada flava</i>	Flavous nomad bee	-	T
<i>Nomophila noctuella</i>	Rush veneer	-	T
<i>Notaris acridulus</i>	A weevil	-	T
<i>Notiophilus biguttatus</i>	A ground beetle	IUCN GB Post 2001 LC	T
<i>Notonectidae sp.</i>	A water boatman	-	A
<i>Nysson trimaculatus</i>	Six-spotted wasp-cuckoo	Notable B	T
<i>Ochropleura plecta</i>	Flame shoulder	-	T
<i>Oedemera nobilis</i>	Thick thighed beetle	IUCN GB Post 2001 LC	T
<i>Oedothorax fuscus</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Oedothorax retusus</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Opilio saxatilis</i>	A harvestman	-	T
<i>Opomyza germinationis</i>	An opomyzid fly	-	T
<i>Orthetrum cancellatum</i>	Black tailed skimmer	IUCN GB Post 2001 LC	T
<i>Orthocephalus coriaceus</i>	A plant bug	-	T
<i>Orthonevra geniculata</i>	A hoverfly	-	T
<i>Orthops campestris</i>	A plant bug	-	T
<i>Orthosia miniosa</i>	Blossom underwing	-	T
<i>Osmia spinulosa</i>	Spined mason bee	-	T
<i>Otiorhynchus sulcatus</i>	Vine weevil	-	T
<i>Oulema melanopus</i>	A leaf beetle	-	T
<i>Oxycera rara</i>	Four-barred general	IUCN GB Post 2001 LC	T
<i>Oxychilus alliarius</i>	Garlic snail	IUCN GB Post 2001 LC	T
<i>Pachygnatha clercki</i>	A long-jawed orb-weaver	IUCN GB Post 2001 LC	T
<i>Paederus fuscipes</i>	A rove beetle	Notable B	T
<i>Paederus riparius</i>	A rove beetle	-	T
<i>Palomena prasina</i>	Common green shieldbug	IUCN GB Post 2001 LC	T
<i>Panorpa communis</i>	Scorpion fly	-	T
<i>Panorpa germanica</i>	A scorpion fly	-	T
<i>Pararge aegeria</i>	Speckled wood	IUCN GB Post 2001 LC	T
<i>Pardosa amentata</i>	A wolf spider	IUCN GB Post 2001 LC	T
<i>Pardosa nigriceps</i>	A wolf spider	IUCN GB Post 2001 LC	T
<i>Pardosa prativaga</i>	A wolf spider	IUCN GB Post 2001 LC	T
<i>Pardosa pullata</i>	A wolf spider	IUCN GB Post 2001 LC	T
<i>Pardosa sp.</i>	A wolf spider	-	T
<i>Pardosa tenuipes</i>	A wolf spider	IUCN GB Post 2001 LC, NS	T
<i>Parhelophilus versicolor</i>	A hoverfly	-	T
<i>Passaloecus singularis</i>	A wasp	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Pemphredon lethifer</i>	A wasp	-	T
<i>Phalangium opilio</i>	A harvestman	-	T
<i>Phaonia signata</i>	Leatherjacket bristleshin	-	T
<i>Philaeneus spumarius</i>	Common froghopper	-	T
<i>Philodromus cespitum</i>	A running crab spider	IUCN GB Post 2001 LC	T
<i>Phosphuga atrata</i>	Black snail beetle	IUCN GB Post 2001 LC	T
<i>Phragmotobia fuliginosa</i>	Ruby tiger	-	T
<i>Phrurolithus festivus</i>	An ant-like sac spider	IUCN GB Post 2001 LC	T
<i>Phylloneta impressa</i>	A spider	IUCN GB Post 2001 LC	T
<i>Phytocoris varipes</i>	A plant bug	-	T
<i>Pieris brassicae</i>	Large white	IUCN GB Post 2001 LC	T
<i>Pieris rapae</i>	Small white	IUCN GB Post 2001 LC	T
<i>Pipunculidae indet.</i>	A big-headed fly	-	T
<i>Pirata piraticus</i>	An otter spider	IUCN GB Post 2001 LC	T
<i>Pisaura mirabilis</i>	Nursery-web Spider	IUCN GB Post 2001 LC	T
<i>Plagiodera versicolora</i>	Willow leaf beetle	IUCN GB post 2001 LC	T
<i>Plagiognathus arbustorum</i>	A plant bug	-	T
<i>Plateumaris sericea</i>	A reed beetle	IUCN GB Post 2001 LC	T
<i>Platycheirus albimanus</i>	A hoverfly	-	T
<i>Platycheirus clypeatus</i>	Common marsh boxer	-	T
<i>Platycheirus fulviventris</i>	Orange-legged boxer	-	T
<i>Platycheirus occultus</i>	Dusky marsh boxer	-	T
<i>Pleuroptya ruralis</i>	Mother of pearl	-	T
<i>Plutella xylostella</i>	Diamondback moth	-	T
<i>Pocadicnemis juncea</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Poecilobothrus nobilitatus</i>	Semaphore fly	-	T
<i>Poecilus cupreus</i>	A ground beetle	IUCN GB post 2001 LC	T
<i>Pollenia rudis</i>	Awkward clusterfly	-	T
<i>Polydrusus formosus</i>	A weevil	Notable A	T
<i>Polydrusus pterygomalis</i>	A weevil	-	T
<i>Polygonia c-album</i>	Comma	IUCN GB Post 2001 LC	T
<i>Polyommatus icarus</i>	Common blue	IUCN GB Post 2001 LC	T
<i>Porcellio scaber</i>	Common rough woodlouse	IUCN GB Post 2001 LC	T
<i>Prinerigone vagans</i>	A money spider	IUCN GB Post 2001 LC	T
<i>Prionocera turcica</i>	A crane fly	-	T
<i>Propylea quatuordecimpunctata</i>	14 spot ladybird	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Protapion fulvipes</i>	White clover seed weevil	-	T
<i>Protapion trifolii</i>	A weevil	-	T
<i>Psammoecus bipunctatus</i>	A beetle	-	T
<i>Pseudochorthippus parallelus</i>	Meadow grasshopper	IUCN GB Post 2001 LC	T
<i>Pyrausta aurata</i>	Mint moth	-	T
<i>Pyrausta despicata</i>	Straw-barred pearl	-	T
<i>Pyronia tithonus</i>	Gatekeeper	IUCN GB Post 2001 LC	T
<i>Pyrrhosoma nymphula</i>	Large red damselfly	IUCN GB Post 2001 LC	T
<i>Rhagio scolopaceus</i>	Downlooker snipefly	IUCN GB Post 2001 LC	T
<i>Rhagonycha fulva</i>	Common red soldier beetle	IUCN GB post 2001 LC	T
<i>Rhagonycha testacea</i>	A soldier beetle	IUCN GB post 2001 LC	T
<i>Rhyzobius chrysomeloides</i>	A beetle	-	T
<i>Riponnensia splendens</i>	A hoverfly	-	T
<i>Rivellia syngenesiae</i>	Small signal fly	-	T
<i>Rivula sericealis</i>	Straw dot	-	T
<i>Rutpela maculata</i>	Yellow longhorn beetle	IUCN GB post 2001 LC	T
<i>Saldula saltatoria</i>	Common shore bug	IUCN GB Post 2001 LC	T
<i>Salticus scenicus</i>	Zebra jumping spider	IUCN GB post 2001 LC	T
<i>Sapromyza quadripunctata</i>	A lauxinid fly	-	T
<i>Scaeva pyrastris</i>	Pied hoverfly	-	T
<i>Schizotus pectinicornis</i>	Scarce cardinal beetle	IUCN GB Post 2001 LC, NR	T
<i>Scirtes hemisphaericus</i>	A marsh beetle	-	T
<i>Scoparia subfusca</i>	Large grey	-	T
<i>Selandria serva</i>	Common sedge-sawfly	-	T
<i>Sepedophilus constans</i>	A rove beetle	IUCN GB Post 2001 LC, NS, Notable B	T
<i>Sicus ferrugineus</i>	Ferruginous bee grabber	-	T
<i>Sideridis rivularis</i>	Campion	-	T
<i>Sigara stagnalis</i>	A water boatman	IUCN GB Post 2001 LC	A
<i>Silis ruficollis</i>	A soldier beetle	IUCN GB Post 2001 LC	T
<i>Siphona sp.</i>	A tachinid fly	-	T
<i>Sphaerophoria interrupta</i>	Interrupted globetail	-	T
<i>Sphaerophoria scripta</i>	Common twist-tail	-	T
<i>Sphecodes monilicornis</i>	Box-headed blood bee	-	T
<i>Sphenella marginata</i>	A picture-wing fly	-	T
<i>Staphylinus dimidiaticornis</i>	A rove beetle	-	T
<i>Stenodema calcarata</i>	A plant bug	-	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Stenus ater</i>	A rove beetle	Notable B	T
<i>Stenus bimaculatus</i>	A rove beetle	-	T
<i>Stenus nigritulus</i>	A rove beetle	Notable B	T
<i>Stenus pallipes</i>	A rove beetle	-	T
<i>Stictoleptura rubra</i>	Red longhorn beetle	IUCN GB Post 2001 LC	T
<i>Succinea putris</i>	Amber snail	IUCN GB Post 2001 LC	T
<i>Sympetrum striolatum</i>	Common darter	IUCN GB Post 2001 LC	T
<i>Synageles venator</i>	A jumping spider	IUCN GB Post 2001 LC, NS	T
<i>Syricoris lacunana</i>	Dark strawberry tortrix	-	T
<i>Syrirta pipiens</i>	Compost hoverfly	-	T
<i>Syrphus ribesii</i>	A hoverfly	-	T
<i>Syrphus vitripennis</i>	Glass-winged syrphus	-	T
<i>Tabanus autumnalis</i>	Large marsh horsefly	IUCN GB Post 2001 LC	T
<i>Tachycixius pilosus</i>	Spotted lacehopper	-	T
<i>Tanysphyrus lemnae</i>	Duckweed weevil	-	T
<i>Tenthredo arcuata</i>	Common clover-sawfly	-	T
<i>Tenthredo notha</i>	Yellow-sided clover-sawfly	-	T
<i>Tetanocera arrogans</i>	A snailkilling fly	-	T
<i>Tetragnatha extensa</i>	Common long-jawed orbweb spider	IUCN GB Post 2001 LC	T
<i>Tetragnatha montana</i>	A long-jawed orbweb spider	IUCN GB Post 2001 LC	T
<i>Tetrix subulata</i>	Slender Groundhopper	IUCN GB Post 2001 LC	T
<i>Tetrix undulata</i>	Common groundhopper	IUCN GB Post 2001 LC	T
<i>Tettigonia viridissima</i>	Great green bush cricket	IUCN GB Post 2001 LC	T
<i>Thricops diaphanus</i>	Orange thricops	-	T
<i>Thymelicus sylvestris</i>	Small skipper	IUCN GB Post 2001 LC	T
<i>Tibellus oblongus</i>	Oblong running spider	IUCN GB Post 2001 LC	T
<i>Timandra comae</i>	Blood vein	EnvW S7	T
<i>Tingis cardui</i>	Spear thistle lacebug	-	T
<i>Tipula lateralis</i>	A crane fly	-	T
<i>Tipula oleracea</i>	A crane fly	-	T
<i>Trichosirocalus troglodytes</i>	A weevil	-	T
<i>Trochulus striolatus</i>	Strawberry snail	IUCN GB Post 2001 LC	T
<i>Tropidia scita</i>	Tooth-thighed hoverfly	-	T
<i>Trypoxylon attenuatum</i>	Slender wood borer wasp	-	T
<i>Tychius picirostris</i>	A weevil	-	T
<i>Tyria jacobaeae</i>	The cinnabar	EnvW S7	T



Invertebrate Survey Report

Scientific Name	Common Name	Status	Aquatic (A)/ Terrestrial (T)
<i>Urophora quadrifasciata</i>	Picture-wing fly	-	T
<i>Urophora stylata</i>	Spear-thistle Gall-fly	-	T
<i>Vanessa atalanta</i>	Red admiral	IUCN GB Post 2001 LC	T
<i>Vespula germanica</i>	German wasp	-	T
<i>Vespula rufa</i>	Red wasp	-	T
<i>Vespula vulgaris</i>	Common wasp	-	T
<i>Volucella bombylans</i>	Bumblebee plumehorn	-	T
<i>Volucella pellucens</i>	Pied plumehorn	-	T
<i>Walckenaeria kochi</i>	A money spider	IUCN GB Post 2001 LC, NS	T
<i>Xanthogramma citrofasciatum</i>	A hoverfly	-	T
<i>Xestia xanthographa</i>	Square-spot rustic	-	T
<i>Xylota segnis</i>	Orange-belted leaf-licker	-	T
<i>Xysticus cristatus</i>	A crab spider	IUCN GB Post 2001 LC	T
<i>Xysticus sp.</i>	A crab spider	-	T
<i>Zelotes apricorum</i>	A ground spider	IUCN GB Post 2001 LC	T
<i>Zygaena filipendulae</i>	Six spot burnet	-	T



Appendix B Protected or Notable Species and their Location

Common name	Scientific name	O.S. grid Ref	Status
A solitary wasp	<i>Argogorytes fargeii</i>	SS7870786473	Notable A
Musk beetle	<i>Aromia moschata</i>	SS7854886478	IUCN GB Post 2001 LC, Notable B
Brown-banded carder bee	<i>Bombus humilis</i>	SS7864086485	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7893185620	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7872186199	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7870786438	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7869085793	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7851686447	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7866685999	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7872886364	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7872686377	Env (Wales) Act S7
Brown-banded carder bee	<i>Bombus humilis</i>	SS7851986450	Env (Wales) Act S7
Bulrush veneer	<i>Calamotropha paludella</i>	SS7864586499	Notable B
Musk-thistle blacklet	<i>Cheilosia cynocephala</i>	SS7864286490	NS includes
Latticed heath	<i>Chiasmia clathrata</i>	SS7864586499	Env (Wales) Act S7
Latticed heath	<i>Chiasmia clathrata</i>	SS7864386504	Env (Wales) Act S7
Latticed heath	<i>Chiasmia clathrata</i>	SS7856686186	Env (Wales) Act S7
Square spot deerfly	<i>Chrysops viduatus</i>	SS7898085501	IUCN GB Post 2001 LC, NS includes
Square spot deerfly	<i>Chrysops viduatus</i>	SS7871086196	IUCN GB Post 2001 LC, NS includes
Small heath	<i>Coenonympha pamphilus</i>	SS7857286099	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	<i>Coenonympha pamphilus</i>	SS7857986082	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	<i>Coenonympha pamphilus</i>	SS7879485682	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	<i>Coenonympha pamphilus</i>	SS7892385606	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	<i>Coenonympha pamphilus</i>	SS7879985688	IUCN GB Post 2001 NT, Env (Wales) Act S7



Invertebrate Survey Report

Common name	Scientific name	O.S. grid Ref	Status
Small heath	Coenonympha pamphilus	SS7892785615	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	Coenonympha pamphilus	SS7881285683	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	Coenonympha pamphilus	SS7879985691	IUCN GB Post 2001 NT, Env (Wales) Act S7
Small heath	Coenonympha pamphilus	SS7871285797	IUCN GB Post 2001 NT, Env (Wales) Act S7
A whirligig beetle	Gyrinus suffriani	SS7864786621	IUCN GB Post 2001 VU
The crescent	Helotropha leucostigma	SS7864586499	Env (Wales) Act S7
Rosy rustic	Hydraecia micacea	SS7864586499	Env (Wales) Act S7
Lobe-spurred furrow bee	Lasioglossum pauxillum	SS7870086210	Notable A
Wall	Lasiommata megera	SS7868585924	IUCN GB Post 2001 NT, Env (Wales) Act S7
Wall	Lasiommata megera	SS7891585611	IUCN GB Post 2001 NT, Env (Wales) Act S7
Wall	Lasiommata megera	SS7862086032	IUCN GB Post 2001 NT, Env (Wales) Act S7
Wall	Lasiommata megera	SS7899685530	IUCN GB Post 2001 NT, Env (Wales) Act S7
Wall	Lasiommata megera	SS7892885603	IUCN GB Post 2001 NT, Env (Wales) Act S7
Silvery leafcutter bee	Megachile leachella	SS7849686438	Notable B
Fen snout	Nemotelus pantherinus	SS7861086504	IUCN GB Post 2001 LC, NS includes
The interrupted burying beetle	Nicrophorus interruptus	SS7872986250	IUCN GB Post 2001 LC, NS includes, Notable B
Six-spotted wasp-cuckoo	Nysson trimaculatus	SS7868085921	Notable B
A rove beetle	Paederus fuscipes	SS7856886604	Notable B
A wolf spider	Pardosa tenuipes	SS7869185877	IUCN GB Post 2001 LC, NS includes
A weevil	Polydrusus formosus	SS7856086481	Notable A
Scarce cardinal beetle	Schizotus pectinicornis	SS7867586218	IUCN GB Post 2001 LC, NR includes
A rove beetle	Sepedophilus constans	SS7868785907	IUCN GB Post 2001 LC, NS includes, Notable B
A rove beetle	Stenus nigritulus	SS787862	Notable B



Invertebrate Survey Report

Common name	Scientific name	O.S. grid Ref	Status
A jumping spider	Synageles venator	SS7869185877	IUCN GB Post 2001 LC, NS includes
Blood vein	Timandra comae	SS7864586499	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7846886624	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7866586006	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7843786625	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7845686618	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7872486208	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7900085525	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7863086039	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7871686403	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7885385652	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7870785730	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7871186398	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7869886473	Env (Wales) Act S7
The cinnabar	Tyria jacobaeae	SS7884285636	Env (Wales) Act S7
A money spider	Walckenaeria kochi	SS7862086490	IUCN GB Post 2001 LC, NS includes
A rove beetle	Stenus ater	SS7868985882	Notable B
A rove beetle	Stenus ater	SS7861086504	Notable B



Contents

Executive Summary	iii
1 Introduction	1
1.1 Overview	1
1.2 Project Context	1
1.3 Purpose of Report	1
2 Legislation.....	3
3 Methods	4
3.1 Overview	4
3.2 Desk Study	4
3.3 Survey Area	4
3.4 Survey Methods	4
3.5 Invertebrate Identification	7
3.6 Evaluation of Study Area Importance	7
3.7 Surveyor Qualifications and Experience	7
3.8 Report Qualification	8
4 Results.....	9
4.1 Overview	9
4.2 Desk Study	9
4.3 Field Survey	9
5 Evaluation and Conclusion	15
6 References	17
7 Figures.....	20

Figures

Figure 1 Site Location Plan.....	20
----------------------------------	----

Tables

Table 3-1. Survey Dates and Weather Conditions	4
Table 3-2: Aquatic Invertebrate Survey Locations and Photographs.....	6
Table 5-1: Pantheon Output: Specific Assemblage Type Condition Assessment (whole Survey Area)	15

Appendices

Appendix A	Invertebrate Species Recorded & Status
Appendix B	Protected or Notable Species and their Location

Executive Summary

Stantec UK Ltd was commissioned by National Grid to undertake invertebrate surveys of land owned by National Grid (hereafter 'the Site') and BOC Ltd. (hereafter 'the BOC land') (together referred to in this report as "the Study Area") at Margam, Port Talbot, Wales, proposed for a sub-station extension and associated cable route. This survey work was undertaken in 2025 to determine ecological constraints and opportunities for the proposed development associated with the presence of protected or notable invertebrates.

This report describes and assesses the terrestrial and aquatic invertebrate features of ecological value present in the Study Area following the surveys undertaken during May, June, July and August 2025. The field surveys are supported by a desk study including a review of local records within 2km of the Site and survey reports undertaken for the Site in 2009, and in 2022 for Tata Steel land, located to the west of the BOC Ltd land, west of the railway line.

The desk study returned numerous records of International Union for Conservation of Nature (IUCN) Red List invertebrate species and SPI species within 2 km of the Study Area. The surveys undertaken in 2009 on the Site identified the presence of 402 species of invertebrate, many of these were common and widespread species, with a large proportion being associated with the wetland habitats present at the Site. Two Priority Species were found: the brown-banded carder bee *Bombus humilis* and the shrill carder bee *Bombus sylvarum*. An invertebrate assessment conducted at the Tata Steel site in 2022 recorded a total of 414 species, of which 28 species are recorded to have national status including scarce butterfly and bee species. Species with the greatest conservation concern recorded were the wall butterfly *Lasiommata megera* and the shrill carder bee. The assessment concluded that the area surveyed was of regional importance for invertebrate assemblages.

The surveys undertaken of the Study Area in May, June, July and August 2025, recorded 436 species in total; of which the following 29 species are protected and/or notable:

- A solitary wasp *Argogorytes fargeii* Notable A
- Musk beetle *Aromia moschata* IUCN GB Post 2001 LC, Notable B
- Brown-banded carder bee *Bombus humilis* Env (Wales) Act S7
- Bulrush veneer *Calamotropha paludella* Notable B
- Musk-thistle blacklet *Cheilosia cynocephala* NS
- Latticed heath *Chiasmia clathrate* Env (Wales) Act S7
- Square spot deerfly *Chrysops viduatus* IUCN GB Post 2001 LC, NS
- Small heath *Coenonympha pamphilus* IUCN GB Post 2001 NT, Env (Wales) Act S7
- A whirligig beetle *Gyrinus suffriani* IUCN GB Post 2001 VU
- The crescent *Helotropha leucostigma* Env (Wales) Act S7
- Rosy rustic *Hydraecia micacea* Env (Wales) Act S7
- Lobe-spurred furrow bee *Lasioglossum pauxillum* Notable A
- Wall butterfly *Lasiommata megera* IUCN GB Post 2001 NT, Env (Wales) Act S7

Invertebrate Survey Report

- Silvery leafcutter bee *Megachile leachella* Notable B
- Fen snout *Nemotelus pantherinus* IUCN GB Post 2001 LC, NS
- The interrupted burying beetle *Nicrophorus interruptus* IUCN GB Post 2001 LC, NS, Notable B
- Bleeding heart spider *Nigma puella* IUCN GB Post 2001 LC, NS
- Six-spotted wasp-cuckoo *Nysson trimaculatus* Notable B
- A rove beetle *Paederus fuscipes* Notable B
- A wolf spider *Pardosa tenuipes* IUCN GB Post 2001 LC, NS
- A weevil *Polydrusus formosus* Notable A
- Scarce cardinal beetle *Schizotus pectinicornis* IUCN GB Post 2001 LC, NR
- A rove beetle *Sepedophilus constans* IUCN GB Post 2001 LC, NS, Notable B
- A rove beetle *Stenus nigrutilus* Notable B
- A jumping spider *Synageles venator* IUCN GB Post 2001 LC, NS
- Blood vein *Timandra comae* Env (Wales) Act S7
- Cinnabar moth *Tyria jacobaeae* Env (Wales) Act S7
- A money spider *Walckenaeria kochi* IUCN GB Post 2001 LC, NS
- A rove beetle *Stenus ater* Notable B

The 2025 assessment found that the Site and the BOC land combined are of at least regional importance for invertebrates, based on Plant's assessment criteria.

Further analysis of the recorded species within Natural England's online tool Pantheon found that two of the identified habitat assemblages met the assessment criteria for Favourable condition, these being Open Habitats – Rich Flower Resource and Open Habitats – Scrub Edge. The remaining habitat assemblages identified were all considered to be in Unfavourable condition. As the Pantheon tool was partly developed from a predecessor tool which was used to determine the condition of SSSIs with respect to their invertebrate interest, the Study Area could potentially be considered of National importance, with respect to Open Habitats – Rich Flower Resource and Open Habitats – Scrub Edge.

1 Introduction

1.1 Overview

- 1.1.1 Stantec UK Limited (Stantec) was commissioned by National Grid to undertake invertebrate surveys of the area of land owned by National Grid at Margam, Neath Port Talbot; hereafter referred to as 'the Site' and the land to the south of the Site, owned by BOC Ltd, hereafter referred to as 'the BOC land'.

1.2 Project Context

Site Location and Description

- 1.2.1 The Site is located in Margam Port Talbot, at approximate central grid reference NGR SS780850, and comprises an existing substation to the east of the Tata Steel Works and Network Rail railway line; the Site also lies to the south of the Tata Steel Sports and Social Club (golf course), to the west of woodland and to the north of the BOC Ltd. works area and fields owned by BOC Ltd. Beyond the immediate Site surroundings, the M4 corridor lies to the east, Swansea Bay lies to the west, Eglwys Nunydd Reservoir to the south and Margam town to the north.
- 1.2.2 The BOC land considered in this report lies immediately to the south of the Site, between the Site and the road to the north of the Eglwys Nunydd Reservoir, Heolcae'r Bont. The location of the Site and the BOC land is shown in **Figure 1**. Together the Site and the BOC land are referred to in this report as the Study Area.
- 1.2.3 The Study Area was subject to habitat surveys completed in 2024 and 2025 which identified that the Study Area comprises a mosaic of reedbed, scrub, grassland and small areas of open water associated with a number of ditches.

Description of Works

- 1.2.4 The Site and the BOC land are proposed for an extension to the existing substation and associated cabling works, with the substation extension proposed to the east of the existing substation within the Site and cabling works passing through the Site and the BOC land. The proposed substation extension and associated works within the Site will be progressed under a planning application and the cable and associated works will be progressing under National Grid's Permitted Development rights.

Historic Project Understanding and Ecological Context

- 1.2.5 The Site was subject to a previous successful planning application for a new substation within National Grid land which received planning consent in 2009. However, the development was not progressed by National Grid. A suite of ecological surveys was completed to inform that previous planning application and the results were presented within the Margam 275kV Substation Environmental Report (National Grid 2009).

1.3 Purpose of Report

- 1.3.1 The purpose of this invertebrate report is to:

Invertebrate Survey Report

- (i) identify historic records of protected and notable species within 2km of the Study Area boundary;
- (ii) identify the presence and distribution of protected and notable species using suitable habitats within the Site and the BOC land;
- (iii) evaluate the value of the Study Area for invertebrates.

2 Legislation

- 2.1.1 This section outlines legislation relevant to invertebrates in Wales.
- 2.1.2 The Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. In total the list includes 24 invertebrate species.
- 2.1.3 European Protected Species (EPS), which include invertebrates such as large blue butterflies, are protected under both the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017 (as amended). Taken together, these make it an offence to:
- Deliberately capture, injure or kill a EPS;
 - Deliberately disturb any EPS, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.
 - To be in possession or control of any live or dead EPS or any part of, or anything derived from a EPS;
 - Damage or destroy a breeding site or resting place of a EPS;
 - Intentionally or recklessly obstruct access to any place that a EPS uses for shelter or protection;
 - Intentionally or recklessly disturb a EPS while it is occupying a structure or place that it uses for shelter or protection.
- 2.1.4 Section 7 of the Environment (Wales) Act 2016 also lists 188 species of invertebrates, which requires these species to be considered in planning and development processes to ensure that their habitats are not adversely affected.