PRELIMINARY ECOLOGICAL APPRAISAL

TATA STEELWORKS, PONTARDDULAIS

For:

WALTERS

Project:	**Tata Steelworks, Pontarddulais**	
Project Number	J0023	
Title	**Preliminary Ecological Appraisal**	
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Client	Walters	
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Prepared by:	Ellie Watkins and Alice Wheeler 26-May-23	

Executive summary

Site	The site is considered to be of low ecological value. The habitats on site with the highest ecological values include broad-leaved trees, woodland, and pond.
BATS	**Potential high impact** – Confirmed bat roosts on site – Recommendation: *Further Surveys*.
REPTILES	**Potential Impact** – Scrub and grassland verge on the site boundary have potential to support populations of common reptile species. Reptile survey recommended if these habitats cannot be retained during development, in order to determine an appropriate mitigation strategy to prevent negative impacts on reptiles.
DORMOUSE	**Negligible Impact** – Dormouse considered unlikely to be present within areas of suitable habitat at the site – No impact.
BIRDS	**Potential low Impact** – The area may be used as foraging and nesting grounds for various bird species – Recommendations: impacts negated through mitigation
GCN	**Potential moderate impact** – Pond on site – Recommendation: Further Surveys. .
INVERTEBRATES	**Potential low impact** -Low potential for priority species **–** Recommendation: Enhancement opportunities.

CONCLUSION

Further surveys should be undertaken before development to assess the scale of impact to provide appropriate mitigation to prevent contravention of legislation.

Contents

1 INTRODUCTION

Background

1.1 Sylvan Ecology were commissioned to carry out a *Preliminary Ecological* Appraisal survey and desk study for a proposed development at *TATA Steelworks, Pontarddulais, SA4 8RX.*

Ecological Context

1.2 The site comprises large areas of semi-improved grassland. Several large buildings are present comprised of corrugated metal to the west of the site. Stone and brick buildings are also present within the centre of the site. A further two metal sheds are present to the south. Hard standing bare ground runs throughout the site, forming pathways and roads. Several woodland clusters are present around the boundary of the site. Scattered trees are located throughout the site. Several small areas of scrub are located towards the north and east of the Steelworks. An area of standing water is present to the south of the site.

1.3 The site lies within *Pontarddulais*, approximately 12km northwest of Swansea. All associated land for the proposed development (herein referred to as the site) is located at:

- central OS grid reference: SN 59066 04270;
- nearest post code: SA4 8RX.

1.4 The immediate surrounding landscape is mainly residential. The wider region consists of open fields, farmlands, and wooded areas. The *river Loughor* is located to the west of the site. The city of Swansea is located to the southeast of the site.

Aims of Study

1.5 The aims of the study are to:

- determine the types of habitat that are present within the site;
- assess the likely presence of protected species and species of principal importance for nature conservation within the site;
- identify any potential ecological constraints to development within the site;
- identify requirements for any additional ecological surveys needed to determine potential ecological impacts; and
- describe measures to mitigate or compensate for any impacts on the ecological interest of the site.

2 METHODOLOGY

Desk Study

2.1 Existing ecological and nature conservation data relevant to the site were collated from various sources:

- Information relating to protected and notable species within 2km of the site was provided by *LERC Wales' Biodiversity Information & Reporting Database*, who also provided information relating to statutory designated sites;
- The Magic website (http://www.magic.gov.uk/) was reviewed to determine whether there are any internationally important statutory designated sites for nature conservation, and for other statutory designated sites for nature conservation, within 2km from site; and
- Google Earth was used to review aerial photographs of the site and surrounding area in order to better understand the setting and ecological context of the site.

Field Survey

2.2 An ecology walkover was undertaken in accordance with the methodology set out in JNCC, 20101 by Ellie Watkins and Alice Wheeler on 22nd March 2023. The survey was carried out under optimal weather conditions, so the ground was soft enough to identify species specific prints.

2.3 The survey involved a site walkover of the area falling within site boundary shown on the map in Appendix A, in order to map the main habitat types present. Detailed target notes were made in relation to any notable features considered important to the ecology of the site: these are referred to by the prefix TN in order to assist cross-reference to the habitat map provided in Appendix A.

2.4 The survey was extended to include assessment of the potential of the site to support protected or notable species. Although this approach supports an initial analysis of the likely presence of protected or notable species, a comprehensive assessment may require specialist expertise and/or season-critical survey techniques, which fall beyond the scope of this study. The presence of protected species was noted where possible, but walkthrough surveys cannot usually confirm species presence or absence; only the likelihood of presence can be assessed.

2.5 This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.

2.6 The dominant and readily identifiable higher plant species identified in each of the various habitat parcels were recorded and their abundance was assessed on the DAFOR scale:

- D: Dominant
- A: Abundant
- F: Frequent
- O: Occasional
- R: Rare
- L: Locally, appended to any of the above five categories to reflect local distribution within the site.

2.7 (These scores represent the abundance within the defined area only and do not reflect national or regional abundances).

2.8 Additionally, incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support legally protected species and other species of conservation concern, including species of principal importance for the purpose of maintaining and enhancing biodiversity, listed in Section 7 of the *Wales Environment (Wales) Act* 2016.

Limitations

2.9 The field survey was conducted at a suboptimal time of year for botanical recording. It cannot be discounted that further species may be present later in the year, that were not apparent at the time of survey. Nonetheless, the purpose of this report is not to compile a comprehensive species list but to establish habitat type and potential ecological constraints. Due to nature of the site, it is considered that sufficient information was gathered for the purposes of this assessment.

3 RESULTS

Desk Study

3.1 Information relating to protected and notable species within 2km of the site was provided by *Aderyn*: LERC Wales' Biodiversity Information & Reporting Database, who also provided information relating to statutory designated sites; LERC Reference: 0223-938.

Desk Study - Habitats

Non-Statutory Designated Sites for Nature Conservation.

3.2 The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the *Aderyn* and online desk-based resource *MAGIC*. The data identified three statutory sites and 10 non-statutory SINCs within a 2 km radius of the site (Table 1).

Table 1. *Summary of Designated Sites within a 2 km radius of the application site*

Site Name	Status	Reason for Designation	Approximate distance from the project site	Importance
Carmarthen Bay and Estuaries	SAC	Partially submerged sandbanks, estuary habitat, mudflats, sandflats, large shallow inlets and bays and Atlantic salt meadows (Glauco-Puccinellietalia maritimae).	1.7 km	International
Burry Inlet and Loughor Estuary	SSSI	Grazed saltmarsh, sandflats and mudflats supporting a wader and wildfowl population of over 46,000.	1.7 km	National
Graig Fawr, Pontardulais	SSSI	Dry acidic grassland, poorly drained acid grassland and infrequent soligenous mires.	1.3 km	National
Loughor to Penllergaer Railway Line	SINC	Ancient and wet woodland.	1.6 km	County
Waungron to Gowerton Railway Line	SINC	No information available.	1.9 km	County
M4 Corridor	SINC	Motorway corridor.	1.6 km	County
Ynys Marshes and Slopes	SINC	No information available.	0.8 km	County

Banc Darren Fawr	SINC	High, open moorland.	1.1 km	County
Loughor Corridor	SINC	River corridor with bank vegetation and wet woodland.	0.1 km	County
Camffrwd Valley Pontardulais	SINC	No information available.	1.1 km	County
Waungron Marsh	SINC	Marshland within upper Loughor estuary, native wet woodland, and species rich grassland.	0.5 km	County
Coed Bach Park Pontardulais	SINC	No information available.	0.9 km	County
Bolgoed Quarry	SINC, Wildlife Trust Reserve	Former quarry, broad-leaved woodland.	1.9 km	County

Desk Study - Species

Bats

3.3 *Aderyn* provided 97 records for at least nine species of bat within 2 km of the site. These are common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeu*s), Natterer's bat (*Myotis nattereri*), Daubenton's bat (*Myotis daubentonii*), whiskered bat (*Myotis mystacinus*), noctule (*Nyctalus noctula*), Greater horseshoe bat *(Rhinolophus ferrumequinum*), Lesser horseshoe bat *(Rhinolophus hipposideros*) and brown long-eared bat (*Plecotus auritus*). In addition, *Aderyn* also provided records of unidentified pipistrelle bat species (*Pipistrellus* sp.) and unidentified bat species (*Chiroptera*).

3.4 The nearest bat records provided by *Aderyn* is located approximately 148m from the site and is for an unidentified pipistrelle bat recorded in 2011.

Great Crested Newt (GCN)

3.5 Aderyn provided no records for GCN (*Triturus cristatus*) within 2km of the application site.

Reptiles

3.6 *Aderyn* provided 57 records of reptiles within 2 km of the application site. These records comprised seven of grass snake (*Natrix helvetica*), 22 of slow worm (*Anguis fragilis*) and 28 common lizards (*Zootoca vivipara*). The closest of these records was for grass snake located 1.1 km from the application site (dated 2015).

Badgers

3.7 *Aderyn* provided five badger (*Meles meles*) records within 2 km of the site; the closest record is 1.4 km from site (dated 1985).

Dormouse

3.8 *Aderyn* provided four records of dormice (*Muscardinus avellanarius*) within 2 km of the application site. This record was located approximately 1.7 km southwest of the application site in 2019.

Invertebrates

3.9 *Aderyn* provided 31 records for 11 different priority species of invertebrates within 2 km of the application site. The species are *Coenonympha pamphilus, Erynnis tages, Hoplodrina blanda, Lasiommata megera, Lycia hirtaria, Melanchra persicariae, Plebejus argus, Satyrium w-album, Spilosoma lubricipeda, Spilosoma lutea,* and *Tyria jacobaeae*.

Habitat assessment

3.10 A map showing the habitats present within the proposed development site is given in Appendix A. Photographs depicting the main ecological features may be found below.

3.11 Twelve habitat types were identified within, or on the boundary of the site, as follows:

- Semi-improved grassland;
- Standing water;
- Dense scrub;
- Scattered scrub;
- Buildings;
- Walls;
- Tall ruderal;
- Bare ground;
- Invasive species;
- Broadleaf woodland;
- Scattered broadleaf trees; and
- Spp poor hedge.

Semi-improved neutral grassland (SNG)

3.12 Much of the site is dominated by semi-improved neutral grassland. The vegetation is poorly maintained and rank in places, with some bare patches.

- SNG1: A thin strip of grass; species composition is dominated by cocksfoot (*Dactylis glomerata*), with frequent plantain (*Plantago*

major), little robin (*Geranium purpureum*), dandelions (*Taraxacum* sp.), cleavers (*Galium aparine*), Greek mustard (*Sinapis arvensis*), hawkweed (*Hieracium* sp.) and ragwort (*Jacobaea vulgaris*).

- SNG2: A small patch of rank grassland, dominated by perennial ryegrass (*Lolium perenne)*, with frequent dandelion, plantain, vetch (*Vicia sativa*), woodrush (*Luzula* sp.), and occasional little robin, burnet saxifrage (*Pimpinella saxifrage*), creeping jenny (*Lysimachia nummularia*), wild strawberry (*Fragaria vesca*) and common nettle (*Urtica dioicia*).
- SNG3: large area of semi-improved grassland with relatively well-maintained sward (height<4cm). Species composition is dominated by perennial ryegrass and white clovers (*Trifolium repens*), with occasional plantain, creeping buttercup (*Ranunculus repens*), dandelion and cocksfoot; with rare vetch, meadow buttercup (*Ranunculus acris*), and broadleaf dock (*Rumex obtusifolius*).

Photo 1: *Closeup of SNG3.*

- SNG4: large area of semi-improved grassland a large area of bare ground within. Species composition is dominated by perennial ryegrass and white clover, with occasional plantain, creeping buttercup, dandelion and cocksfoot, with rare vetch, meadow buttercup, and broadleaf dock.

Photo 2: *Overview of all grassland areas.*

- SNG5: Small area of grassland, with frequent perennial rye grass, spike moss (*Selaginella* sp.), and white clover, and occasional dandelion, cocksfoot, plantain, and little robin.
- SNG6: A large area of grassland, which has been heavily poached entrance. Species composition is dominated by cocksfoot (Dactylis glomerata), with frequent by perennial ryegrass, white clovers plantain, little robin, dandelions, daffodils (*Narcissus pseudonarcissus*), and snowdrop (*Galanthus nivalis*). The area is heavily disturbed by local residents and there is a lot of litter and some fly tipping.

Dense Scrub

3.13 There are several areas of dense scrub throughout the site.

- DS1: Species composition is dominated by gorse (*Ulex europaeus*); with frequent bramble and stinging nettle.
- DS2: Species composition is dominated by bramble; with frequent gorse, ash (*Fraxinus excelsior*) and willow saplings.
  DS3: Species composition is dominated by young trees (ash, willow, and birch), with frequent hawthorn (*Crataegus moniogyna*), and bramble.
- DS4: Species composition is dominated by gorse (Ulex europaeus); with frequent bramble ash (*Fraxinus excelsior*) and willow saplings.
- DS5: Species composition is dominated by bramble; with frequent gorse, and willow saplings.

Photo 3: *Overview of DS3.*

Broadleaf Woodland

3.14 There are several small areas of broadleaf woodland that occur along the boundary of the site as described below:

- BW1: Area of woodland outside the application site on the western site boundary, behind a metal fence. Species composition is dominated by silver birch (*Betula pendula*), oak (*Quercus sp.*), ash, willow, and sycamore (*Acer pseudoplatanus*). The understorey vegetation is comprised of ivy, bramble, and gorse.

Photo 4: *Aerial view of BW1, also shows B7.*

- BW2: The woodland area is within an enclosed metal fence to the south of the site; it surrounds an area of standing water. The woodland canopy is dominated by willow and oak. With occasional beech (*Fagus sylvatica*), ash and cherry laurel (*Cerasus laurocerasus*). The ground vegetation is comprised of bracken, creeping buttercup, cleavers, bramble, and primrose (*Primula*

vulgaris).

- BW3: A small area of woodland enclosed metal fence to the south of the site, species composition is dominated by willow, with occasional silver birch and oak. Other species present include holly, ivy, bramble, and bracken. Japanese knotweed throughout.

Invasive Species

3.15 Japanese knotweed was located throughout the eastern area of the site.

Introduced shrubs (IS)

3.16 Raised beds; the decorative planting is dominated by Rhododendron (*Rhododendron ponticum*) and cotoneaster, with frequent *Symphoricarpos spp*, *Prunus lusitanica* and *Arecaceae spp*.

Standing Water

3.17 A body of standing water (SW) is located within the woodland along the southern site boundary. Full survey of this water body was not possible due to limited access to the area.

Buildings

3.18 Multiple buildings were located within the site boundaries.

- B1: Two storey, flat roofed, modern brick building located on the southern side of the site. The building has low potential for roosting bats.
- B2: Two storey, hipped roofed, stone and brick house. This building is a confirmed bat roost.
- B3: Corrugated metal shed with a concrete ground surface. The building has low potential for roosting bats.
- B4: A second corrugated metal building with low potential for roosting bats.
- B5: A large brick building with a corrugated metal roof. The building has low potential for roosting bats.
- B6: A large, corrugated metal building. The building has low potential for roosting bats.
- B7: A large, corrugated asbestos building. The building has low potential for roosting bats.
- B8: Breezeblock shed, with corrugated steel roof. The building has negligible potential for roosting bats.

Photo 5: *Overview of B2*

Bare Ground

3.19 Areas of concrete (BG) comprising roads and footpaths around the site with no vegetation present.

Scattered Broadleaf Trees

3.20 Scattered broadleaf trees occur throughout the site. The trees have been grouped below:

- ST1: Trees with moderate ecological value located along the northern boundary. The species of these trees was willow, varying from semi-mature to mature. These trees had moderate nesting potential.
- ST2: A stand of trees in the northwest corner of the site containing both mature and semi-mature ash, hawthorn, oak, and silver birch. The trees were in good condition when surveyed and provided moderate nesting potential.
- ST3: A stand of trees along the northern-most field boundary containing both mature and semi-mature ash, hawthorn, and silver birch. The trees were in good condition when surveyed and provided moderate nesting potential.
- ST4: Three multistem willow trees along the northern-most field boundary which contained bird nests. PRF's were observed in both trees.
- ST5: Two medium multistem willow trees along the eastern site boundary with high nesting potential and PRF's for bats. Nests were present in the trees at the time of survey. Medium and large willow and a large multistem sycamore along the eastern site boundary. PRF's were present within the trees, and they provided nesting potential for birds.
- ST5: Species present included willow, silver birch, and hawthorn.

Photo 6: *Overview of ST3*

Scattered scrub

3.21 Scrub is encroaching into the area of grassland, species composition is dominated by bramble, with frequent buddleia, young willow trees / saplings.

Tall ruderal

3.22 Patch of tall ruderal vegetation, species composition is dominated by common nettle, with rare spear thistle (Cirsium vulgare), and cleavers.

Photo 7: *Close up tall ruderal vegetation*

Rubble mounds

3.23 Three large, old, spoil heaps that have established themselves with semi-improved vegetation, scattered scrub, and invasive species.

Photo 8: *Overview of spoil mounds*

Species poor hedge

3.24 There are two lengths of Leyland cypress hedge on the eastern site boundary. The trees have been insensitively cutback and are in poor condition.

Photo 9: *Aerial view of spp poor hedge*

Fauna

3.25 The following species' evidence of their presence were incidentally recorded during the course of the survey:

- Blackbird;
- Jackdaw;
- Wren;
- Robin; and
- Bat (unknown spp).

4 SITE EVALUATION

Baseline Evaluation Criteria

4.1 Based on the site survey results, an ecological evaluation of the site was undertaken using a combination of evaluation criteria for habitats and species, although the general framework follows that provided by CIEEM[1] (see Table 2 below).

4.2 Where relevant the evaluation was made with reference to the statutory protection afforded to species and habitats.

4.3 Legal protection does not always correspond to conservation value. Some species (e.g., badgers) are protected for reasons of animal welfare rather than conservation. Others are of national conservation value but are not protected by law (e.g., *Environment (Wales) Act 2016*. Section 7 Priority species).

Table 2: *Determination of ecological value.*

Evaluation Value	Example of Habitat or species
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive.
National	Sites designated at UK level, e.g., Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare. A regularly occurring regionally or county significant population/number of any nationally important species. A feature identified as of critical importance within Section 41 of the NERC Act (2006).
Regional	Key Habitat type included within BAP. A regularly occurring, locally significant number of a regionally important species.
County	A site designated as a Site of Importance for Nature Conservation (SINC); or A regularly occurring, substantial population of a species scarce in the County
Local	Habitats or species populations of value in a local (i.e., within 5 km of the site) context. Habitats of poor to moderate biological diversity e.g., established conifer plantations, species poor hedgerows and un-intensively managed grassland which supports species which are common to the local area and whose loss can be easily mitigated.
Negligible	A habitat which offers little value for nature conservation, e.g., arable field

4.4 The ecological evaluation of the habitats on site is summarised in Table 3

[1] CIEEM (2019) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Chartered Institute of Ecology and Environmental Management, Winchester.

below. The habitats recorded on the site are relatively common and considered to be of medium ecological value.

Table 3. *Summary of Ecological Evaluation of the Habitats on the Site.*

Habitat	Reason for Valuation
Low Value	
Scattered scrub	Common habitat type, no nesting bird habitat.
Dense scrub	Common habitat type, potential nesting bird habitat.
Introduced shrubs	Common habitat type and botanically species-poor, provides limited potential for fauna
Tall ruderal	Common habitat type and botanically species-poor, provides limited potential for fauna
Semi improved neutral grassland	Relatively common habitat type, low grade, moderate in extent
Spp poor hedgerows	The hedgerows of poor quality, and do not meet the *UK Biodiversity Action Plan Priority Habitat Description* of a hedgerow and will not be classed as a priority habitat. These hedgerows are not covered by the *Hedgerow Regulations 1997.*
Moderate Value	
Broadleaved woodland	Low grade, limited in extent, poor connectivity. Provides good potential habitat for fauna.
Standing water	A full species assessment of the ponds has not been undertaken; however it is believed that the ponds do meet the criteria set out in *UK Biodiversity Action Plan Priority Habitat Description* for a priority habitat.
Scattered trees	Low grade trees, limited in extent and species poor. Provides limited potential for nesting birds and roosting bats.

Site evaluation

4.5 The key ecological features, on site, are the woodlands, and the trees; these are considered to be of value at the zone-of-influence only, i.e., site level. The remaining habitats, including the grassland, are considered to be of low ecological value.

5 PROTECTED SPECIES CONSTRAINTS

Bats

Building

5.1 As part of the habitat survey an external examination of the on-site buildings was undertaken with binoculars to assess likely suitability for roosting bats. Bats are known to be roosting in one of the buildings on site.

Trees

5.2 Several trees with bat roost potential were also identified, for example, a large, mature, oak tree, with several PRFs was noted within ST1; and such holes may be used by a variety of bat species which use trees for roosting, including Noctules, an Annex II species, which is known to show a preference for trees and was present in the background data check.

Foraging and commuting habitats

5.3 Suitable bat foraging / commuting habitat (e.g., hedgerows, woodland, and tall grassland / ruderal vegetation) occurs throughout site, including habitats which may potentially be used by Annex II species, i.e. Lesser horseshoe bats which are known to be roosting on site.

Legislation

5.4 All bat species are fully protected under *The Conservation of Habitats, & Species Regulations (amendment) (EU exit) 2019.* Taken together, this makes it an offence to intentionally or deliberately capture, kill or injure or disturb bats (whether in a roost or not), and intentionally or recklessly damage, destroy or obstruct access to their roosts.

Birds

Habitat

5.5 Birds' nests were noted during the site visit within the hedgerows; and the other wooded areas offer nesting opportunities for birds on site. To reduce the likely impact on birds, mitigation measures will be introduced to ensure the conservation of nesting birds. Assuming that the recommended precautionary mitigation measures will be adopted (See section 8: *Mitigation*), it is not anticipated birds will preclude the sites development.

Legislation

5.6 Birds, their eggs and active nests are protected under the *Wildlife and Countryside Act 1981*, as amended, with the exception of a number of species considered as pests. This protection includes the birds

themselves. Their nests are also protected from damage or destruction, both whilst the birds are constructing and using them.

Reptiles

Habitat

5.7 Reptiles prefer to reside in areas with a network of longer vegetation (for cover) adjacent to suitable basking habitat such as shorter vegetation and hard standing. In addition, reptiles like to hibernate in complex structures such as hedge banks, which are sheltered from the elements and less susceptible to fluctuations in weather conditions. Suitable reptile habitat occurs throughout the boundary habitat.

5.8 Based upon the desk study records and the habitats present on site, there is a low possibility of reptiles being present within the boundary vegetation.

Legislation

5.9 All British reptiles are protected under the *Wildlife & Countryside Act 1981*, as amended, from killing and injury. Following the revision of the UKBAP priority species list in 2007, all native reptile species are now listed as UK priority species.

Dormice

5.10 The woody areas within the site are isolated and provide negligible potential for dormouse. The woody areas adjacent to the site provide suitable habitat for dormice; as its outside the application site, no direct impact is likely.

Legislation

5.11 Dormice are fully protected under *The Conservation of Habitats, & Species Regulations (amendment) (EU exit) 2019*. This makes it an offence to intentionally or deliberately capture, kill or injure or disturb dormice and intentionally or recklessly damage, destroy or obstruct access to their nest.

GCN

5.12 There is a pond within the application site, however there is a negligible network of drainage ditches and ponds within the surrounding area. Thus, based upon the desk study records and the habitats present on and off site, there is a low possibility of GCN within the application site.

Legislation

5.13 GCN are fully protected under *The Conservation of Habitats, & Species*

Regulations. (amendment) (EU exit) 2019. Taken together, this makes it an offence to intentionally or deliberately capture, kill or injure or disturb GCN, and intentionally or recklessly damage, destroy or obstruct access to their habitat and resting places.

Invertebrates

5.14 The habitats within the site provide suitable habitat to support a range of common and widespread invertebrates.

5.15 Based upon the desk study records and the habitats present on site, the site is considered unlikely to support any important populations of notable invertebrate species. Invertebrates are not therefore anticipated to preclude development of the site.

Badger

5.16 No evidence of badger setts or badger foraging were recorded within the site and the site is considered to have low suitability for badger sets due to its open nature. However, it is possible that badgers occasionally access the site at night to forage.

5.17 Although the badger is not strictly protected under nature conservation legislation, badgers and their setts are nonetheless afforded protection in relation to ill-treatment under the *Protection of Badgers Act 1992*.

Wild mammals

5.18 No mammal signs were noted during the survey; however, the site may be used by other wild mammals such as hedgehog, which, in 2007, were added to the UK BAP priority species list, on account of its rapid decline. Based upon the desk study records, other notable species which have been recorded include stoat, weasel, and polecat.

5.19 Wild mammal species are currently given limited protection under the *Wild Mammals (Protection) Act 1996.* This makes it an offence to intentionally cause this species unnecessary suffering by certain methods, including crushing and asphyxiation.

6 RECOMMENDATIONS FOR FURTHER SURVEY

Bats

Trees

6.1 It is recommended that woodland habitat be incorporated into the new design, however if trees are scheduled to be lost, any trees which may be impacted should be inspected for their suitability for bats.

6.2 If trees with High to Moderate bat roost potential are scheduled to be felled and/or subject to surgery, surveys will be necessary to confirm the presence or likely absence of roosting bats. This survey work would encompass detector surveys and possibly a climb and inspect survey, using endoscope and torch, assuming it is safe to do so.

6.3 For trees with Low potential, suitable mitigation may be put in place to ensure no bats are harmed.

Buildings

6.4 Bat emergence surveys will be undertaken to determine if bats are using the building on site; the nature of the potential use and the species of bat. The survey methodology will be in accordance with the Bat Conservation Trust Bat *Surveys Good Practice Guidelines*[2].

6.5 Should bats be identified on-site, the survey findings (i.e., species present, abundance and distribution across the site) would be used to devise a suitable mitigation strategy.

Site activity

6.6 A Phase 2 Bat activity survey will be undertaken to determine if bats are using the woodland / hedgerows / wall etc; the nature of the potential use and the species of bat. The survey methodology will be in accordance with the Bat Conservation Trust Bat Surveys Good Practice Guidelines.

Reptiles

6.7 Habitats suitable for reptiles (i.e. boundary habitat of hedgerows, woodland, and walls) will be subject to presence / absence surveys. Presence / absence surveys require seven survey visits undertaken

[2] Bat Conservation Trust, 2016. *Bat Surveys: Good Practice Guidelines*. Bat Conservation Trust, London.

according to recommended best practices (Froglife, 1999[3]; Natural England, 2011[4]), two survey methods would be used:

- a visual search for basking reptiles
- checking of artificial refugia (placed at a minimum density of 50 refugia per hectare of suitable habitat, up to a maximum of 250 refugia in total)

6.8 Typically, the artificial refugia should be laid out for, if possible, a minimum of 2 weeks, prior to starting the reptile survey. Reptile presence / absence surveys are seasonally constrained and should be carried out either in spring (March-June inclusive) or early autumn (late August to September inclusive). The purpose of the reptile survey is to determine the presence or likely absence of reptiles at the site in order to avoid intentional killing or injury of individual reptiles (during the course of site clearance and site development), which is unlawful.

6.9 Should reptiles be identified on-site, the survey findings (i.e. species present, abundance and distribution across the site) would be used to devise a suitable mitigation strategy.

Great Crested Newts

6.10 Habitats suitable for GCN breeding will be subject to presence / absence surveys. Presence / absence surveys will be undertaken using eDNA analysis. Should GCN be identified on-site, the survey effort will need to increase to establish a population estimate, which would be used to devise a suitable mitigation strategy.

Invasive Species

6.11 Japanese knotweed was located within the southeast of the site and so a further invasive species survey will be required.

Arboriculture

6.12 The large over mature tree within the site, may be impacted upon by the development, it is recommended that an arboricultural assessment (BS:5837) be undertaken to establish the potential impact of the development on the trees on site.

[3] Froglife. 1999. Advice Sheet 10. *Reptile survey: an introduction to planning, conducting, and interpreting surveys for snake and lizard conservation*. Froglife, Peterborough.

[4] Natural England. 2011. *Reptile Mitigation Guidelines*. Natural England, Peterborough. (Withdrawn

7 RECOMMENDATIONS FOR MITIGATION

Breeding bird habitat

7.1 It is recommended that clearance of nesting bird habitat should be undertaken in the period August to February inclusive. Should it prove necessary to remove any breeding bird habitat during the breeding season, the area should be checked in advance for the presence of birds' nests. Once checked, if there is no evidence of breeding birds, clearance work should be completed within 48 hours of inspection. If any active nests are found in this area, then vegetation clearance must cease, and an appropriate buffer zone should be established. This buffer must be left intact until it has been confirmed that the young have fledged, and the nest is no longer in use.

Wild Mammals

7.2 It is recommended that good building practices are adopted during the construction phase to safeguard any individual animals which venture onto the proposed development area. Such practices would include covering of all deep holes and trenches overnight and/or the provision of planked escape routes for any trapped wildlife.

Bat Lighting Mitigation

7.3 The semi-improved grassland area which would be subject to the most significant impacts during development of the site is considered low value for bat foraging and commuting. However, habitat in the wider area provides good foraging habitat. The proposed mitigation to prevent impacts to commuting and foraging bats within the site is therefore focused on avoidance of artificial lighting impacts on areas within the local vicinity of the site that may contain higher value bat habitats.

7.4 Any proposed lighting scheme for development of the site should attempt to minimise the amount of light spillage on to boundary habitats, via the use of baffles and hoods.

7.5 Baffles and hoods should be used to ensure no light illuminates boundary habitat or trees. There will be a full horizontal cut-off with no light more than 90o above the horizontal.

7.6 Blue-white short wavelength lights can have a significant impact on the invertebrate prey of bats by mimicking daylight and will not be used. A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce

blue light component.

7.7 No uplighters (i.e. up lighting trees, buildings, and vegetation) should be incorporated into the development design.

7.8 All lighting on site should be in accordance with the guidance set out in: Bat Conservation Trust and Institute of Lighting Professionals (2018) Guidance Note 08/18: Bats and artificial lighting in the UK. ILP, Rugby

8 ENHANCEMENT OPPORTUNITIES

Mammals and birds

Bat box and bird boxes can be installed within any new development. The provision of hedgehog gaps into all ridged boundaries (13 cm x 13 cm) to allow free passage of hedgehogs across the site.

Invertebrates

8.1 Wildflowers could be planted to benefit pollinators. The table below shows the plant species to be grown on site, they have been selected to benefit honeybees, bumblebees, and solitary bees, and to supply pollen and nectar for much of the year. The recommended area for planting has been highlighted in the proposed works and mitigation map, the number of and the precise location of each individual plant should be decided upon by a professional horticulturalist.

Table 4: *Some useful plants for bees and a rough estimate of flowering times (flowering times will vary depending geographical location and weather).*

Flowering time	Plant species.
Jan – Feb	Snowdrops, crocus,
March	Celandine, marsh marigold, goat willow (in scrub), blackthorn (in scrub)
Apr – May	Forget me not, blackthorn, foxglove, and dead nettle.
Jun – Jul	Barberry, white clover, birds foot trefoil, Bramble (in scrub), Welsh poppy, Common comfrey, and Borage
August	Most July plants will flower into August. Rosebay willowherb (in scrub).
Sep – Oct	Knapweed, Borage, and ivy
Nov – Dec	Ivy and stonecrop.

8.2 In addition to the above, birds foot trefoil and white clover should be planted throughout the lawn area. Birds foot trefoil will continue to flower after being mown and offers nectar to honeybees, short-tongued bumbles, long tongued bumbles, and solitary bees. White clover will also continue to flower after mowing, it is a good source of pollen for honeybees and supplies nectar to honeybees, short-tongued bumbles, long tongued bumbles, and solitary bees.

9 CONCLUSION

9.1 Providing the recommended mitigation measures and surveys are adopted, relevant nature conservation legislation will not be contravened, ecological impacts of the development will be reduced to a minimum and ecological issues are not, based upon the available information, anticipated to preclude the sites development.

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PHASE 1 HABITAT MAP

TATA Steelworks, Pontarddulais

Date: May 2023	Drawn by: D.P.
Scale:	Drawing N°: v1.1

LEGEND

- Woodland
- Fence
- Semi improved grassland
- Scattered trees
- Wall
- Tall ruderal
- Pond
- Japanese knotweed
- Dense scrub
- Scattered scrub
- Rubble mound
- Bare ground
- Introduced shrubs
- Hard standing
- Structures
- Spp poor hedge

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