



Tata Steel UK Limited

# Electric Arc Furnace

Reptile Survey Report

2487033 P&C EAF (Issue for PAC)

MAY 2024

## RSK GENERAL NOTES

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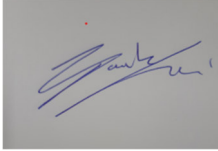

**Title:** Electric Arc Furnace – Reptile Survey Report

**Client:** Tata Steel UK Limited

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**Office:** Cardiff

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## EXECUTIVE SUMMARY

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The report presents the findings of reptile surveys carried out on land at Tata Steelworks in Port Talbot, South Wales. The surveys were carried out between April and June 2022. This report has been produced to support the Electric Arc Furnace project. The surveys were based on the 2021/2022 survey area (the boundary of the previous iteration of the project). Update surveys were not completed with the change in red line boundary as the habitat areas covered were considered representative of the wider site.

The purpose of this survey was to establish the presence or likely absence of reptiles in connection with the proposed development. Habitat suitable for reptiles comprised neutral grassland, scrub, ephemeral short perennial vegetation, waterbodies/ watercourses and woodland which was identified in a preliminary ecological appraisal (PEA) of the site by RSK Biocensus in 2021. The background data search identified records of grass snake, slow-worm and common lizard within 1 km of the site.

Slow-worm, common lizard, and grass snake were recorded across the site.

An estimated population size classification was carried out and a low population was estimated for grass snake, and a good population was estimated for both common lizard and slow-worm.

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# 1.0 INTRODUCTION

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## 1.1 Purpose of this report

- 1.1.1 The report presents the findings of reptile surveys carried out on land at Tata Steelworks in Port Talbot, South Wales (central Grid Ref SS 77524 86021). The area termed 'the site' throughout this report is delineated on Figure 1 by the red-line boundary.
- 1.1.2 Surveys were commissioned to inform the planning process and Environmental Statement ecology chapter in respect to reptiles using the site. The surveys were undertaken to determine the level of reptile activity at the site, identify if reptiles could be affected by the proposals and, if necessary, inform a mitigation strategy to reduce impacts to non-significant levels.

## 1.2 Background

- 1.2.1 The reptile surveys were carried out between April and June 2022 within the 2021/2022 survey area (shown in purple in Figure 1). Subsequently, adjustments were made to the proposed development, however, no additional habitat with connectivity to the wider landscape was identified for further survey (shown in red in Figure 1). Therefore, the original survey scope covered sufficient areas to inform the development proposals.

## 1.3 Ecological Context

- 1.3.1 A preliminary ecological appraisal (PEA), including a background data search (BDS) was completed by RSK (RSK, October 2021). Records of grass snake (*Natrix helvetica*), slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) were received during the BDS, within 1 km of the site boundary. Habitat within the site boundary was identified as suitable for common species of reptile during the PEA.
- 1.3.2 The approximately 160 ha site is located to the south-east of the town of Port Talbot. The site is predominately bare ground/ developed land. Open mosaic habitat is the most dominant habitat type comprising a mixture of scrub, grassland and ephemeral vegetation. There are a number of channels throughout the site and one large lake associated with the steelworks, located at the northern extent of the site.
- 1.3.3 The site is immediately bordered to the north, east and west by Tata Steelworks with coastal floodplain grassland, reedbed, an access road and Margam Moors Site of Special Scientific Interest (SSSI) adjacent to the south of the site. The surrounding landscape is a mixture of woodland, hedgerows, waterbodies (reservoir), coastal floodplain grassland and residential properties within Margam. Swansea Bay (Bristol Channel) is located approximately 880 m west of the site.

## 1.4 Development Proposals

- 1.4.1 The Proposed Development will require the demolition of existing buildings and structures, and the construction of a new EAF steel production facility. The Proposed Development also includes a scrap metal handling facility and associated scrap yards, slag processing facility, chemical and material storage structures, buildings, handling systems, electrical control rooms and power infrastructure, laboratories, offices and ancillary facilities, together with new and amended transport infrastructure, landscaping and associated development.



## 2.0 METHODOLOGY

### 2.1 Artificial refuge surveys

- 2.1.1 The standard method for establishing reptile presence is to survey using artificial refuges (roofing felt tiles and squares of corrugated metal, known as 'tins' c.0.5 m<sup>2</sup>), which are placed in suitable reptile habitat. The felt tiles and metal tins absorb the heat of the sun and attract reptiles, which use them for shelter and basking to aid temperature regulation. This allows surveyors to find reptiles that would otherwise be widely dispersed and well-hidden.
- 2.1.2 Reptile survey visits using 184 refuges were carried out between April and June 2022 when reptiles are active but before the weather gets too warm to negate the need for basking, weather conditions for each survey can be found in Appendix A. They were placed in suitable habitat in a small area to the west of the site as shown in Figure 1. The refuges were checked for reptiles seven times during suitable weather. Ideal weather conditions are bright sunshine between the hours of 0830 and 1100 or 1600 to 1830, with air temperatures between 9 and 15 °C, or if there is hazy or intermittent sunshine and little wind then between 9 and 18 °C, not during rain. When checking tins, a general watch was kept for other signs of reptiles, e.g. grass snake eggs, excrement or sloughed skins (often beneath refuges).

### 2.2 Population estimate

- 2.2.1 Although a full population estimate was not completed, using the data collected in the presence/ likely absence survey, an indication of the population size on the site can be estimated using the population size classification system shown in Table 1. Reptile numbers relate to the maximum number of adults of each species spotted during one reptile survey conducted on one day in suitable weather conditions. The population estimate using peak counts does not include juveniles because they are often abundant, but they have a high rate of mortality in their first year, so inclusion can distort population assessments. The size-class classification provides a general guide of the numbers likely to be found on site.

**Table 1: Population estimate classification according to Froglife (1999)**

Species	Low Population	Good Population	Exceptional Population
Adder	<5	5-10	>10
Common lizard	<5	5-10	>10
Grass snake	<5	5-20	>20
Slow-worm	<5	5-20	>20

\* The figures in the table pertain to the maximum number of adults seen and/or observed under tins (placed in a density of 10 per hectare), by one person in one day.

## 3.0 RESULTS

### 3.1 Artificial refuge survey

- 3.1.1 Three species of common reptile was found on the site; slow-worm, common lizard and grass snake, as shown on Figure 2. All of these species are considered to be widespread.
- 3.1.2 Table 2 summarises the results of visits one to seven, raw survey data can be found in Appendix B. The locations of the records are shown on Figure 2.

**Table 2: Summary of reptile survey results**

Species	Peak Adult Count
Common lizard	10 (visit 4)
Grass snake	1 (visit 4)
Slow-worm	19 (visit 3)

- 3.1.3 Several records of common lizard and slow-worm were also noted during other ecological surveys.

### 3.2 Population estimate

- 3.2.1 The maximum number of adults of each species recorded during one reptile survey visit conducted on one day in suitable weather conditions is shown in Table 3. The population classification estimate is based upon seven surveys undertaken to define presence/ likely-absence and therefore, only an estimate for population is provided (Table 3). This is defined by the number of reptiles recorded per hectare.
- 3.2.2 Based on Froglife guidance, the site supports a low population of grass snake and good populations of common lizard and slow-worm.

**Table 3: Maximum counts of adults and population estimates**

Species	Peak Count	Population Estimate
Grass snake	1	Low population
Common lizard	10	Good population
Slow-worm	19	Good population



## 4.0 EVALUATION AND CONCLUSIONS

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- 4.1.1 Based on the survey findings and population estimates, the site supports three species of common reptile (grass snake, common lizard and slow-worm). There is a low population estimate for grass snake and a good population estimate for both common lizard and slow-worm. The grass snake was recorded west of the section of the Mother Ditch (North) which forms a large lagoon, in areas of high-quality reptile habitat (rough grassland and dense scrub). The slow-worm and common lizard records were concentrated within the southern area of the site in high quality reptile habitat (woodland edge, rough grassland and dense scrub).

## 5.0 REFERENCES

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Froglife (1999). *Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

RSK Biocensus (October 2021), *Project Cronus: Port Talbot – PEA REV00*. RSK

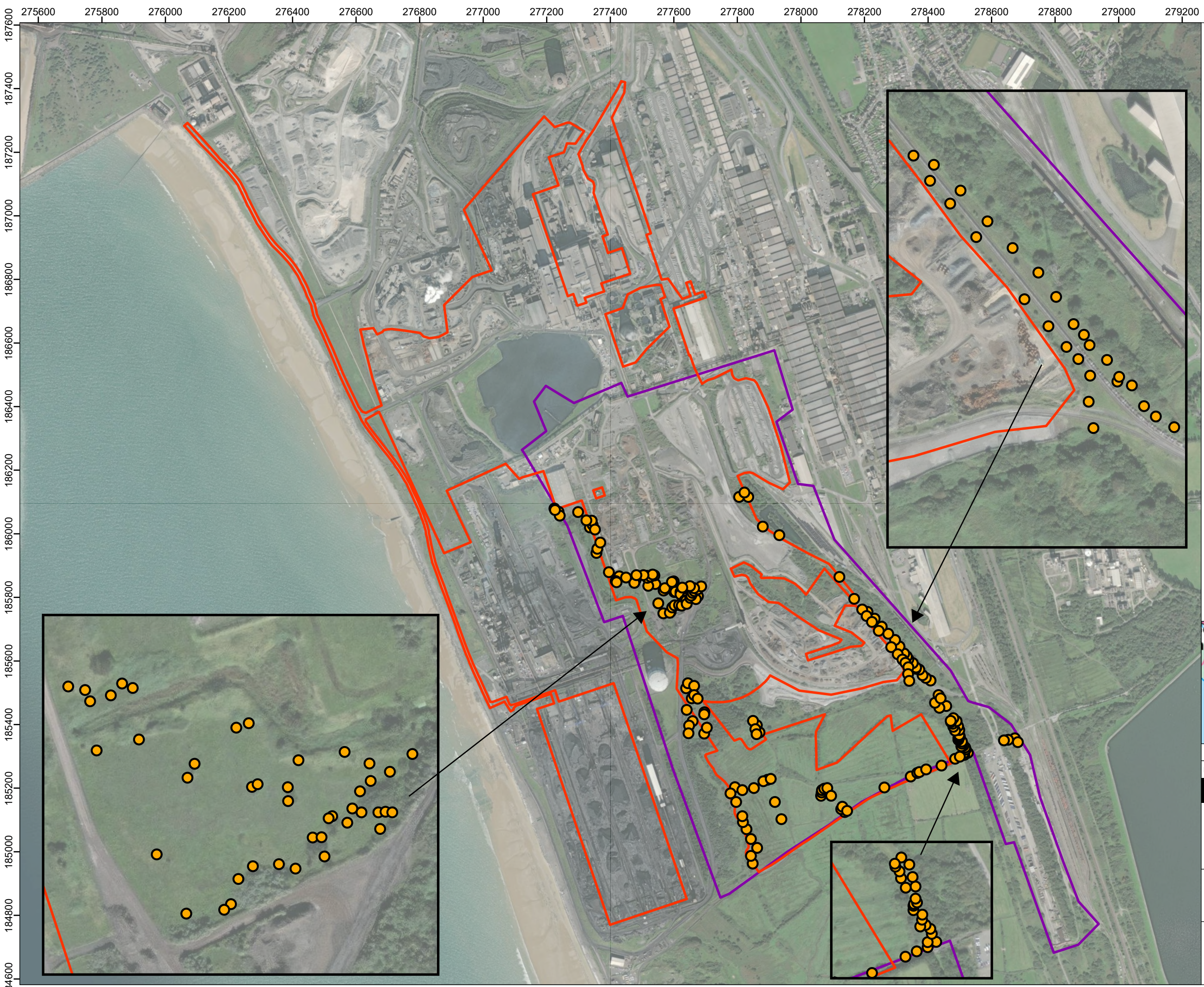
## 6.0 FIGURES

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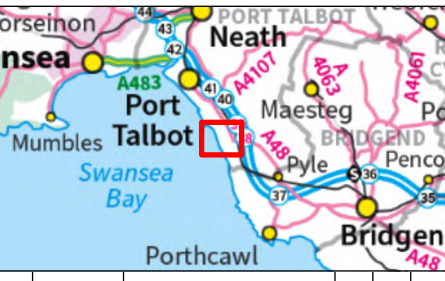
**Figure 1** – Reptile Refugia Locations

**Figure 2** – Reptile Survey Results





- Legend:
- Site boundary
  - 2021/2022 survey area
  - Reptile refugia location

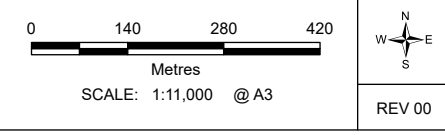


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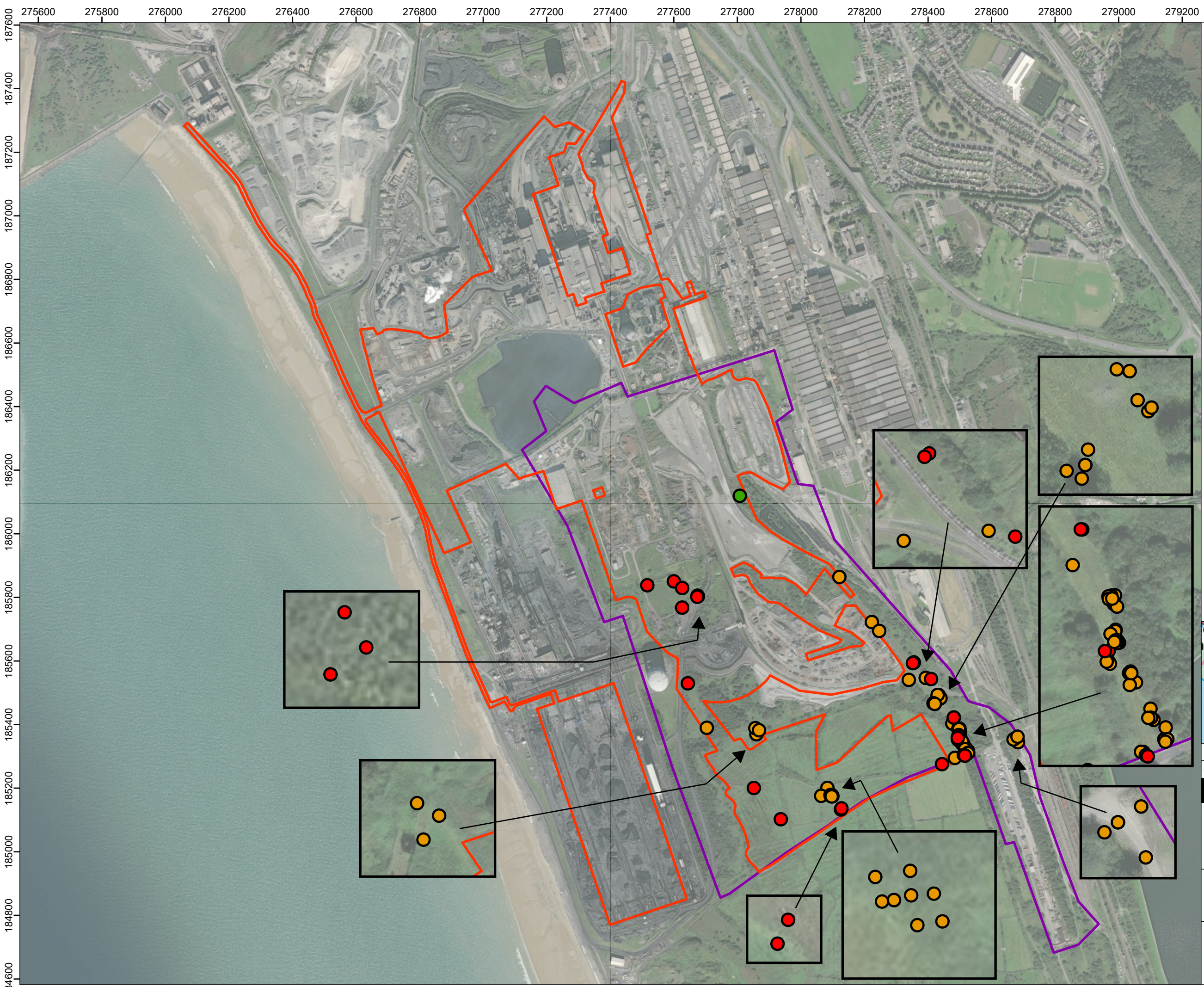
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TITLE: Figure 1:  
Reptile refugia locations







**Legend:**

- Site boundary
- 2021/2022 survey area

**Reptile Species**

- Common Lizard
- Grass Snake
- Slow Worm

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TITLE: Figure 2:  
Reptile survey results

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## APPENDIX A – SURVEY CONDITIONS

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Survey Visit	Date	Temp. (Air)	Wind (Beaufort)	Cloud (Octas)	Rain (0-5)	Suitable Conditions Yes, No, Fair
1	07.04.2022	9	6	2	0	Yes
2	26.04.2022	8	3	3	0	Yes
3	03.05.2022	12	1	1	0	Yes
4	25.05.2022	12	6	2	0	Yes
5	17.06.2022	18	2	3	0	Fair
6	22.06.2022	17	1	4	0	Fair
7	01.07.2022	15	5	2	0	Fair



## APPENDIX B – RAW SURVEY DATA

Species		Visit 1 07.04.22	Visit 2 26.04.22	Visit 3 03.05.22	Visit 4 25.05.22	Visit 5 17.06.22	Visit 6 22.06.22	Visit 7 01.07.22	Highest Adult Count
Grass snake	Male	0	0	0	0	0	0	0	1
	Female				1				
	Juvenile				0				
	Unknown				0				
Common Lizard	Male	0	0	0	0	0	0	4	10
	Female			0	0			0	
	Juvenile			0	0			1	
	Unknown			4	10			0	
Slow-worm	Male	3	0	6	6	0	0	1	15
	Female	6	4	9	1	6	0	8	
	Juvenile	1	2	4	5	3	0	1	
	Unknown	0	3	0	0	0	1	0	



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