

# A585 Windy Harbour to Skippool Improvement Scheme

**TR010035**

## 6.8.3 ES Appendix 8.3: Reptile Technical Appendix

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009

**A585 Windy Harbour to Skippool  
Improvement Scheme**  
Development Consent Order 201[ ]

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**ES APPENDIX 8.3: REPTILE TECHNICAL APPENDIX**

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## 1 INTRODUCTION

### 1.1 Aims and Objectives

1.1.1 This report provides the findings of the reptile surveys undertaken in support of Highways England's proposed development of the A585 between Windy Harbour and Skippool (hereafter referred to as 'the Scheme').

1.1.2 The aims and objectives of this study were to:

- Identify the presence of any reptile species using suitable habitats within the study area
- Evaluate the habitats present with regards to reptiles

1.1.3 The need for mitigation or compensation, and the identification of potential opportunities to enhance the existing ecological baseline, are not included within this report, but are discussed in full in Chapter 8: Biodiversity (document reference TR010035/APP/6.8).

### 1.2 Report Structure

1.2.1 This report has been subdivided into the following sections:

- Section 1 and 2: provide the aims and objectives with an overview of the methodologies adopted
- Section 3: presents the findings of the desk study and reptile surveys
- Section 4: summarises the results and provides conclusions relating to reptiles
- Section 5: references

## 2 METHODOLOGY

### 2.1 Introduction and Guidelines

2.1.1 The study sought to identify habitats of potential value to reptiles and to determine their presence within, or likely absence from, the area surveyed.

2.1.1 The scope of the reptile surveys was designed with reference to good practice guidance, including the *Herpetofauna Workers' Manual* (Gent and Gibson, 2003) and *Reptile Survey Guidance* (Froglife, 1999; Natural England, 2011).

2.1.2 The desk study area (the 'Desk Study Area') and field survey area (the 'Survey Area'), described herein, were determined during the options phase, at which time multiple Scheme options were under consideration. This report therefore, in some instances, contains information outside of the various study and survey areas discussed herein.

### 2.2 Desk Study

2.2.1 Table 2-1 summarises the sources of information utilised during the desk study and the information that was obtained.

Table 2-1: Desk Study Data Sources

Source	Information obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) – <a href="http://magic.defra.gov.uk">magic.defra.gov.uk</a>	The location of international/national nature conservation designated sites notified for their reptile assemblages.
Ordnance Survey mapping and online aerial imagery	Key areas of habitat which reptiles may utilise.
The Lancashire Environment Record Network (LERN)	Records of reptiles within approximately 1km of the Draft Order Limits.
Lancashire Amphibian and Reptile Atlas Project (LARA)	Reptile distribution maps and records of any reptiles within approximately 1km of the Draft Order Limits.
National Biodiversity Network Atlas (NBN): <a href="https://nbnatlas.org/">https://nbnatlas.org/</a> (last accessed 16/02/2017)	Records of reptiles with approximately 1km of the Draft Order Limits. Data protected by a Creative Commons Zero (CC0) or Creative Commons with Attribution (CC BY) licence was used within this report.
Wyre Council online planning application search – <a href="http://publicaccess.wyre.gov.uk/online-applications/">publicaccess.wyre.gov.uk/online-applications/</a>	Habitat information and reptile records, within approximately 1km of the Draft Order Limits, submitted in support of planning applications to Wyre Borough Council.

### 2.3 Surveyor Experience

2.3.1 All surveyors involved with screening and scoping for reptiles were experienced in the following:

- Field identification of all widespread reptile species and field signs; for example: sloughs, burrows and eggs



- Assessing the potential suitability of habitats for widespread reptile species
- Determining appropriate spatial scope for survey
- Implementing appropriate survey techniques in a variety of habitat types

2.3.2 Surveys were undertaken outside of the known range for reptile species protected by European law: sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*; their presence during surveys was therefore highly unlikely. Survey licences were therefore not required to facilitate the surveys undertaken.

## 2.4 Defining the Survey Area

2.4.1 Due to the large-scale of the Scheme, it was not appropriate to survey all potentially suitable habitats for reptile within Scheme's likely zone of influence. Surveys were, therefore, targeted towards habitats considered most likely to contain reptiles within approximately 100m of the Draft Order Limits (the reptile 'Survey Area').

2.4.2 A reptile habitat assessment, to determine the location of habitats most likely to support reptiles, was undertaken and was informed by analysis of aerial photographs; the results of the Phase 1 habitat survey; and, a review of existing reptile records. The habitat assessment identified the extent of key habitat areas within the Survey Area.

2.4.3 The habitat assessment included consideration of the following criteria:

- Location in relation to species range
- Vegetation structure
- Insolation (sun exposure)
- Aspect
- Topography
- Surface geology
- Connectivity to nearby good-quality habitat
- Prey abundance
- Refuge opportunity
- Hibernacula potential
- Disturbance
- Egg-laying site potential (grass snake only)

2.4.4 Seven areas for presence/absence surveys (hereafter referred to as 'Survey Zones') were identified through the habitat assessment (Figure 8.3.1 at Annex B).

## 2.5 Presence / Absence Survey

2.5.1 In each Survey Zone, artificial refugia – a combination of corrugated iron, coroline roofing material and roofing felt, measuring a minimum of 0.5m x 1.0m – were placed in areas identified as suitable reptile habitat.

- 2.5.2 In non-linear habitats, refugia were placed at a density of 5–10 per hectare. In linear habitats of less than 10m width, for example hedgerows and road verges, refugia were placed at a frequency of at least 1 per 10m of suitable habitat. The total number of refugia and their approximate locations were recorded on an aerial map.
- 2.5.3 Artificial refugia were left to settle for a minimum of 14 days prior to conducting the first check.
- 2.5.4 Each refugia check was conducted during the following conditions:
- Time: 07:00–18:00
  - Air temperature: 10°C–20°C
  - Rain: No rain, or light rain only, at time of survey. Surveys between periods of heavy rain (when all other conditions are suitable) were acceptable
- 2.5.5 In addition to careful checks by lifting the refugia, binoculars were used to check for reptiles between refugia.
- 2.5.6 During each check, surveyors recorded details of all herptiles encountered, including, species, number of individuals, life-stage (adult, sub-adult, juvenile) and, when possible, sex.
- 2.5.7 Reptile locations were marked using a Global Positioning System. Where topography and vegetation structure may have reduced the accuracy of records below 5m, this information was noted.
- 2.5.8 To determine reptile presence or likely absence, 7 visits were undertaken to each Survey Zone from April to October 2017, inclusive, with at least 4 visits conducted during ‘optimum’ survey months: April, May, June and September (Table 2-2).
- 2.5.9 In line with good practice guidance, the first and last surveys were separated by a period of at least 30 days, with a minimum of 2 days between each visit.

Table 2-2: Conditions for the Reptile Surveys

Visit Number	Date	Time		Temp (°C)		Weather
		Start	End	Start	End	
1	22 June 2017	08:30	14:00	12	16	Clear and dry
2	28 July 2017	07:50	14:30	14	17	Overcast with sunny spells. Some light showers
3	25 August 2017	12:30	16:00	13	16	Clear and dry after heavy downpour
4	12 September 2017	10:55	12:50	13	14	Cloudy with sunny spells. Light rain at end of the survey

Visit Number	Date	Time		Temp (°C)		Weather
		Start	End	Start	End	
5	19 September 2017	12:15	15:00	13	13	Cloudy with sunny spells
6	26 September 2017	12:30	15:30	13	13	Cloudy with sunny spells
7	3 October 2017	09:00	14:00	10	14	Cloudy with sunny spells

## 2.6 Survey Limitations

2.6.1 Over the course of the 7 visits, approximately 30 refugia were removed from the Survey Zones – potentially by third-parties unaware of the purpose of the refugia; or were eaten, or trampled, by livestock. Nevertheless, remaining refugia were widespread, maintaining good spatial coverage of each Survey Zone. Although only low numbers of refugia were removed, to offset the reduced sampling effort in some areas and to supplement the dataset, additional refugia were distributed in other areas that were less susceptible to removal by third-parties or livestock. The additional refugia were left undisturbed for 14 days before being surveyed. Therefore, the temporary reduction in the number of refugia between surveys was deemed highly unlikely to qualitatively affect the quality of the data generated or any conclusion drawn in relation to the ecological baseline.

### 3 RESULTS

#### 3.1 Desk Study

3.1.1 No designated sites notified for reptiles or reptile records were identified during the desk study.

#### 3.2 Survey Results

3.2.1 No reptiles were recorded during the presence/absence surveys. However, other herptiles, common frog (*Rana temporaria*) and common toad (*Bufo bufo*), were recorded using the artificial refugia (see Annex A – Survey Results).

3.2.2 The total number of common toads recorded was 162 over the 7 survey visits, with a peak count of 15 on visit 3, in Survey Zone 3.2. Common frog were recorded in lower numbers than common toad, but were still widespread across the survey area.

3.2.3 A single great crested newt was recorded under a refuge in Survey Zone 3.1 close to a pond with confirmed great crested newt presence (refer to Appendix 8.2 (document reference TR010035/APP/6.8.2)).

3.2.4 As no reptiles were recorded, additional surveys during optimum surveys months to determine population size were not required.

## 4 CONCLUSIONS

- 4.1.1 No reptiles were recorded during the study. The Survey Area predominantly comprised regularly grazed agricultural fields representing low-value reptile habitat; therefore, it is likely that reptiles were absent from the area or present at very low densities.

## 5 REFERENCES

Design Manual for Roads and Bridges (DMRB) (2008) *Volume 11 Section 2 Part 2 HA 202/08 Environmental Impact Assessment*.

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

Gent T and Gibson S (2003) *Herpetofauna Workers Manual. JNCC, Peterborough.*

Herpetofauna Groups of Great Britain and Ireland (1998) *Evaluating Local Mitigation / Translocation Programmes: Maintaining Best Practice and Lawful Standards. HGBI, Halesworth.*

Interim Advice Note (IAN) 130/10 (2010) *Ecology and Nature Conservation Criteria for Impact Assessment, Highways Agency.*

Natural England (2011). *Natural England Technical Information Note TIN102: Reptile Mitigation Guidelines. Natural England, Peterborough. (Note this guidance was published and subsequently withdrawn in September 2011).*

## 6 ABBREVIATIONS

Term	Meaning/Definition
CC0	Creative Commons Zero
CC BY	Creative Commons with Attribution
LARA	Lancashire Amphibian and Reptile Atlas Network
LERN	Lancashire Environment Research Network
MAGIC	Multi-Agency Geographic Information for the Countryside
NBN	National Biodiversity Network

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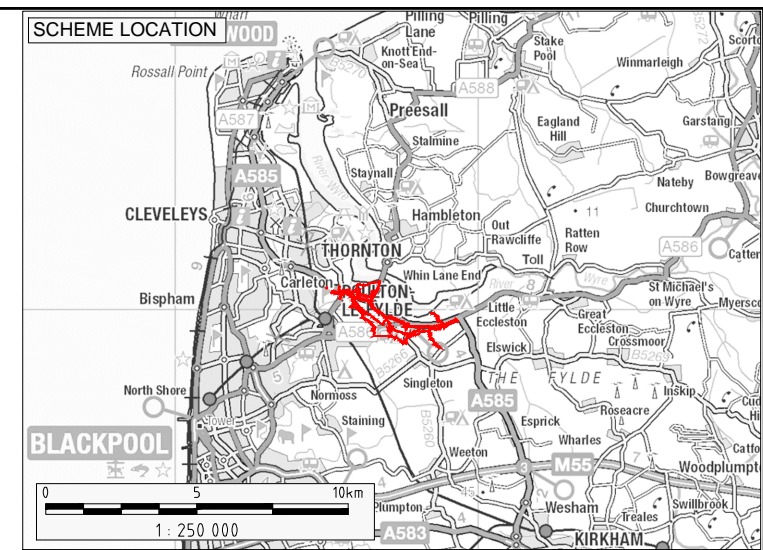
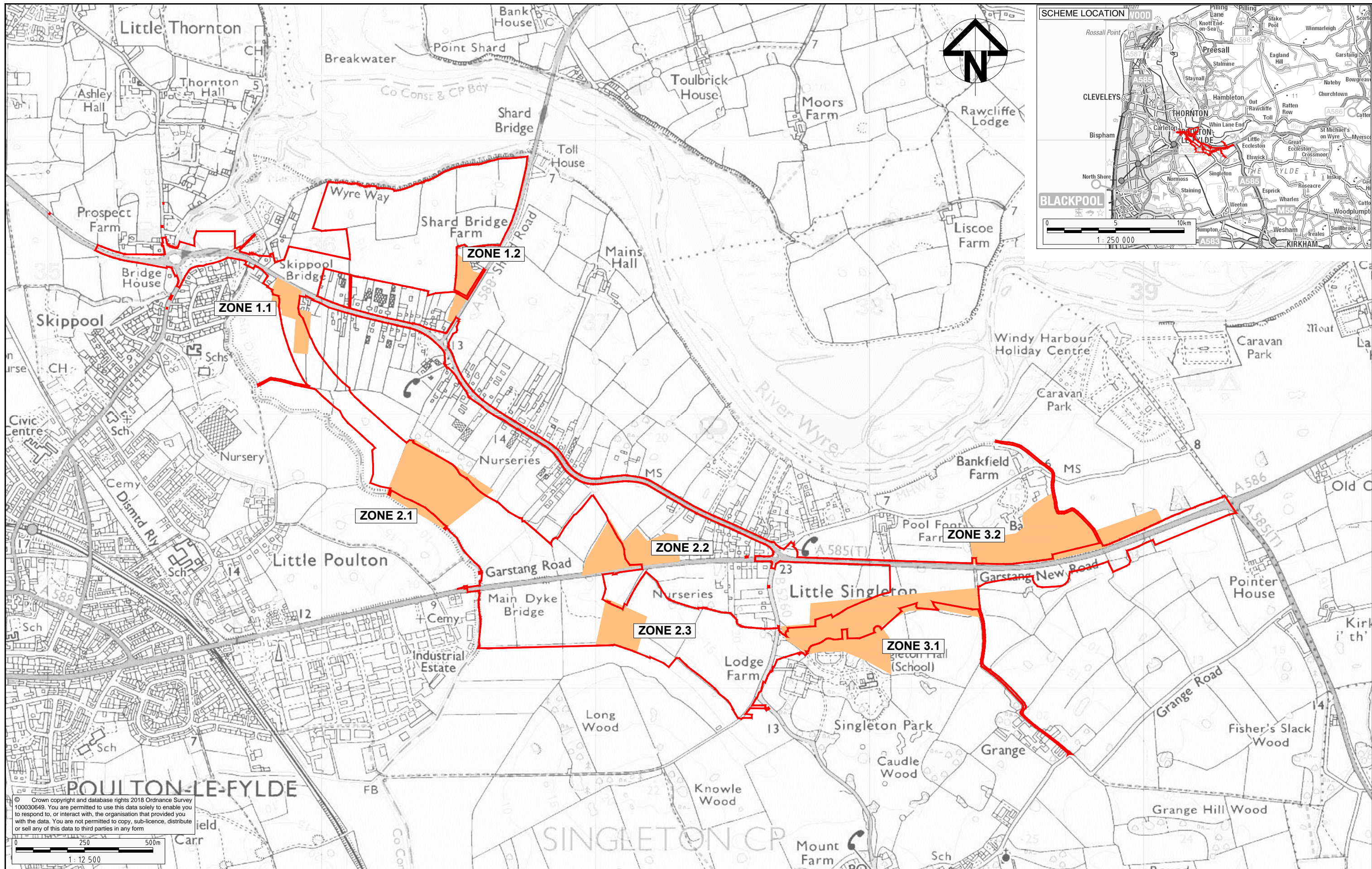
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## **ANNEX A – SURVEY RESULTS**

Visit Number	Survey Zone	Species	Life-Stage			Total
			Juvenile	Adult	Undetermined	
1	1.2	common toad	0	0	1	1
	2.2	common toad	4	3	0	7
	3.1	great crested newt	0	0	1	1
		common toad	1	1	0	2
	3.2	common toad	2	5	0	7
		common frog	0	1	0	1
2	2.2	common toad	2	1	0	3
	3.1	common toad	1	1	0	2
		common frog	0	1	0	1
	3.2	common toad	1	0	0	1
3	1.1	common toad	0	3	0	3
		common frog	0	1	0	1
	2.2	common toad	3	5	0	8
	3.1	common toad	5	6	0	11
		common frog	0	0	1	1
	3.2	common toad	6	9	0	15
4	1.2	common toad	2	1	0	3
	2.1	common toad	9	0	2	11
		common frog	0	0	1	1
	3.1	common toad	0	0	7	7
		common frog	0	0	1	1
	3.2	common toad	14	0	0	14
5	2.1	common toad	3	8	0	11
	3.1	common toad	6	5	0	11
		common frog	0	0	3	3
	3.2	common toad	11	3	0	14
6	2.1	common toad	6	0	0	6
		common frog	0	0	2	2
	3.1	common toad	3	1	0	4
	3.2	common toad	6	2	0	8
7	1.2	common toad	0	0	1	1
	2.1	common toad	3	0	3	6
		common frog	0	0	1	1
	3.1	common toad	0	0	2	2
		common frog	0	0	2	2
3.2	common toad	0	3	0	3	
Total			88	60	28	176

## ANNEX B – DRAWINGS

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0 250 500m  
1:12 500

**KEY:**  
 Draft Order Limits  
 Reptile Survey Zone

Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
0	S8	OCT18	S8 - DCO SUBMISSION	JN	KB	NH



Client  
 Project A585 WINDY HARBOUR TO SKIPPOOL IMPROVEMENT SCHEME  
 Drawing Title ENVIRONMENTAL STATEMENT REGULATION 5(2)(a) REPTILE REPORT: REPTILE SURVEY AREA

Status	Revision
S8 - DCO SUBMISSION	0
Scale 1:12 500 @ A3	Date OCT 2018
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Drawing number HE PN   Operator   Volume   Location   Title   Number	
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