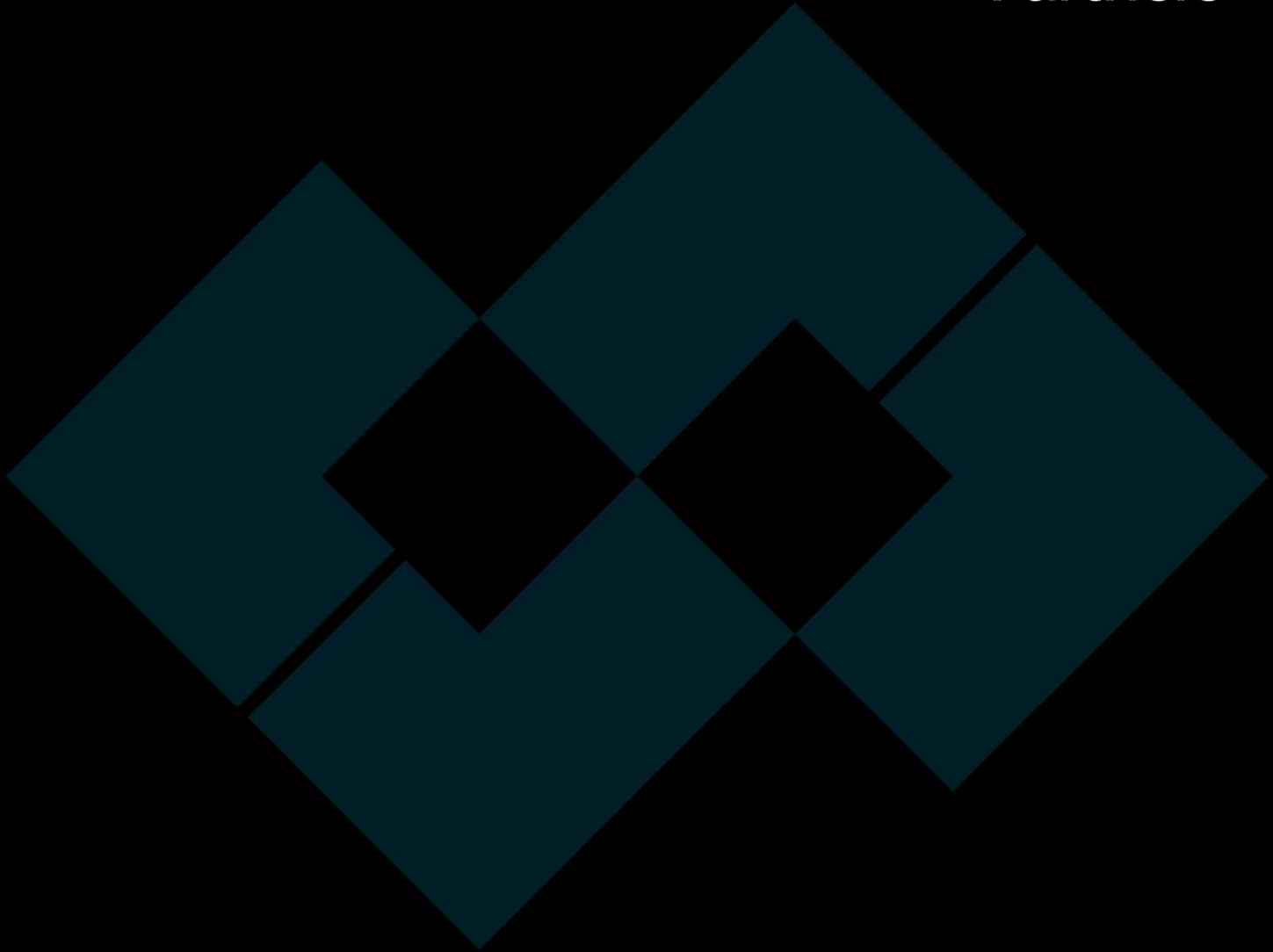




Appendix L7 - Reptile Survey Report Langstone FCERM Scheme

July 2022

Document Information

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Contents

Summary.....	1
1. Introduction.....	1
2. Legislation.....	2
3. Methodology	2
3.1 Background Data Search	2
3.2 Reptile Survey Method	2
4. Results.....	5
4.1 Background Data Results	5
4.2 Reptile Survey Results	6
5. Discussion.....	10
6. Recommendation	11
7. Conclusion	11
8. References	11
Appendix A - Froglife Advice Sheet 10 Criteria	12

Summary

- A reptile presence / likely absence survey was undertaken between 16th April and the 8th June 2021 for the Coastal Partners 'Langstone Flood and Coastal Erosion Management (FCERM) Scheme' site in Havant.
- A second survey was undertaken between the 5th and the 26th April 2022 to account for the inclusion of a compound and haul route proposal effecting an area to the north of the previous survey location
- Two reptile species were recorded during the survey series, including common lizard and slow-worm.
- The location could be considered a 'key reptile site' (using the HBIC data), however, following the survey results is considered to have a 'good' population of slow-worm and a 'low' population of common lizard present within the site.
- Once the detailed design is known, appropriate mitigation and/or compensation measures will be required to ensure impacts to reptiles are avoided or minimised.

1. Introduction

A series of ecology surveys were required for the Coastal Partners Langstone Flood and Coastal Erosion Risk Management (FCERM) Scheme (Figure 1.1). This report constitutes an assessment of the reptile interest within that suite of surveys.

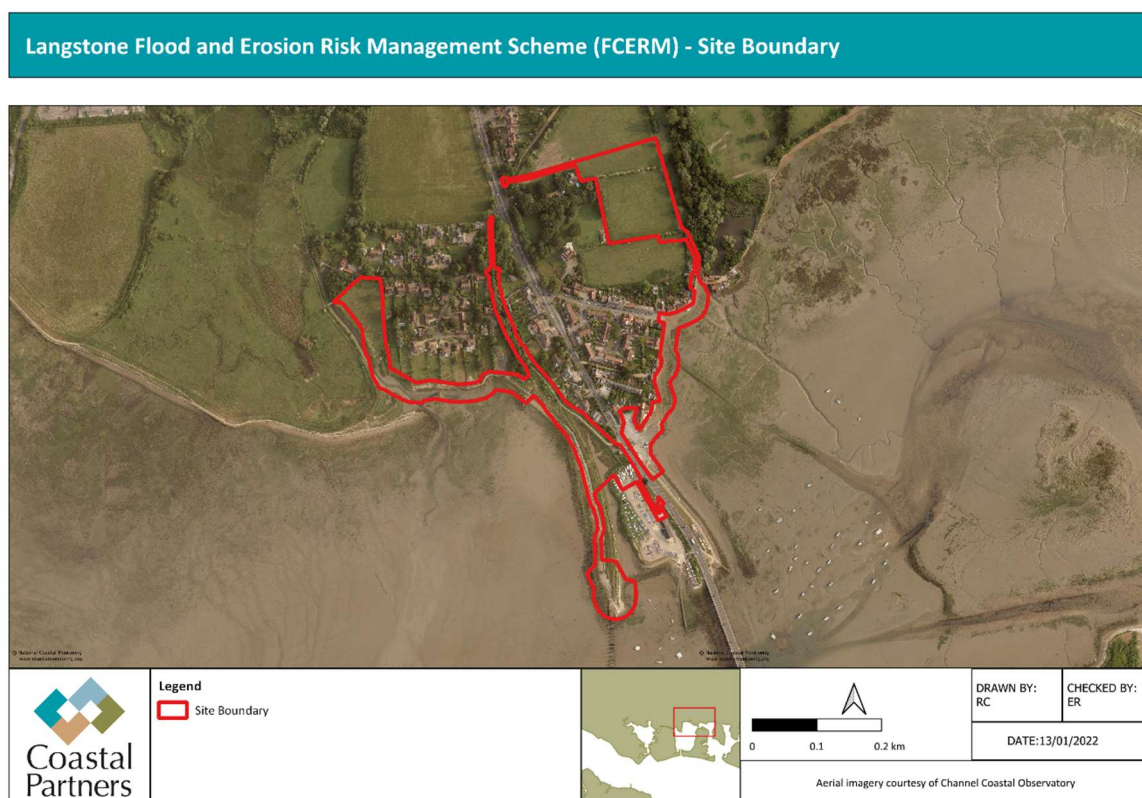


Figure 1.1 – Langstone FCERM approximate Scheme Boundary.

2. Legislation

All reptile species are protected under UK law. Slow-worms (*Anguis fragilis*), common lizard (*Zootoca vivipara*), adder (*Vipera berus*) and grass snake (*Natrix natrix*) are protected under the Wildlife and Countryside Act 1981 (as amended), Sections 9(1) and 9(5) from deliberate injury, deliberate killing and trade. Smooth Snake (*Coronella austriaca*) and Sand Lizard (*Lacerta agilis*) are fully protected under all sub sections of Section 9 and are additionally protected under the Conservation of Habitats and Species Regulations 2017 (as amended); making it an offence to disturb these species without an appropriate licence.

All reptile species are species of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of this act local authorities and other public bodies have a legal duty to take their conservation into account.

3. Methodology

3.1 Background Data Search

A desktop assessment was undertaken assessing data from Hampshire Biodiversity Information Centre (HBIC), www.magic.gov.uk and aerial imagery.

3.2 Reptile Survey Method

A presence / likely absence survey was undertaken in accordance with the Herpetofauna Groups of Britain and Ireland (HGBI) (1998) guidelines and Natural England's 'Reptiles: surveys and mitigation for development projects' guidance (Natural England, 2015). Five transects (A-E) (Figure 3.2.1) were established through areas of potentially suitable reptile habitat within the original site boundary. The transects were surveyed with a total of 53 Artificial Cover Objects (ACOs), consisting of 500mm x 500mm bitumen felt squares. The ACOs were placed approximately every 10 - 20m along the transects and were left to settle in for two weeks following placement. Each transect received nine site visits during suitable conditions (Table 3.2.1), between 16th April and 8th June 2021; and records of any reptiles basking on top or sheltering underneath the ACOs were made.

Since the 2021 survey, a haul route and compound for the Langstone Flood and Coastal Erosion Risk Management (FCERM) Scheme has been proposed outside of the original site boundary and survey area. Therefore an additional survey was undertaken to account for the proposed location effected by the haul route and compound proposal. Three transects (A – C) (Figure 3.2.2) were established through areas of potentially suitable reptile habitat. The transects were surveyed with a total of 41 ACOs, consisting of 500mm x 500mm bitumen felt squares. The ACOs were placed approximately every 10 - 20m along the transects and were left to settle in for two weeks following placement. Each transect received seven site visits during suitable conditions (Table 3.2.2), between 5th and 26th of April 2022; and records of any reptiles basking on top or sheltering underneath the ACOs were made.

In addition, during survey transects a methodical visual search of natural basking locations was undertaken to gain further observations of reptiles. The transects were established by Ed Rowsell, Zoe Palmer and Rachel Cook, the surveys were undertaken by Rachel Cook, Mark Edgeller and Nicola Reid who are experienced and trained in undertaking reptile surveys. The population size was calculated based on the maximum number of adults seen during each survey visit as detailed in the Froglife Advice sheet 10 (Froglife, 1999).

Langstone Reptile Survey Mats and Transect (2021)

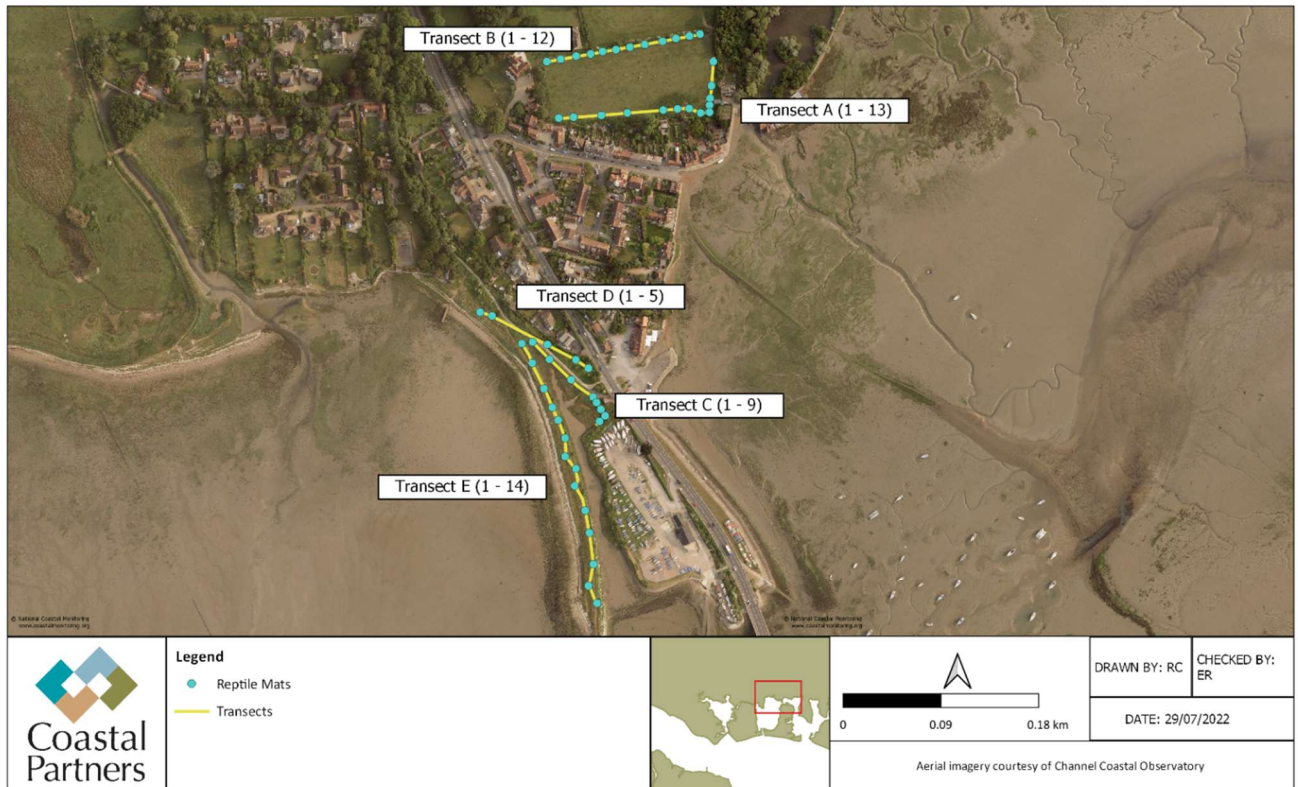


Figure 3.2.1 – Langstone Reptile Survey 2021 Transects A-E Showing Position of ACOs.

Additional Langstone Reptile Survey Transects and Mat Locations (2022)



Figure 3.2.2 – Langstone Reptile Survey 2022 Transects A-C Showing Position of ACOs.

Table 3.2.1 - Meteorological Data for the Reptile Surveys

Date	Start Time	End Time	Temp. Start (°C)	Temp. End (°C)	Cloud Cover (%)	Wind Direction	Wind Strength (Kn)	Weather Comments
16.04.2021	11.00	13.30	9	11	10	South, southeast	6	Sunny
23.04.2021	10.00	12.00	15	16	10	South, southeast	10	Sunny, slight breeze
27.04.2021	10.00	12.00	11	16	10	South, southwest	2	Sunny.
07.05.2021	10.00	12.00	12	16	0	West	7	Sunny, slight breeze
16.05.2021	10.00	12.00						Intermittent heavy rain and dry sunny spells
19.05.2021	10.15	12.00	14	16	20	West	10	Sunny, some cloud, slight breeze
27.05.2021	11.15	12.30	17	17	20	South	7	Sunny, some cloud

03.06.2021	10.45	12.00	17	18	30	Southwest	8	Sunny with clouds
08.06.2021	10.00	11.30	18	19	15	Southwest	9	Sunny, warm, slight breeze
05.04.2022	13.00	13.55	16	16	0	West	11	Sunny
13.04.2022	11.30	12.15	14	15	20	South, Southwest	9	Mostly sunny
14.04.2022	10.15	10.45	11	11		Southwest	3	Thin fog, otherwise clear. Fog burnt off to be sunny day.
18.04.2022	10.15	11.00	13	13	30	Northwest	8	
20.04.2022	10.00	10.50	12	12	40	Northeast	6	
22.04.2022	9.55	10.45	13	13	50	Northeast	14	
26.04.2022	10.30	11.30	13	14	0	East, Northeast	10	Sunny day

Limitations: During the 2021 survey Transect A became highly overgrown by tall vegetation including nettles and brambles during May – June which made access to some of the ACOs difficult and the ACOs hard to locate. Whilst transect A was visited weekly for 9 weeks, not all the ACOs along the transect were checked. In addition, ACO D3 along transect D was buried by garden waste which was noticeably deposited along the edges of the footpath on a regular basis. After 3 visits to transect D it became impossible to recover the ACO from the pile of waste without appropriate equipment, therefore it was abandoned. Bitumen felt ACOs were used for the survey which may reduce survey efficacy for snakes. A survey of this type is by its nature a snapshot in time. Wildlife populations fluctuate over time and ranges can expand or contract; the results of this survey are considered to be valid for between 12 and 24 months, if works are delayed a new survey should be considered.

4. Results

4.1 Background Data Results

The site is within close proximity to Chichester and Langstone Harbours SPA and Ramsar, Solent and Dorset SPA, the Solent Maritime Special Area of Conservation (SAC), Chichester Harbour SSSI and Area of Outstanding Natural Beauty (AONB), Langstone Harbour SSSI, and Warblington Meadow SSSI. The Langstone Mill Pond is a designated Site of Importance for Nature Conservation (SINC). There are 24 SINCs within 2km of the site, but only the Mill Pond within.

There are significant areas of optimal reptile habitat within the site boundary particularly within the scrub and improved grassland adjacent to the footpath which runs parallel to the Langstone Road, and the improved grassland and hedgerows within the Langstone Meadows.

HBIC records note 4 species of reptile (common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus*) have been recorded within 2km of the site. Surveys on Southmoor (adjacent to the western extent of the site) discovered a

strong population of common lizard and slow-worm in 2017. Using the Froglife Advice sheet 10 (Froglife, 1999) criteria, a location that supports three or more reptile species is considered a 'key reptile site'.

4.2 Reptile Survey Results

During the surveys, two species of reptile, common lizard (*Zootoca vivipara*) (Figure 4.2.1) and slow-worm (*Anguis fragilis*) (Figure 4.2.2) were recorded. Peak survey counts for both adults and juveniles (Table 4.2.1) were; 1 common lizard (on 3 dates in April) and 13 slow worms (27/05/2021).



Figure 4.2.1. Common Lizard (*Zootoca vivipara*) (Image Courtesy of Coastal Partners).



Figure 4.2.2. Slow-worm (*Anguis fragilis*) (Image Courtesy of Coastal Partners).

Table 4.2.1 - Total Reptile Numbers (Including Adults and Juveniles) on each Survey Date.

Date	Slow-worm Total Count (Adults and Juveniles)	Common Lizard Total Count (Adults and Juveniles)	Comments
16.04.2021	2	1	Transect C - D
23.04.2021	2	1	Transects C - E
27.04.2021	3	1	Transects C - D
07.05.2021	5	0	Transect D
16.05.2021	1	0	Transect D
19.05.2021	10	0	Transects B - E
27.05.2021	13	0	Transects B - E
03.06.2021	8	0	Transect B - D
08.06.2021	7	0	Transect B - D
05.04.2022	1	0	Transect A
13.04.2022	2	0	Transect A
14.04.2022	1	0	Transect A
18.04.2022	2	0	Transect A
20.04.2022	2	0	Transect A
22.04.2022	2	0	Transect A
26.04.2022	2	0	Transect A
	Highest count in one session		

Peak adult survey counts (Table 4.2.2) were one common lizard (on 16.04.21, 23.04.21 and 27.04.21) and 13 slow-worms (on 27.05.21). Using the Froglife Advice sheet 10 (Froglife, 1999) criteria (Appendix A), these results indicate that the location has a 'good' population of slow-worm and a 'low' population of common lizard.

Table 4.2.2 - Total Adult Reptile Numbers on each Survey Date.

Date	Slow-worm Total Adult Count	Common Lizard Total Adult Count	Comments
16.04.2021	2	1	Transect C - D
23.04.2021	2	1	Transects C - E
27.04.2021	3	1	Transects C - D
07.05.2021	5	0	Transect D
16.05.2021	1	0	Transect D
19.05.2021	8	0	Transects B - E
27.05.2021	13	0	Transects B - E
03.06.2021	6	0	Transect B - D
08.06.2021	4	0	Transect B - D
05.04.2022	1	0	Transect A
13.04.2022	2	0	Transect A
14.04.2022	1	0	Transect A
18.04.2022	2	0	Transect A
20.04.2022	2	0	Transect A
22.04.2022	2	0	Transect A
26.04.2022	2	0	Transect A
	Highest count in one session		

Langstone Reptile Survey (2021) - Positive Slow Worm Records

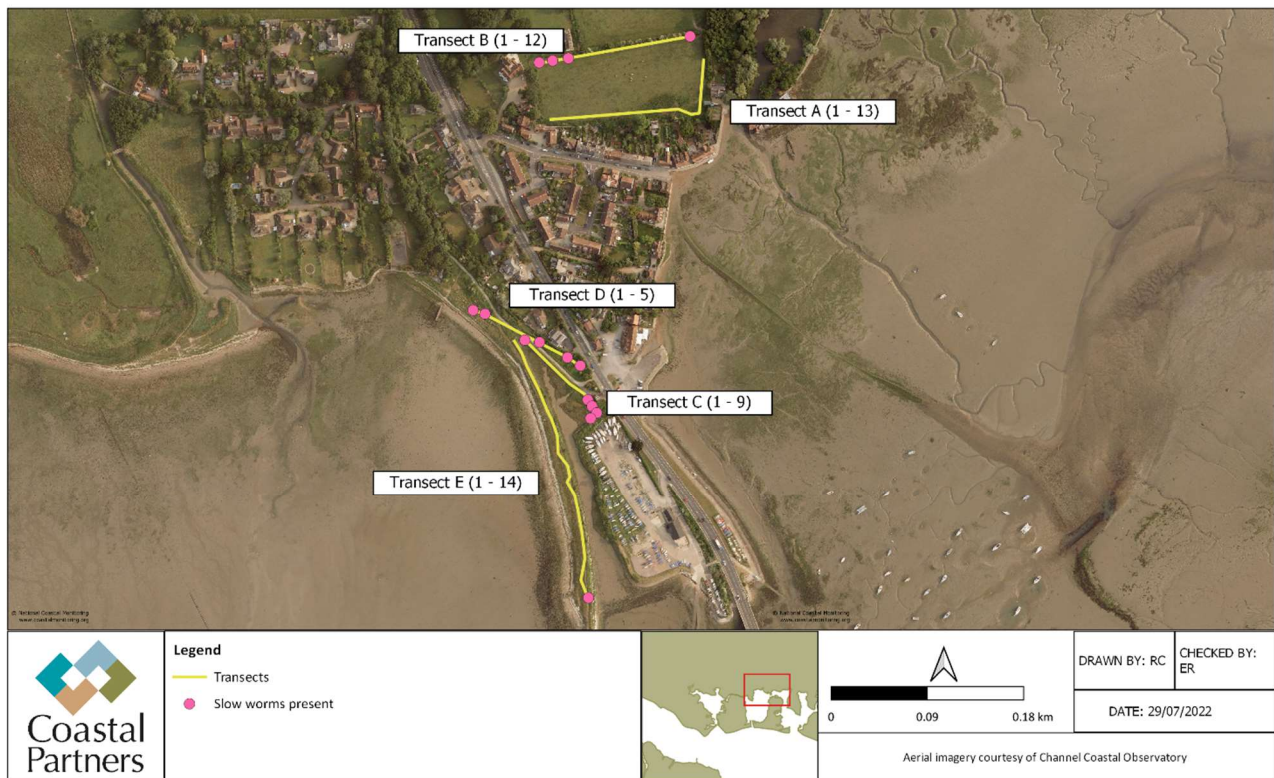


Figure 4.2.3 – 2021 Survey Positive Records of Slow Worm (*Anguis fragilis*) on all Transect Routes.

Positive Records of Slow Worm (*Anguis fragilis*) on additional Transect Routes (2022)

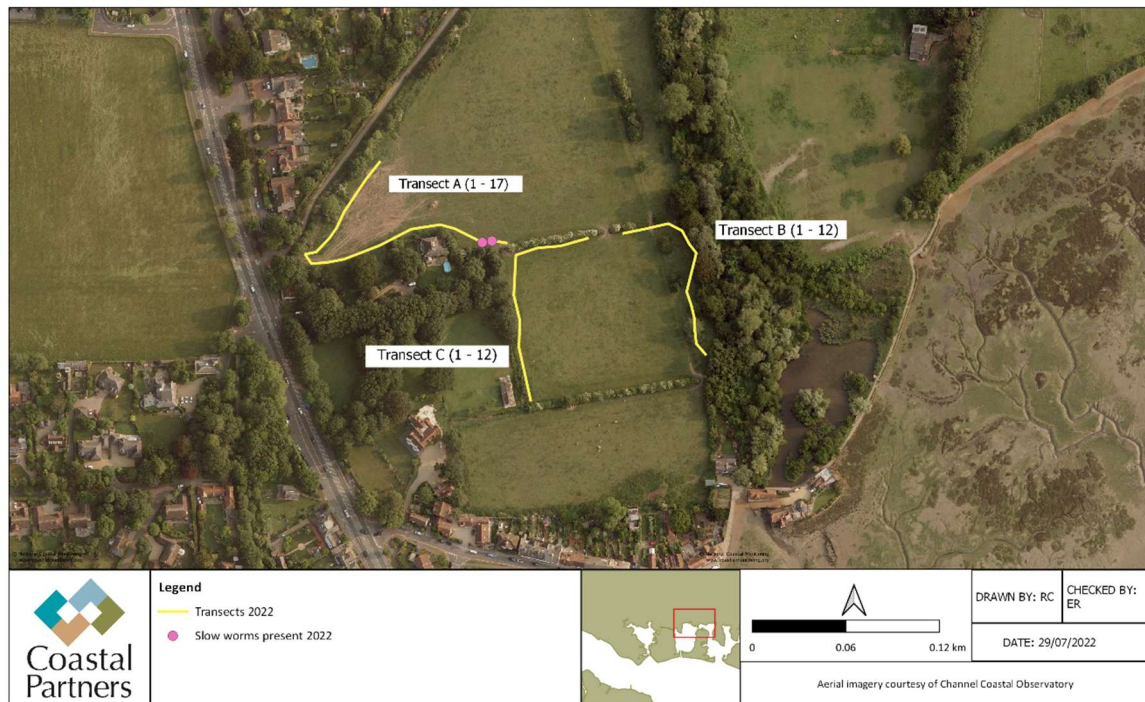


Figure 4.2.4 – 2022 Survey Positive Records of Slow Worm (*Anguis fragilis*) on all Transect Routes.

Langstone Reptile Survey (2021) - Positive Common Lizard Records

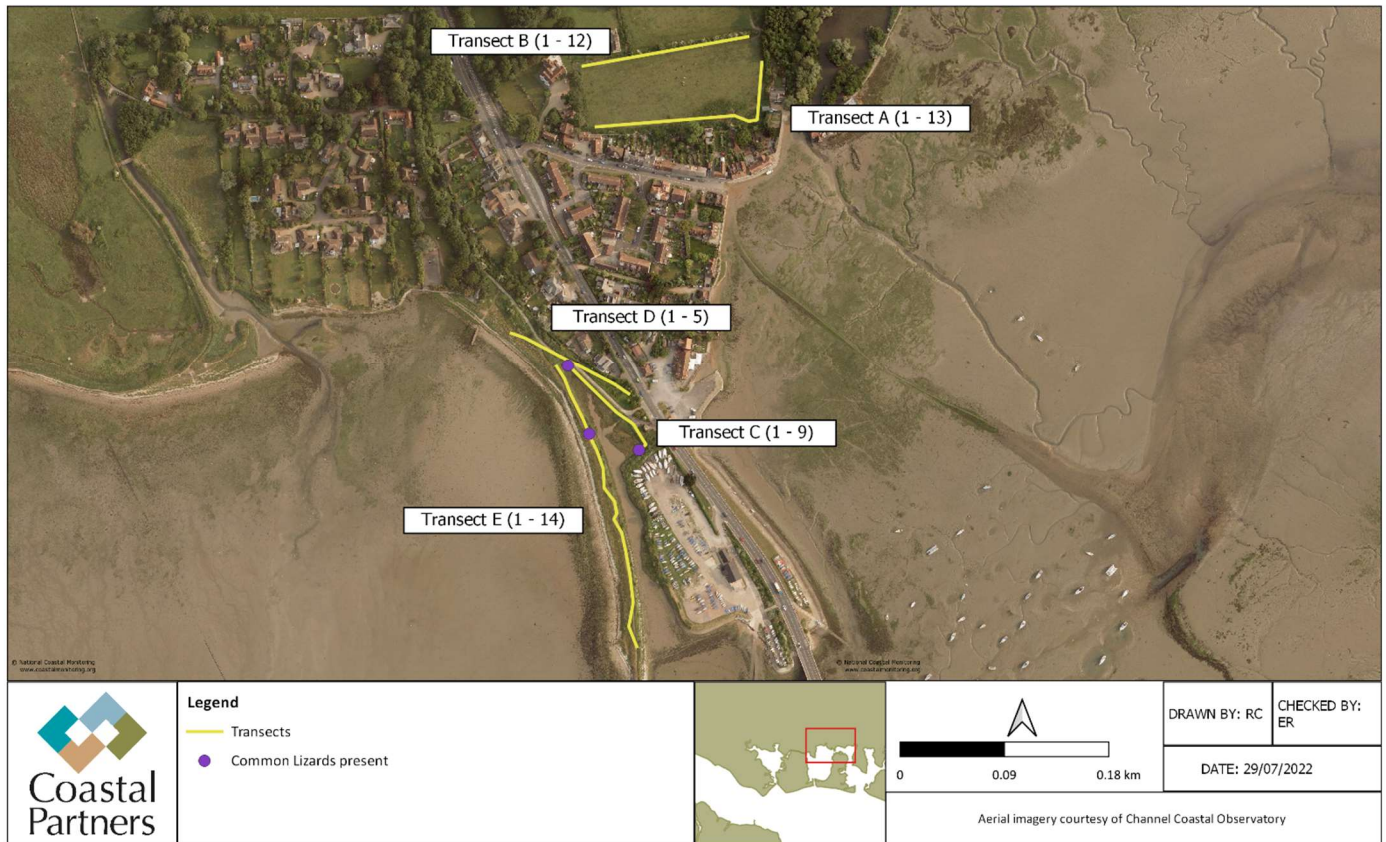


Figure 4.2.5 – 2021 Survey Positive Records of Common Lizard (*Zootoca vivipara*) on all Transect Routes.

There were no positive records of Common Lizard (*Zootoca vivipara*) on 2022 survey.

5. Discussion

Using the HBIC data, four species of reptile have been confirmed as present within 2km of the site. However, during the survey, two of those reptile species were confirmed as present on the site. The slow-worm was present along transects B, C, D and E within the 2021 survey site (Figure 4.2.3), with the largest numbers recorded along transect D adjacent to the footpath, which contained predominantly scrub. During the 2022 survey, the slow-worm was present along transect A (Figure 4.2.4), which contained grassland with adjacent scrub. The number of slow-worms found during the combined surveys indicate a 'good' population within the site, the 2022 survey alone indicates a low population in that survey area. The common lizard was found along transects C and E in the 2021 survey only (Figure 4.2.4), where scrub and grassland habitats were present; with numbers indicating a 'low' population of common lizard. There were no adder or grass snake sightings during the survey. Whilst there was HBIC records of adder and grass snake within 2km of the site, there were none within the scheme area. Adder records close to the site were on Hayling Island. The nearest grass snake record was at the Old Farmhouse on Wade Lane in 2006, north of the area.

Local observers confirmed that adders are usually seen on the north of Hayling Island. However, the site contains suitable habitat for the adder and grass snake, particularly to the west of the bridge and there are small pockets of suitable habitat in the Langstone meadow near the Mill Pond. It should be presumed that any suitable reptile habitat within the scheme area supports a number of reptile species, however the results of the survey and the HBIC data search suggest the likely absence of the adder and grass snake within the scheme area.

During the course of the reptile survey male, female and juvenile slow-worms were recorded, which confirmed that there was a breeding population present for these species within the site. It was difficult to sex the common lizards seen during the survey, but it can be presumed that a breeding population is also present within the site boundary.

6. Recommendation

Once the detailed design is known, appropriate mitigation and/or compensation measures will be required to ensure impacts to reptiles are avoided or minimised.

Further details, guidance and mitigation measures relating to the reptiles can be found on Natural England's 'Reptiles: surveys and mitigation for development projects' webpage: <https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences>

7. Conclusion

It can be concluded that the Langstone FCERM site supports a 'good' population of slow-worm and a 'low' population of common lizard. Once the detailed design is known, appropriate mitigation and/or compensation measures will be required to ensure impacts to reptiles are avoided or minimised.

8. References

Froglife. (1999). *Froglife Advice Sheet 10 Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation*. Peterborough: Froglife.

Herpetofauna Groups of Britain and Ireland (HGBI) (1998). *Evaluating Local Mitigation / Translocation Programmes: Maintaining Best Practice and Lawful Standards*. HGBI Advisory Notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpubl.

Natural England (2015). Reptiles: surveys and mitigation for development projects. Available at: <https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences> (Accessed on 15.01.20).

Appendix A - Froglife Advice Sheet 10 Criteria

Survey assessment: Key Reptile Sites

The Key Reptile Site Register is a mechanism designed to promote the safeguard of important reptile sites. The criteria for site selection are given below, including a table which allows the classification of the relative size of reptile populations on the basis of survey counts. Compare your survey results with the criteria given below to obtain an objective evaluation of the importance of the reptile interest on your site.

To qualify for the Key Reptile Site Register, the site in question must meet at least one of the following criteria:

- (1) supports three or more reptile species
- (2) supports two snake species
- (3) supports an exceptional population of one species (see table)
- (4) supports an assemblage of species scoring at least 4 (see table)
- (5) does not satisfy 1-5 but which is of particular regional importance due to local rarity (e.g. in the East Midlands of England, adders are very rare so even "low" populations should be designated as Key Sites)

	Low population <i>Score 1</i>	Good population <i>Score 2</i>	Exceptional population <i>Score 3</i>
Adder	<5	5 - 10	>10
Grass snake	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Slow-worm	<5	5 - 20	>20

Figures in the table refer to maximum number of adults seen by observation and/or under tins (placed at a density of up to 10 per hectare), by one person in one day.