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Natterjack toad & Sand lizard surveys

October 2023

Ainsdale Hope Centre
Sandringham Road
Ainsdale
Southport
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1.0 Introduction & Scope

1.1 As part of a proposed planning application involving development at Ainsdale Hope Centre, Southport, and following pre-application consultation(s) with Merseyside Environmental Advisory Service (MEAS), Tyrer Ecological Consultants Ltd were commissioned by Ecology Services Environmental Consultants to carry out a suite of surveys to inform impact assessment for two protected species that are associated with the nearby designated Sefton Coast - natterjack toad (*Epidalea calamita*) and sand lizard (*Lacerta agilis*).

1.2 Following a site meeting with represented parties from Tyrer Ecological Consultants Ltd, Ecology Services Ltd, Natural England, Sefton Council and North Merseyside Amphibian & Reptile Group (NMARG), it was agreed beforehand the surveys that form the remit of this report would be confined to the Ainsdale Hope Centre, Southport ("the Site") and comprise four nocturnal terrestrial surveys in respect of natterjack toad and seven diurnal surveys in respect of sand lizard (whilst diurnal surveys further complimented the overall survey effort for natterjack toad).

1.3 This report details the scope, methodology adopted for the surveys and the results (including incidental observations), followed by conclusions and associated recommendations.

1.4 The aim of the work was to establish whether protected natterjack toad or sand lizard stand to be directly impacted by development at Ainsdale Hope Centre, Southport, through the gathering of sufficient data. Objectives therefore were to:

- Determine presence or likely absence of natterjack toad and/or sand lizard at the Site following best practice methodology within the optimal timeframes to carry out surveys.
- Gather sufficient data to inform an impact assessment for the two named species in consideration of a wider impact assessment being carried out by Ecology Services Ltd.
- Determine if further surveys are required either on Site or within the wider environment to inform an impact assessment for the two named species.
- Determine if a Mitigation licence(s) may be required.
- Advise on any further requirements considering protected species legislation and evolving policy.

2.0 Natterjack toad & Sand lizard - Legislation & Status

2.1 Natterjack toads (termed 'Natterjacks' or 'NT' in this report) and Sand lizard (termed 'SL' in this report) are both European Protected Species (EPS) listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Both species are recognised as species of principal conservation importance under section 41 (s.41) of the Natural Environment Rural Communities Act 2006 (NERC Act) - England.

2.2 Specifically, the existing legal framework makes it illegal to:

- Intentionally or deliberately capture, injure or kill NT/SL,
- Damage or destroy a breeding or resting place of a NT/SL, or intentionally or recklessly damage or destroy any structure or place used for shelter or protection,
- Intentionally or recklessly disturb a NT/SL in a place used for shelter or protection, or deliberately disturb NT/SL in such a way as to be likely significant to affect:
    (i) the ability of any significant group to survive, breed, rear or nurture their young
    (ii) the local distribution or abundance,
- Intentionally or recklessly obstruct access to a place used for shelter or protection,
- Possess a NT/SL (alive or dead), or any part of a NT/SL.

2.3 NT/SL are also, to a lesser extent, protected by the Protection of Animals Act (1911), which prohibits any acts of cruelty or mistreatment. Releasing a NT/SL in such a way as to cause undue suffering may also be an offence under the Abandonment of Animals Act 1960. Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

3.0 Survey Methods

Natterjack toad

3.1 Depending upon the aim of the survey(s), fieldwork should take place between April and September to coincide with the period when natterjack toads are most likely to be active (Martin, Y. *et. al.*, 2021).

3.2 With scope agreed beforehand (discussed in section 1.0), four nocturnal surveys were carried out at the Site in favourable climatic conditions in the months of April, May and September thus within the active window. Methodology applied the techniques for locating animals in suitable terrestrial habitat outlined in *Natterjack Toad Survey Guidelines - Guidance for monitoring natterjack toads in the UK* (Martin, Y. *et. al.*, 2021).

3.3 A transect was followed for all surveys. This comprised a method of walkover torching at night and terrestrial refuge checks to the periphery of the Site boundary, for approximately 3 hours on each occasion. Surveyors focused on areas most suitable for natterjack toad habitation, such as low-lying vegetation or cropped grassland. During the April and May surveys, surveyors also listened for calling males that might indicate breeding pools. No pools or ponds were present during any of the surveys to warrant spawn or string counts.

3.4 See **Table 3.1** for survey information and surveyor credentials for natterjack toad surveys.

Table 3.1 - Presents the survey information for natterjack toad surveys

Survey Date	Surveyors	Sunset	Times on Site	Weather Conditions	Temp Start º C	Temp End º C
06/04/2023	MP & KW	1956	1955 - 2255	Dry, 100 % humidity, clear skies, wind 1/6 (Beaufort scale)	10	8
28/04/2023	MP & KW	2036	2035 - 2330	Dry, 75% humidity, light cloud, wind 0/6 (Beaufort scale)	11	10
18/05/2023	KW & DB	2111	2110 - 0000	Dry, 80% humidity, full cloud cover, wind 0/6 (Beaufort scale)	15	13
05/09/2023	DB & KJ	1953	1955 - 2255	Dry, 50% humidity, clear skies, wind 1/6 (Beaufort scale)	19	17

Surveyor credentials

(MP) Mr. M. Pritchard ACIEEM - Senior Ecologist who holds a protected species survey licence for Natterjack toad and Sand lizard (2022-62891-SCI-SCI) as well as Great crested newt (2018-34062-CLS-CLS England); (S089281/1.) (Wales). Mr. Pritchard has seven years of experience in ecology, is a long-term member of North Merseyside Amphibian & Reptile Group (NMARG) and has undertaken extensive training and demonstrated key competence in species ID, known ecology, and ecological impact assessment for both protected species having worked on a range of commercial and conservation projects.

(KW) Mrs. K. Wilding CEnv MIEMA ACIEEM - Principal level Ecologist with sixteen years' experience / Director of Tyrer Ecological Consultants Ltd. Has a broad range of skills and has demonstrated key competence in protected species ID, known ecology, and ecological impact assessment. Accredited agent on the licence of Mr. M. Pritchard ACIEEM.

(DB) Mr. D. Burrows BSc, Qualifying CIEEM - Consultant Ecologist with three years' experience, holds a Natural England Great Crested Newt: CL08 Class 1 license (2022-106040-CL08-GCN). Has extensive training and key experience in surveying for Natterjack toad, including on commercial and conservation schemes. Accredited agent on the licence of Mr. M. Pritchard ACIEEM.

(KJ) Miss K. Judson MSc, BSc, Qualifying CIEEM - Consultant Ecologist with three years' experience, FISC Level 5 (2022), Has extensive training and key experience in surveying for amphibians in the UK. Accredited agent on the licence of Mr. M. Pritchard ACIEEM.

Sand lizard

3.5 Froglife (2015) states seven survey visits are required to establish the presence/absence of reptile populations and that optimal conditions to survey reptiles are during the mornings or late afternoons when air temperature is between 9ºC - 20ºC.

- Time of year: peak months are April and May. In March you can encounter emerging animals near hibernation sites if conditions are suitable. Late August to late September can be useful for encountering juveniles. July and early August are generally less useful months for surveying due to the days being hotter (even reptiles can get too hot and seek shade).

- Time of day: peak times are April and May during morning hours (between 8.30am - 11.00am) and 4.00pm - 6.30pm in the afternoon. In March the warmer parts of the day (midday) are most effective. In late June, when the weather is generally warmer, reptiles can be found earlier in the morning and later in the afternoon.

- Weather conditions: peak air temperature is between 9-20°C. Bright sunshine is favourable on cooler days and hazy or intermittent sunshine is favourable when warmer. Rain or wind is unsuitable. Weather sequence is also important: a hot spell after several days of cold weather, or showery weather after a prolonged dry period, are favourable.

3.6 In accordance with the guidance outlined in Froglife (2015) '*Surveying for reptiles*' and the *Herpetofauna Workers' Manual* (2003), seven surveys were undertaken to establish the presence or absence of sand lizard. This involved surveys between April and September avoiding July and August. Each survey lasted approximately 2 hours in optimal survey conditions. Survey visits were undertaken on each occasion by Mrs. K. Wilding CEnv MIEMA ACIEEM (see **Table 3.2** for further credentials).

3.7 Surveys consisted of On-site 'saturation walkovers' on each occasion (complete then repeat transects) with the sun oriented to the rear of the surveyor (where possible) for a fixed duration (typically 2 hours). Visual search of suitable habitat was the main method adopted by surveyors (most effective method for Mersey race *L. agilis*), whilst also checking atop/under artificial refugia (artificial cover objects or ACOs) that were deployed two weeks in advance of the first survey (to allow a bedding in period). ACOs were deployed at locations deemed the most suitable habitats on the Site for reptiles. In this case, south-facing slopes, ecotones between long and short grassland, tree cover, anthills, scattered scrub, were targeted. ACOs used consisted a mix of 100 mats (bitumen felt approximately 0.5m x 0.5m square), carpet tile (thin carpet cut to approximately

0.5m x 0.5m square) and corrugated coraline (cut to approximately 0.5m x 0.5m square). Each ACO was checked for basking individuals from a distance, including use of close-focus binoculars (model: Pentax Papillon) before slowly being approached and searched beneath, by lifting the ACO, checking for sheltering reptiles. Additionally, suitable habitats within the wider Site were slowly walked through and observed for basking reptiles.

3.8 See **Table 3.2** for survey information and surveyor credentials for the sand lizard surveys.

Table 3.1 - Presents the survey information for sand lizard surveys

Survey Date	Surveyor	Times on Site	Weather Conditions	Temp Start º C	Temp End º C
11/04/2023	KW	1045 - 1245	Dry & sunny, 5% cloud cover, wind 0/6	10.5	12.5
22/04/2023		1130 - 1330	Dry, hazy cloud, 65% cloud cover, wind 0/6	11	13.5
03/05/2023		1630 - 1830	Dry, hazy cloud, 40% cloud cover, wind 1/6	16	15.5
28/05/2023		1630 - 1830	Dry, clear sky, 0% cloud cover, wind 1/6	17	16
08/06/2023		1730 - 1930	Dry, clear sky, 0% cloud cover, wind 2/6	20	18
22/06/2023		1700 - 1900	Dry, clear sky, 0% cloud cover, wind 1/6	20	18
05/09/2023		1130 - 1330	Post-rain, 50% cloud cover, wind 2/6	14	16.5

Surveyor credentials

(KW) Mrs. K. Wilding CEnv MIEMA ACIEEM - Principal level Ecologist with sixteen years' experience / Director of Tyrer Ecological Consultants Ltd. Has a broad range of skills and has demonstrated key competence in protected species ID, known ecology, and ecological impact assessment. Accredited agent on the licence of Mr. M. Pritchard ACIEEM.

3.9 See **Figure 3.2** overleaf for visual aid on reptile transects and location of ACOs.

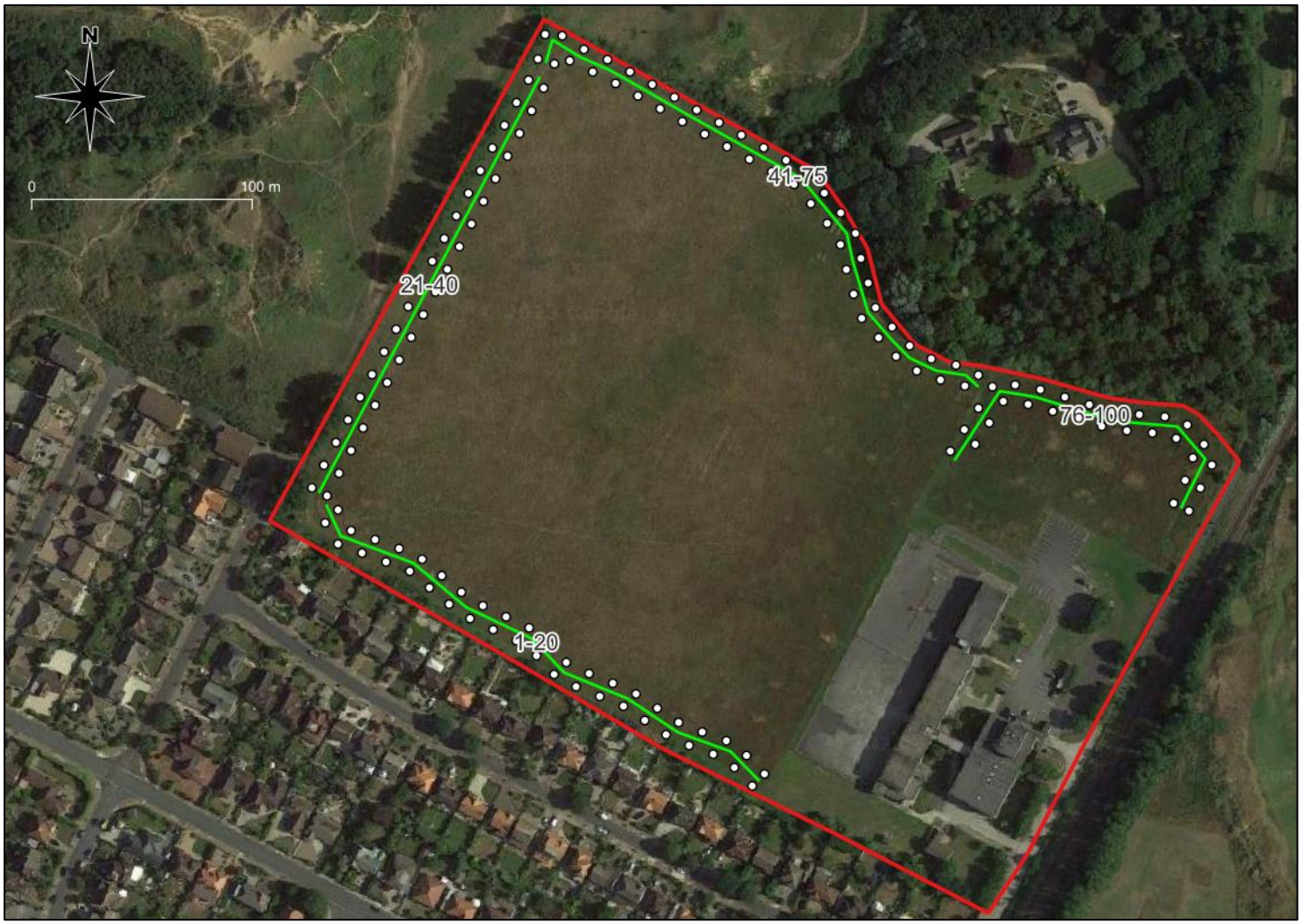

Figure 3.2 – Visual aid shows the location of ACOs # 1-100, and general route of transects (Scale: 1:1930)

Limitations

3.10 The surveys focused on the peripheral boundaries of the Site given the sloped topography versus the flatter centre of the Site, the valuable ecotones present from a mowing regime creating rides of short closely cropped grassland against adjacent habitat such as tree cover, scrub, tussocky grassland and anthills, and because these areas would be directly in the path of any animals looking to commute on to Site or from it. It was decided that incorporation of 100 mixed ACOs to aid the surveys would provide sufficient shelter opportunities on which to establish presence / absence of NT / SL, however, given the size of the Site the number of ACOs used could have been tripled, which could be perceived as presenting a minor survey limitation, particularly considering the centre of the Site where no ACOs were set.

3.11 Whilst accepting more ACOs could have aided the survey effort the Site was visited a total of eleven times in total between April and September, thus the information gathered is considered sufficient to provide a robust dataset and a comprehensive data gathering exercise on which sound conclusions and recommendations can be presented in best practice.

4.0 Results

4.1 **Table 4.1** provides the raw data gathered during the natterjack toad surveys.

Table 4.1 – Nocturnal surveys raw data

Nocturnal survey #	Date	Natterjack toad total	Incidental observations
1	06/04/2023	0	x2 adult common toad encountered along the west boundary near to neighbouring gardens fence line.
2	28/04/2023	0	A number of common toads were heard calling on Site but not seen during the survey.
3	18/05/2023	0	x1 adult female great crested newt was encountered within tussocky, anthill grassland in the east of the Site bordering the off-site woodland. x2 smooth newt were also encountered in grassland along the west boundary adjacent to gardens.
4	05/09/2023	0	x36 common toads and x4 common frogs were encountered whilst carrying out transects within the grassland (now a much higher sward given the lack of management) and beneath the ACOs laid out for reptile surveys.

4.2 **Table 4.2** provides the raw data gathered during the sand lizard surveys.

Table 4.2 – Diurnal surveys raw data

Diurnal survey #	Date	Sand lizard total	Incidental observations
1	11/04/2023	0	x1 common lizard and x2 common toads were encountered below various ACOs along north boundary.
2	22/04/2023	0	x8 common lizards and x5 common toads were encountered below various ACOs – north boundary.
3	03/05/2023	0	x9 common lizards were encountered below various ACOs along north boundary.
4	28/05/2023	0	x3 common lizards were encountered below various ACOs along north boundary.
5	08/06/2023	0	x5 common lizards and x1 common toad were encountered below various ACOs, including ACOs along the west boundary.
6	22/06/2023	0	x4 common lizards were encountered below various ACOs including ACOs along the south boundary.
7	05/09/2023	0	x7 common lizards and x2 smooth newts were encountered below various ACOs along the north boundary.

4.3 During the course of the four nocturnal surveys (supplemented by the seven diurnal surveys) no natterjack toads were encountered.

4.4 During the course of the seven diurnal surveys no sand lizards were encountered.

Incidental observations

4.5 The results show how the Site supports good numbers of common lizard (*Zootoca vivipara*) and common toad (*Bufo bufo*) in abundance range that suggests respective medium size populations, as well as small populations of common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*). Common lizard where mainly recorded along the north boundary but as the surveys progressed, and the vegetation grew longer, they were also recorded below ACOs along the west and south boundaries.

4.6 **Figure 4.1** provides a heat map generated through the application of the tools available on https://gridreferencefinder.com/ for where common lizard were encountered the course of the surveys. The heat map below should be considered broadly accurate to 10 metres from where the ACOs were placed along the inner periphery boundaries of the Site.

Figure 4.1 – Heatmap that highlights the common lizard sightings encountered along transects and at ACOs over the course of the diurnal surveys

4.7 An adult female great crested newt (GCN) (*Triturus cristatus*) was encountered in tussock-forming, anthill grassland during one of the nocturnal surveys in May at National Grid Reference: SD31431296 in the east of the Site close to off-site neighbouring woodland.

5.0 Conclusions and Recommendations

5.1 Based on the results of the surveys following best practice survey guidelines it can be reasonably determined that natterjack toad NT and sand lizard SL are likely absent from the Site and thus development proposals are unlikely to directly impact either of these species in respect of terrestrial habitat loss, or present a construction related risk of disturbance, injury or death.

5.2 Whilst the assessment provides reasonable assurance of no direct impacts, in-direct impacts cannot be conclusively assumed without further information, such as development type, scale and magnitude, specifically in respect of off-site receptors including the statutory designated Sefton coast, as impacts such as increased recreational pressures, introduction of domestic cats, increase in pollution / fire damage etc, poses risks to the named protected species that exist on the designated site.

5.3 Great crested newt GCN, which receive the same protection as NT/SL, were detected on Site and as it has been determined they use the Site, this species could be negatively affected by terrestrial habitat loss or from development related risks. As such further survey effort for great crested newts, in accordance with industry standard best practice guidance, including off-site ponds within 250-500 metres radius, is highly recommended to inform an impact assessment and appropriate mitigation plan for this species. A mitigation licence may be required following further surveys, unless a competent ecologist robustly determines otherwise through further evidence-based assessment.

5.4 Common lizard are present on Site in good numbers at a county scale. Whilst not receiving the same greater protection as sand lizards, all native reptiles have some degree of protection in the UK, through Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), mainly protection against killing, injuring and trade. This level of protection under section 9 (parts 1 and 5) applies to the four widespread species of reptile, namely the common lizard, slow-worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Viper berus*). Only part of sub-section 9(1) applies, which make it an offence to:

- intentionally kill or injure (such species), and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) (such species).

5.5 Common toad, a species of principal importance (priority species) under Section 41 (s.41) of the Natural Environment Rural Communities Act 2006 (NERC Act), are present in good numbers at a local scale. Common frog and smooth newt were also found on Site in small numbers.

5.6 In respect of the overall findings considering amphibians and reptiles a comprehensive Herpetofauna Mitigation Plan is recommended to be produced to support the planning application / ecological impact assessment, following the completion of all flora and fauna surveys. As a minimum such a document should include appropriate measures in accordance with the mitigation hierarchy, include a technical method statement with reasonable avoidance measures (RAMs), or series of RAMs, a fencing / trapping plan for common lizards which are protected from intentional injury/death, and include appropriate habitat protection, creation and enhancement plan.

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Appendix I – Supporting Photography

Plate 1 – Female GCN encountered on Site 18/05/2023

Plate 2 – Common lizard were recorded regularly at ACOs during diurnal surveys