

# **Summary Report on Reptile and Amphibian presence, impact on, and any necessary mitigation measures needed at**

## **Littlehampton Fort Restoration Project**

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### **Background.**

As part of the above Project I, as a Consultant Herpetologist with extensive pre-existing knowledge and experience of the herpetofauna (Amphibians and Reptiles) present in both the general and immediate area, was asked to assist with habitat assessment, herpetofauna potential and presence and impact assessment in relation to the herpetofauna which might be affected by the project and to advise on any mitigation measures. The following summarises the actions and findings together with recommendations.

### **Habitat Assessment**

The fort is built immediately adjacent to a reasonably extensive coastal dune system. Much of the system is still primary in nature with considerable open sand and dense marram growth. Although there is little in the way of embryo dunes, the existing frontal ridges are not subject to degradation from sea or wind, and, in fact, appear to receive adequate replenishment from these. This portion of dune is excellent herpetofauna habitat and is certainly home to one widespread species and one endangered species. These frontal ridges terminate at a minimum distance of 20 metres from the fort itself.

The dune structure stretches to the southern half of the fort providing connectivity with the main dune system. This area is however fixed dune with little marram or exposed sand and covered with the somewhat varied vegetation one might expect – typically ivy, bramble, various shrubs - and might be described as being of a good habitat type for most of our widespread herpetofauna.

### **Herpetofauna potential**

This is governed not only by the habitat types but also by known records within the area. These records confirm the presence of the following species:-

**Sand lizard (*Lacerta agilis*).** A strictly protected species which is found within the frontal dune system. The habitat around the Fort itself could only be described as “secondary” for this species and would probably not be used unless there was sufficient population pressure to force expansion. No such pressure is apparent and their presence within the affected area was regarded as possible but unlikely.

**Viviparous lizard (*Zootoca vivipara*).** A widespread (but still protected) species which is found in the frontal system and which would also thrive in the habitat immediately surrounding the fort. Presence regarded as extremely likely.

**Adder (*Vipera berus*), Grass snake (*Natrix natrix*) and Slowworm (*Anguis fragilis*).** There have been unconfirmed reports of “snakes” on the dune system. Although the last of the three listed species is actually a lizard, it is most commonly reported as a snake. Reports are few and far between and I have to say that I have never seen any of these in numerous site visits over the years. Their presence, however, cannot be totally discounted and, if present, they would be able to make use

of the habitat immediately surrounding the fort. The last snake species, Smooth snake (*Coronella austriaca*) is not known in the area, nor is any of the habitats suitable for this species.

**Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*), Palmate newt (*Lissotriton helveticus*).** All of these are found in the surrounding area and will wander some distance from their “home” ponds. Nevertheless, much of the habitat, including connectivity with suitable ponds is unsuitable and none have been reported. Again, their presence cannot be discounted but is highly unlikely. These animals are minimally protected, but good practise would require that they not be harmed.

There are two further highly protected amphibian species. The Natterjack toad (*Epidalea calamita*) and the great crested newt (*Triturus cristatus*). The former is not found anywhere in the area and their presence can be discounted, while the latter is in the same position as the widespread species detailed above.

Mention should also be made of one alien species, the wall lizard (*Podarcis muralis*). There are numerous colonies of this animal in southern England – the nearest at West Worthing and Shoreham Beach (where it inhabits the Shoreham Fort!). It would use this type of habitat and its presence could not be discounted without survey. It is in a strangely ambivalent legal position being at once a European Protected species and a potentially invasive alien.

## **Herpetofauna Presence**

In view of the high probability of at least 1 widespread, but nevertheless protected species being present, and the possibility of other species including at least one endangered species being present, it was agreed that a proper survey should be carried out. This took the usual form of combining visual and refugia surveys over a number of weeks in varying weather condition. On 18<sup>th</sup> May, refugia in the form of 1m x 0.5m sheets of roofing felt were laid at approximately 2 metre intervals both within and outside the fort. Due to the strong coastal winds these were weighted down with stones. These refugia are a long established effective means of recording herpetofauna which use them either to bask on or, even more commonly, to hide beneath.

A period of approximately 3 weeks was allowed for these to bed in. From 10<sup>th</sup> June a total of 9 visits were carried out in varying weather conditions by Restoration Project personnel concentrating on the refugia themselves. During the same period I carried out a similar number of visits in optimum conditions both checking the refugia and carrying out visual searches. As a control, I also looked at the dune frontals to ensure my abilities were still up to scratch and that conditions were right. On each of my visits, although I saw herpetofauna on the frontal dunes, I saw none within the proximity of the fort. Prior to this exercise, a single Viviparous lizard had been seen on the periphery by me. During the same period, the Project workers also found no herpetofauna.

Although I find this surprising, the nature and duration of the survey was sufficient to show that there was no significant herpetofauna presence within the affected area.

## **Impact Assessment**

Clearly, in view of the fact that there are no significant numbers of herpetofauna present (indeed, almost none at all!) it can safely be concluded that any impact on the animals in the general area will be absolutely minimal. Consequently mitigation measures can be limited.

## **Mitigation measures**

Had the survey disclosed any established herpetofauna colonies, or of the area being used on a seasonal basis or as hunting territory by herpetofauna from the adjacent dunes, then a prolonged exercise to capture and remove the animals would have had to be undertaken. This would itself have been eased considerably as the animals could simply be transferred outside any reptile exclusion fencing.

However, no such exercise is necessary.

It will remain necessary to erect reptile exclusion fencing due to the close proximity of known populations of protected herpetofauna. Even prior to this, light work such as the removal of ivy from the fort wall faces can be continued.

## **Summary/Recommendations**

- 1) The fort environs provide good, albeit secondary rather than optimum, habitat for herpetofauna
- 2) There was a perceived high probability of at least one protected species being found within the affected area
- 3) A survey was carried out using established and proven methodology.
- 4) Only one “herp”, a Viviparous lizard (*Zootoca vivipara*) was found throughout the entire period.
- 5) It can be concluded that there is no significant herpetofauna presence and that risk of harm to animals would not be lessened by carrying out traditional mitigation measures.
- 6) Nevertheless, reptile exclusion fencing should be erected to separate the affected fort area from the adjacent dunes before any heavy/destructive work (apart from that necessitated by the erection of such fencing) is carried out.
- 7) At all stages, Project worker should be aware of a potential Herpetofauna presence. Most can simply be caught and transferred to the outside of the exclusion fencing BUT
  - a) do not attempt this with adders (call me or another expert)
  - b) nor with Sand lizards or Great Crested Newts - if seen, work **MUST** immediately stop (again, call me or another licensed expert)

## **Addendum**

Of the species potentially present, Sand lizards or Great Crested Newts are highly protected endangered species. It is illegal to even disturb them without a license – thus the recommendation regarding them.

Most of the remaining species have a lesser level of protection and simply must not be killed or injured – I would suggest that it is good practice to extend this to **ALL** species.

Chris Davis  
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