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17<sup>th</sup> October 2018

Dear Sir/Madam,

**R.e. Reptile receptor survey at Furzeley Golf Course for development on Land adj 15 Billett Avenue, Waterlooville, PO7 7SZ – APP/18/00109**

This letter details the evaluation of an area of land within Furzeley Golf Course and subsequent reptile survey results after it was identified as a potential receptor site for a small population of slow worms found at the proposed development site located at 15 Billett Avenue, Waterlooville, Hampshire.

The initial presence/absence survey of the donor site detailed in the Ecology Co-op Reptile survey report<sup>1</sup> identified a peak count of one slow worm suggesting a low population to be present. As the entire grass area within the development site will be lost, an off-site receptor site needed to be identified that was close to the Billett Avenue site and is ideally within the same local planning authority.

Furzeley Golf Course is located approximately 2 miles west of 15 Billett Avenue and contains many areas of rough semi-improved grassland in between the well-manicured fairways that make up Furzeley golf course. The golf course is divided into two sections, the first nine holes (1-9) and the last nine holes (10-18) and it is the land area containing the last nine holes that has been surveyed as a potential receptor site.

The last nine holes of Furzeley Golf Course measure approximately 22 Ha however only a small proportion of that area is suitable rough grassland for reptiles (approximately 2.4 Ha) and only those rough grassland areas that were close to the boundary hedgerows were surveyed to be used as potential receptor areas due to their more favourable connectivity.

These areas of rough grassland remain undisturbed by management and the golfing public which means that they can be enhanced for reptiles through the addition of three new hibernacula and through potential new management practices. These hibernacula will be positioned in areas that are away from potential interference by golfers/members of the public.

The reptile presence / absence survey of the potential receptor site (Furzeley Golf Course) was carried out by Sophie Bradshaw BSc between 10<sup>th</sup> July and 5<sup>th</sup> October 2018. The survey was carried out by placing artificial refugia across the site in areas of suitable habitat for reptiles, which heat up in the sun and provide cover. 32 bitumen reptile refugia sheets were set out on the 21<sup>st</sup> June 2018 and left for a

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<sup>1</sup> P2310.P2 24.05.17 Reptile Survey Billett Avenue, Waterlooville. The Ecology Co-op.

minimum of ten days to 'bed in' before the commencement of the survey process. Although difficult to calculate exactly, the rough areas targeted by the survey equate to approximately 2.4Ha in area which is just over ten sheets per hectare in accordance with survey guidelines. There are other areas of rough grassland within the centre of the golf course; however, not all were surveyed as they were not as well connected to those along the boundaries. Figure 1 shows the areas surveyed using reptile mats and the areas where reptiles were found indicated by a red star.



**Figure 1.** Orange areas highlighted illustrate areas surveyed with reptile sheets all of which are connected via hedgerow boundaries and rough grassland areas. Red star indicates areas where reptiles were identified.

Reptiles are attracted to these refugia to warm up in the mornings and late afternoon to regulate their temperature and a suitably qualified surveyor is able to count the number and in some cases the sex of each species present. A total of seven surveys are undertaken and the highest count of reptiles from these visits is used to estimate the population of each reptile species on the site as low, good or exceptional according to Froglife advice sheet 10<sup>2</sup>. Surveys must be undertaken when the air temperature is between 9°C. and 18°C and is lower than the temperature of the reptile sheets placed on the ground.

Surveying has been difficult this year due to temperatures rarely dropping below 18 °C and therefore the final three surveys were conducted in late September / early October when temperatures were more regularly within suitable temperature parameters on a regular basis. Afternoon checks were attempted on several occasions however the temperature rarely dropped below 18 until close to sunset.

A peak count of 5 common lizards, one grass snake and a single female adult slow worm have been identified during the survey illustrating that the site supports low populations of these species. The results can be found in Appendix 1.

<sup>2</sup> Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

The areas of rough grassland that have been surveyed clearly appear to be suitable to support a low population of translocated slow worms, given that the habitats are of good value for slow worms providing shelter and foraging habitat and can be improved through the construction of new hibernacula and through improved management (outlined below). In addition, the site is larger in size than the donor site at Billett Avenue with suitable connectivity to other high value habitats and the population from Billett Avenue is very low. The Billett Avenue site measures approximately 0.5Ha whilst the combined areas connected around the golf course boundaries equal roughly 2.4Ha.

### **Receptor Area Design**

Five areas of rough grassland have been identified that will act in combination as the receptor site at Furzeley Golf Course. The five areas are connected via boundary hedgerow and a grassland edge that runs parallel with the hedgerow (See Figure 2). The total area in m<sup>2</sup> of the five grassland sections equal 11,200m<sup>2</sup> or 1.12Ha which is twice the size of the Billett Avenue site (0.5Ha). A larger version of Figure 2 can be found in Appendix 2.

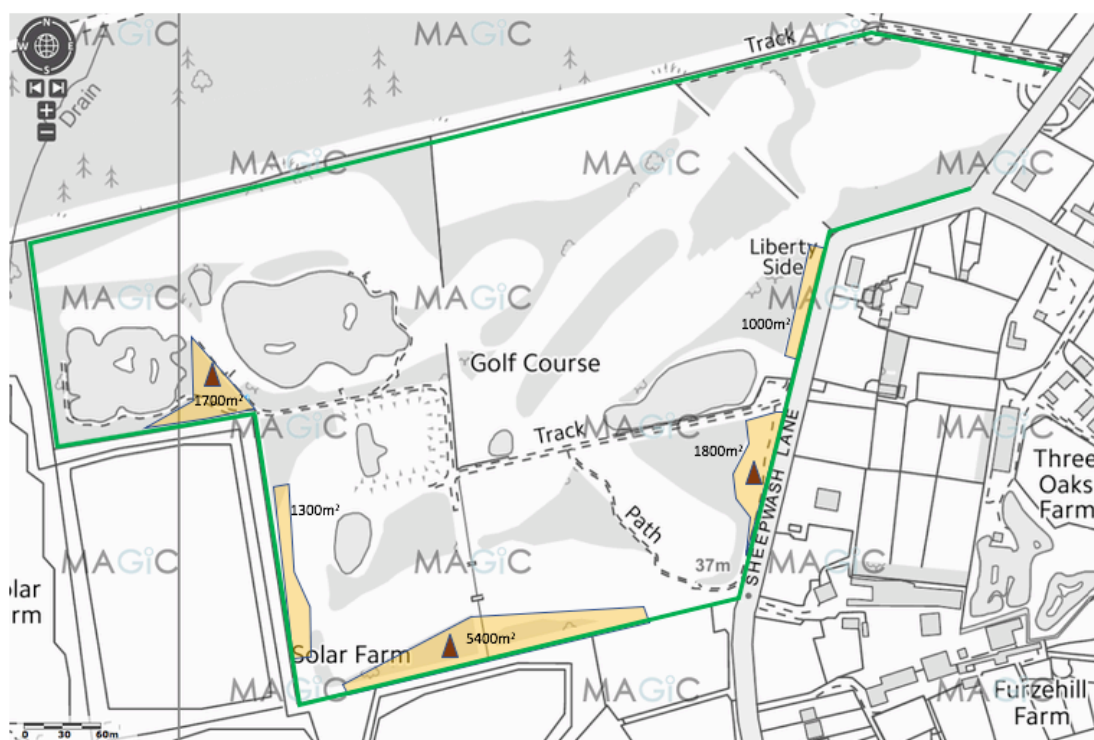


**Figure 2.** The orange areas highlighted indicate the areas to be used as receptor areas at Furzeley Golf Course for reptiles translocated from 15 Billett Avenue in Waterloooville. The measurements in black are for each area and in total equal 11,200m<sup>2</sup> or 1.12ha. Each area is connected to the others via grass verges and boundary hedgerows shown in green.

### **Receptor Site Enhancements**

Habitat enhancements will be created within three of the grassland areas in the form of three hibernacula (one per area as detailed in figure 2). The hibernacula are to be constructed by digging a 1m by 1m hole approximately 30cm deep. Logs of various lengths not exceeding 1m should then be placed into the hole until the top of the structure exceeds 30cm above ground level. Soil from the excavation of the hole should then be placed on top of the logs followed by grass cutting or turf to facilitate the hibernacula blend into its surroundings. The cracks and crevices created by the logs provide a safe and warm shelter for reptiles and amphibians through the winter and as the logs decay they will attract a wide variety of invertebrates which in turn will provide a food source for reptiles.

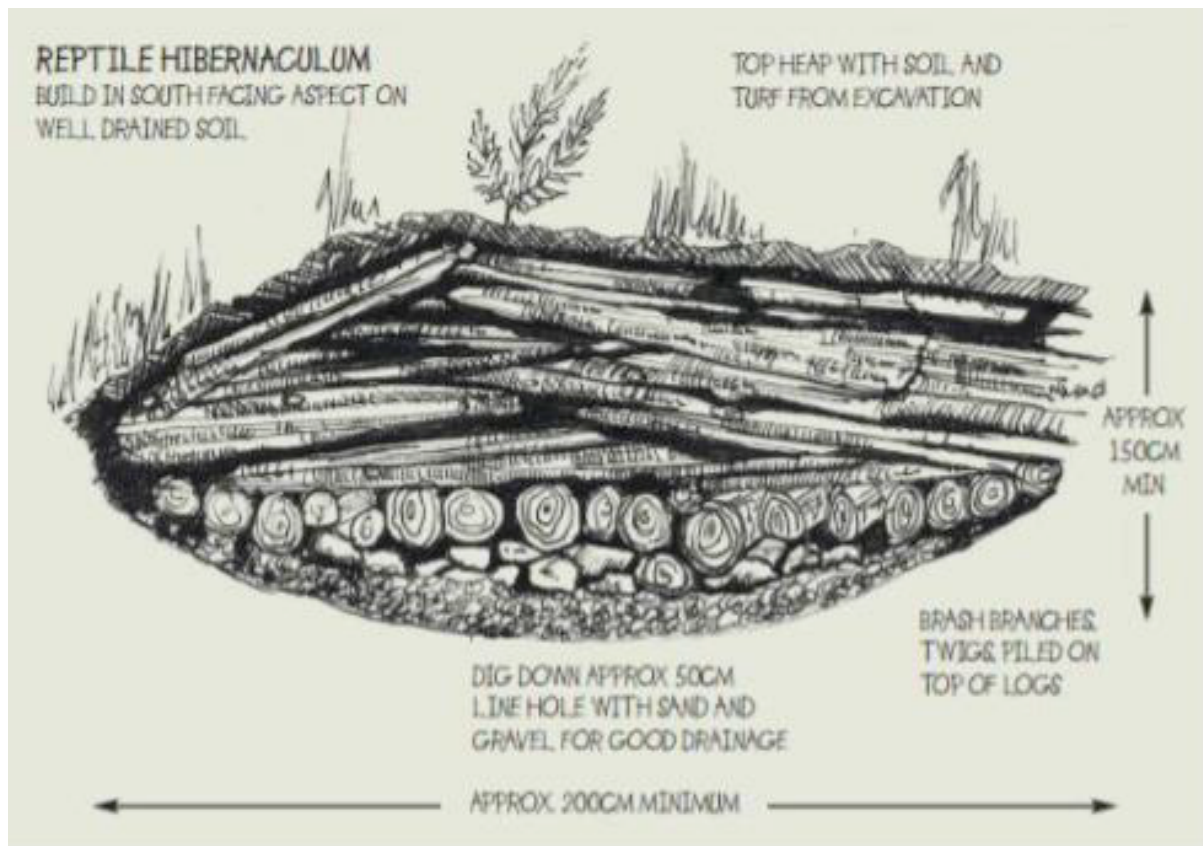


**Figure 3.** Illustration on how to build a hibernacula. Image taken from the 'Reptile Habitat Management Guidelines' by Herefordshire Amphibian and Reptile Team and the Herefordshire Nature Trust.

### **Future Management**

It is important for the receptor site to be managed for reptiles in perpetuity. This means leaving the designated areas of reptile habitat undisturbed during the active season, and safeguarding features suitable for hibernation, and crucially not disturbing them in winter. The grasslands should be allowed to grow tall and should not be frequently mown. If mowing is required, such as to prevent scrub establishment, then this should be done in late autumn/winter months and never below 10cm height. Where possible only 50% of the total receptor area should be cut at any time. Machinery with a low ground pressure should always be used and no other vehicles should be allowed to enter suitable reptile habitat.

Kind regards

*Sam Lunn*

**Sam Lunn**  
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## ***Appendix 1 – Reptile survey results at Furzeley Golf Course.***

**Table 1:** Results of reptile presence / absence survey undertaken at Staunton Country Park. SW – Slow worm, GS – Grass snake, CL – Common Lizard, Juv – Juvenile, SA – Sub adult, F- Female, M – Male.

| <b>Date</b> | <b>Visit number</b> | <b>Start Time of Survey</b> | <b>Air Temp/Refugia Temp °C</b> | <b>Weather Notes, cc = Cloud cover</b> | <b>Species Total</b> |
|-------------|---------------------|-----------------------------|---------------------------------|----------------------------------------|----------------------|
| 10.07.18    | 1                   | 08:45                       | 18/30                           | 05% cc, light breeze                   | None                 |
| 17.07.18    | 2                   | 08:45                       | 18/26                           | 20% cc, light breeze                   | None                 |
| 31.07.18    | 3                   | 08:40                       | 18/24                           | 80% cc, light breeze                   | 1 CL, 1GS            |
| 29.08.18    | 4                   | 09:00                       | 16/20                           | 80% cc, light breeze                   | 5 CL, 1 SASW         |
| 26.09.18    | 5                   | 09:45                       | 16/23                           | 0% cc, still                           | None                 |
| 03.10.18    | 6                   | 10:15                       | 16/25                           | 0% cc, light breeze                    | 1 CL, FSW            |
| 05.10.18    | 7                   | 10:15                       | 16/26                           | 0% cc, still                           | None                 |

## Appendix 2 – Receptor Area Design

