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20<sup>th</sup> October 2014

Dear Tim,

### **Reptile Surveys: Land at Marshmoor, Welham Green**

PJC undertook a phase 1 habitat survey on land at Marshmoor, Welham Green in 2014. During the phase 1 habitat surveys the site supported tussocky grassland or areas of semi improved grassland, mostly associated with hedgerow edges, which were considered to have some potential to support a range of common reptile species such as common lizards or slow worms. As such, PJC recommended that if such habitats were to be affected by proposals, then it would be prudent to undertake reptile presence/likely absence surveys to inform the design of the proposed development.

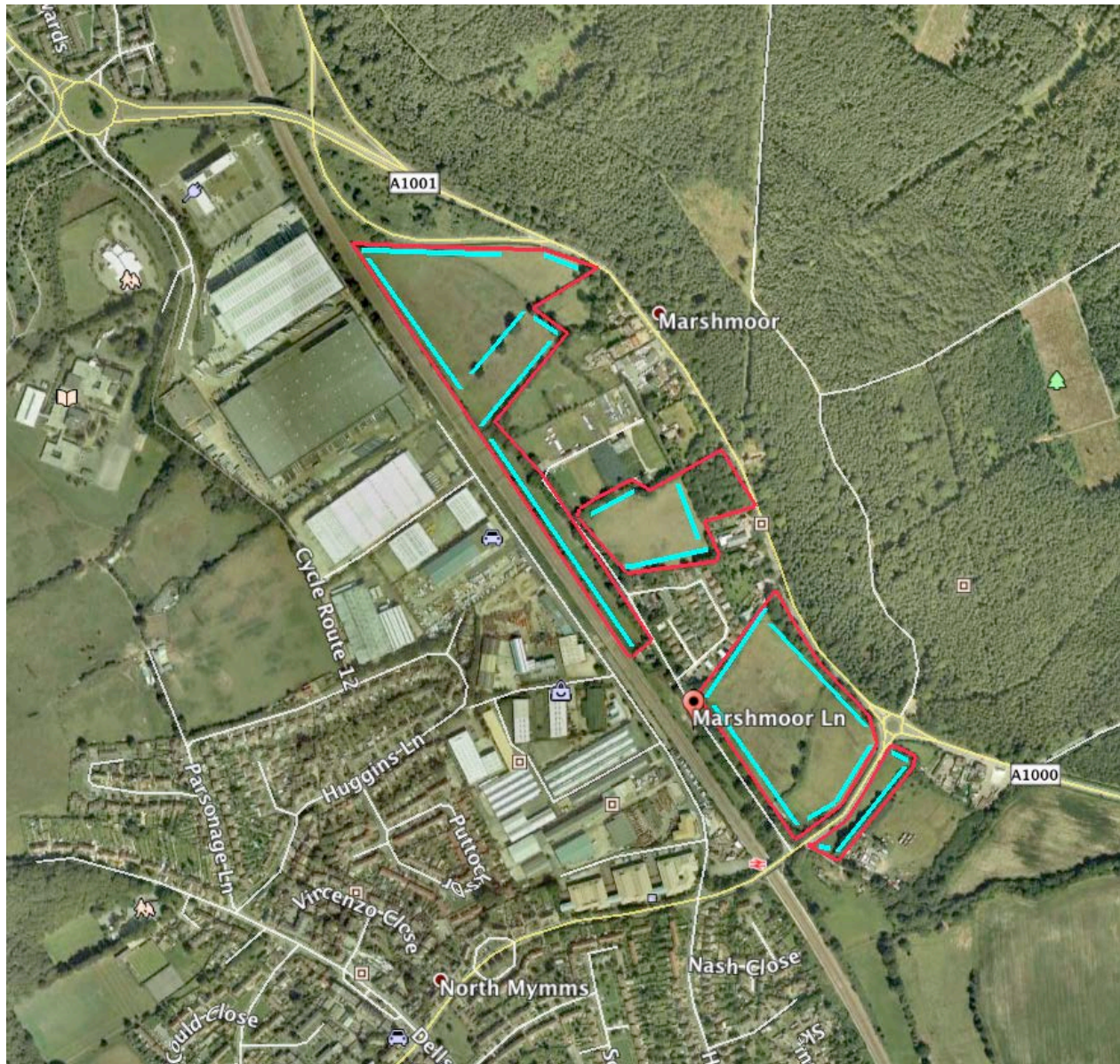
PJC were subsequently commissioned to undertake this further survey work in September 2014.

### **Methodology**

A terrestrial survey of the site for reptiles (presence or absence) was carried out at the site between the dates of 14<sup>th</sup> September to 5<sup>th</sup> October 2014. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing felts) for reptiles early September 2013.

The refugia were placed liberally around the edges of the site, and were all in place onsite for a period of bedding in, prior to the commencement of the reptile survey as recommended in the advice from Natural England. The timing and number of surveys completed were based on guidelines produced by Froglife (1999) and Gent and Gibson (1998). A total of seven survey visits were made to the site to check the refugia for the presence of reptiles. Visits were only carried out if the weather conditions were suitable for locating reptiles. On each visit to the site, a minimum of one circuit to check all refugia was carried out.

Natural refugia was also surveyed during the visits. Any natural refugia, such as log piles and brash piles, were lifted and hand searched for evidence of reptiles. The red line boundary and the approximate location of the reptile mats are shown in figure 1 below.



*Figure 1: The red line boundary and the approximate location of the reptile mats shown in blue.*

## Results

The results are shown in the table below:

Date	Weather	Reptiles
14/09/2014	16 degrees, scattered showers no wind	0
20/09/2014	15 degrees, scattered showers, light wind	0
21/09/2014	15 degrees, sunny and bright, gusty wind	0
27/09/2014	15 degrees, overcast with sunny spells, light wind	0
28/09/2014	16 degrees, overcast with sunny spells, light wind	0
02/10/2014	16 degrees, light showers, no wind	0
05/10/2014	13 degrees, sunny and bright, no wind	0

As can be seen no reptiles were found on site during the survey period.

It must be noted that during the survey period numerous rats were recorded on the site and these have the potential to eat slow worms and maybe other reptile species.

## Discussion and Recommendations

As no reptiles were found during the survey period is it considered unlikely that reptiles would be present on site. However, due to the nature of the site, it is recommended that sensitive clearance is undertaken across the areas where suitable habitat is to be lost to any proposals.

Any suitable habitats within the development footprint area will be gradually strimmed down to a height that is undesirable to reptile species using hand tools. This will be done in a minimum of two stages – firstly down to 30cm and then down to 15cm sward height. This will be undertaken directionally, starting in the center of the site and moving gradually outwards towards areas of more suitable habitat or in a linear fashion if habitat is present adjacent to woodland or hedgerow edges. This procedure will allow any potential reptiles on site to gradually move into habitats that are to be retained. This activity will only be undertaken during the daylight hours in warm and dry conditions (temperatures above 10°C). Following each cut all the vegetation will be removed from the site, to limit the refugia available to reptiles thus encouraging them to move to retained habitats, by using the vegetated green links which will be part of the developments green infrastructure recommendations. Following the strimming of relevant areas of grassland, young trees and scrub will also be removed down to a height of around 10cm if required.



Detailed recommendations and enhancements have been included in the phase 1 report. However, it is always recommended that mature tree lines and hedgerows are maintained around the edges of the development proposals to provide green links and landscaped corridors, which play an important role in allowing the movement of local wildlife across the wider area. These will also provide some habitat for reptiles which may be present in the wider landscape.

Where areas of semi improved grassland is to be lost, new opportunities for grassland, which should be seeded to provide a species rich grassland habitat, are recommended to be created. These would provide opportunities for a range of species, such as invertebrates, amphibians and reptiles as well as small mammals. Such enhancements should be linked to hedgerows and woodlands to create habitat linkages within the new development.

The log piles should be created from the clearance of some of the tree species which are present on site and used within the scheme. These should be associated with tree lines and hedgerows as well as being located in sunny grassland area to provide refugia for a range of species.



*Pictures above showing how log piles can be created within the edges of the site or in the retained habitats on site. These piles can be used by a variety of wildlife, reptiles being one group that happily use such features.*

**Conclusions**

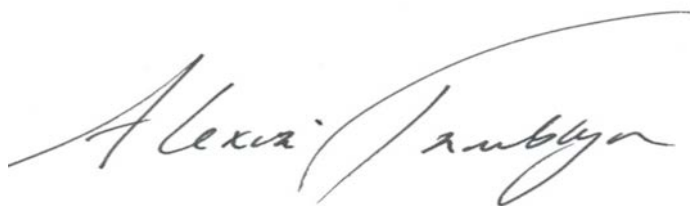
It is considered that the site is unlikely to support reptile species as no reptiles were located during the survey period. However, it is recommended that sensitive clearance works are undertaken to ensure that in the unlikely event that a reptile is present on site, that the reptile will not be harmed during the clearance process.

It is considered that reptiles are not a constraint to the proposed development and no further work is required for these species.

It is also recommended that enhancements to the sites edges are included within the design of the development. Enhancements have been included in the previous report, but should include the use of bird and bat boxes within the scheme. It is also recommended that the tree line edges and hedgerows are softened by the planting of species such as dogwoods, hazel, spindle, wayfaring tree etc and then the use of species rich grassland edges, which will provide a softer edge (an ecotone) between the retained habitats and the new development edge.

I trust this letter of report provides you with sufficient information with regards to the survey works and results for reptiles. However, if there is anything further you require then please do not hesitate to contact me.

Kind regards,

A handwritten signature in black ink, reading "Alexia Tamblyn". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Alexia Tamblyn MA (Oxon) MSc CEnv MCIEEM FRGS,  
Managing Director