



**NATIVE REPTILE
PRESENCE/ABSENCE SURVEY**

**LAND AT BRAYS LANE
ROCHFORD**

Submitted To:
A W Squier Ltd
Rochford, Essex


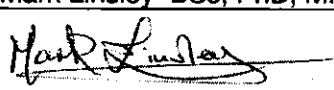
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REPORT SUMMARY

1. A presence/absence survey for native reptiles was conducted on land off Brays Lane, Rochford in Essex. The survey was required following identification of suitable reptile habitat during a preliminary habitat and species assessment of the site.
2. This report details the methods and results of a multiple visit survey to determine presence or likely absence of reptiles within the site.
3. Combination surveys, involving both site search and the use of artificial covers/refugia, were carried out during April and May 2010, in appropriate weather conditions.
4. The surveys revealed the presence of slow worm and grass snake within the site.
5. The site is subject to a proposed development that could have the potential to result in adverse impacts on reptiles with the potential for incidental killing or injuring of individual reptiles where there are impacts with the boundary hedgerows. It is therefore recommended that any clearance of the boundary hedgerows is carried out during the reptile active period (generally (late March)/April - late October inclusive), to avoid hibernating reptiles, and are supervised by a suitably trained and experienced ecologist by means of a watching brief.
6. It is also recommended that appropriate replacement habitat be provided within the proposed development to compensate for any loss of reptile habitat.

1. INTRODUCTION

- 1.1 AMEC Earth & Environmental (UK) Limited (AMEC) was commissioned by A W Squier Ltd to undertake a native reptile presence/absence survey on land off Brays Lane, Rochford in Essex which is proposed for development. The survey was in response to potential reptile habitat being noted on the site during a Phase 1 habitat survey carried out by AMEC in March 2010¹.
- 1.2 In the UK all native reptiles are protected to some extent under the Wildlife and Countryside Act 1981 (as amended). Under the Act, common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Vipera berus*) are protected against intentional killing and injuring and against sale, transportation for sale, etc.
- 1.3 As native reptiles are protected, the identification of any native reptile presence on a development site is necessary in order to assess potential impacts and to develop any appropriate mitigation to prevent or minimise the risk of incidental injury and mortality to reptiles that may result from the development.
- 1.4 This report provides details of a multiple visit presence/absence survey for native reptiles in May 2010 carried out on land off Brays Lane, Ashingdon, Rochford in Essex. The Ordnance Survey grid reference for the site centre is TQ 871 924.

2. METHODOLOGY

- 2.1 The presence/likely absence survey involved two methods – visual search for animals around the site, combined with the inspection of *in-situ*, and deliberately placed artificial covers or refugia. The survey methodology is based upon trying to locate basking reptiles without disturbing them.
- 2.2 Artificial refugia/covers were placed in locations considered potentially suitable for basking reptiles and were placed both in full sun and partial shade. The refugia/covers consisted of 0.5 m² mats of roofing felt, which any reptiles might use to bask on and/or under, placed at a density in excess of 10/ha. Once placed, artificial refugia were left to 'settle in' for at least one week and then surveyed on five separate occasions, and removed on the last survey visit. Any suitable *in-situ* refugia or debris, such as fence panels, planks, logs, corrugated tin sheets, etc., were also carefully inspected and replaced.
- 2.3 Visual searches were carried out by walking slowly and quietly, often stopping, along a predetermined route, which covered the most likely basking sites.
- 2.4 Survey visits were carried out during appropriate weather conditions i.e. those during which reptiles are likely to bask. Generally, such conditions are in air temperatures of between 9° and 18°C, with little or no wind and in the absence of persistent rain. The survey 'window' usually occurs in the early morning and again in the late afternoon/early evening. Hazy or intermittent sunshine can provide good survey conditions when it is warm or bright sunshine when it is cool.

¹ AMEC Earth & Environmental (UK) Limited. (March 2010) *Biodiversity Report – Brays Lane, Rochford*. AMEC Ref: 7888010042/R3758.v.2. Feering, Colchester.

- 2.5 Surveys were carried out during April and May by experienced native reptile surveyors. This period is considered to be optimal for survey of reptiles and thus five survey visits were undertaken in accordance with survey guidelines².

3. RESULTS

- 3.1 The site was approximately 15 hectares in extent and was located on the eastern edge of Ashingdon, near Rochford. The site was divided into a northern and southern area by Brays Lane. The northern area was mainly comprised of an arable field with hedgerows and trees along its boundaries. The southern area consisted of horse paddocks with hedgerow boundaries and a stable yard with an indoor riding school to the east.
- 3.2 Artificial covers were placed on 31 March 2010 between 10:30 and 14:30 hours. No reptiles were observed.
- 3.3 Survey visits were carried out between 13 April and 12 May 2010. Trained, experienced reptile surveyors from AMEC undertook the surveys.
- 3.4 Table 1 overleaf provides details of the survey visits.
- 3.5 The survey revealed the presence of two species of native reptile - slow worm and grass snake within the site.
- 3.6 Both the slow worms and the grass snakes were found along the boundary hedgerows within the site.

² Highways Agency (2005) *Design Manual for Roads and Bridges*. Volume 10: Environmental Design and Management. Section 4: Nature Conservation. Part 7: Nature Conservation Advice in relation to Reptiles.

Table 1: Land off Brays Lane, Rochford - Reptile Survey Data 2010

Visit	Date	Time	Weather & temperature	Observations/notes
1	13/04/10	16:00-17:15	Cloud 1/8; Wind f1-2; Temp: 15.4-16.4°C, No rain in previous 24hrs	6 adult slow worms
2	15/04/10	13:00-14:15	Cloud 2/8; Wind f3; Temp: 16.3-16.5°C, No rain in previous 24hrs	13 adult slow worms 2 juvenile slow worms
3	21/4/10	15:00-16:30	Cloud 2/8; Wind f2-3; Temp: 16.1-16.4°C, No rain in previous 24hrs	18 adult slow worms 3 juvenile slow worms 1 grass snake
4	05/05/10	08:20-10:00	Cloud 7/8; Wind f0-1; Temp: 13.1-13.7°C, No rain in previous 24hrs	29 adult slow worms 8 juvenile slow worms
5	12/05/10	09:00-10:30	Cloud 6/8; wind f2-3; 12.1-12.7°C, No rain in previous 24hrs	40 adult slow worms 4 juvenile slow worms 1 grass snake

Weather data: Cloud cover is provided in eighths; Wind is given as a force in the Beaufort scale.

Force 0 = calm, 0-1 miles per hour; force 1 = light air, 1-3 mph; force 2 = light breeze, 4-7 mph; force 3 = gentle breeze, 8-12 mph; force 4 = moderate breeze, 13-18 mph.

4. CONCLUSIONS & RECOMMENDATIONS

- 4.1 The survey confirmed the presence of two species of common native reptile within the site - slow worm and grass snake. These are, however, likely absent from the cultivated arable areas and also from grazed pasture. The survey revealed that parts of the site may comprise potential hibernation sites where the reptiles may be resident.
- 4.2 The master plan³ indicates that the development will impact some limited sections of the boundary hedgerows within which reptiles were confirmed present. The works would therefore have the potential to result in adverse impacts on reptiles, with the potential for incidental killing or injuring of individual animals. The master plan also shows, however, that those areas of the site where reptiles may hibernate are not to be impacted by the proposals.
- 4.3 In order to mitigate potential incidental mortality as a result of the development, and to ensure legal compliance, it is recommended that any of the limited clearance works directly impacting the boundaries of the site are carried out over winter (November – February inclusive). This would also allow compliance with the legal protection afforded nesting wild birds.
- 4.4 It is recommended that appropriate replacement habitats be provided within the proposed development to compensate for any loss of reptile habitat.
- 4.5 Appropriate habitat includes grassland with scrub, where the grassland is not kept short or managed too intensively. Any scrub planting should include species of already present in the current boundaries. Additional features of use to reptiles could be provided including refuges and purpose built hibernation sites. Refuges could be provided by the placement of log piles with the logs held in place by wire mesh. Hibernacula are (1 m high) mounds constructed of materials, such as logs and hardcore, that provides cavities for reptiles to penetrate. The mounds are turfed and once grown in become unobtrusive.

³ Andrew Martin Associates. *Brays Lane, Rochford Master Plan*. March 2010. Drawing Number: 010.036.03B.