Keepers Hill, Patrixbourne, Kent

Proposed Reptile Receptor Site
Enhancement Strategy and Management Plan

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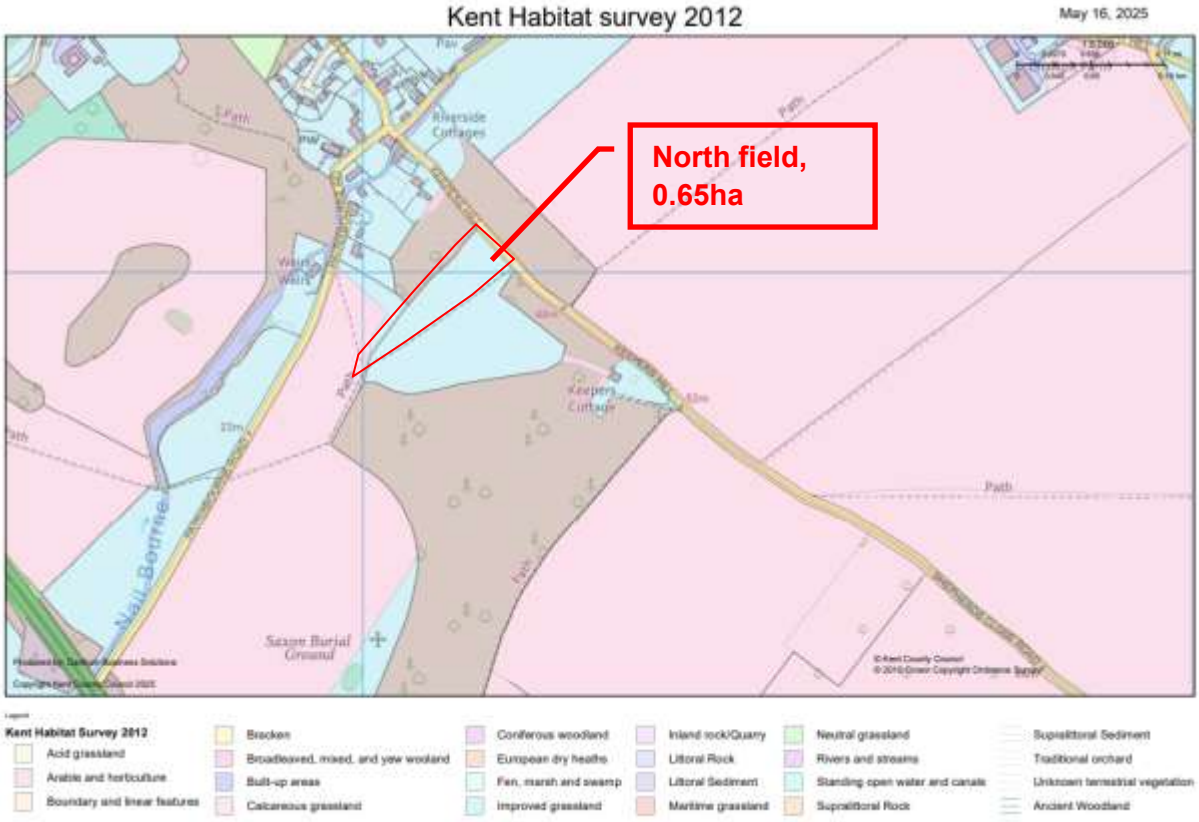
This document presents the biodiversity enhancement strategy and management plan for a field present at Keepers Hill, Bekesbourne CT4 5BT, with the aim to use it as a receptor site for reptiles.

1 Site Description

The site is circa 0.65ha (North field). A second field of twice the size is directly adjacent to the south.

The Integrated Habitat System (IHS) classification of the Kent Habitat Survey 2012 describes the site as: *'Improved grassland'*, being surrounded by '*Broadleaved, mixed, and yew woodland'* and '*Arable and horticulture'.*



The North field consists of 'Other Neutral Grassland' with some sparse vegetation near the middle of the field, and more rank grassland in the south-west corner. No scrub is present.

The two fields have been under Countryside steward scheme (GS6: Management of species-rich grassland[1]) for the last 15 years, with the agreement ending in December 2025. The owner is looking for an alternative management income and is willing to amend the management to allow the North field to be used as a receptor site.

[1] https://www.gov.uk/countryside-stewardship-grants/management-of-species-rich-grassland-gs6

The management carried out in the last 15 years has consisted of topping of vegetation to stop willow scrub encroachment, by using a mechanical tractor mounted Batwing Topper at the end of the harvest season ie, between August and October. This would take place as and when required, circa every 4-5 years.

Historical aerial photos show that this has indeed been the case with clear lines where the topper would have cut the vegetation.

The last topping took place in end summer 2023. No topping is proposed in 2025.

2008:

2017:

2021:

2025:

2 Existing Reptile Population

Detailed reptile surveys were undertaken using artificial refuges, in accordance with best practice guidelines (Froglife, 1999). A total of 22 artificial cover objects were installed on 5th April 2025. They were then checked on seven separate occasions in April-May 2025. They were undertaken by Steve Stanley BSc, who has over ten years of experience in reptile survey and mitigation work and by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience.

Slow worms, lizards and grass snakes were found present, along the boundary vegetation.

Table 1 below gives the details of the survey.

Reptile survey at Keepers Hill, Patrixbourne, Canterbury, CT4 5BP

22 refuges installed on 5th April 2025

Survey	Date	Time	Average Air Temp. deg C:	Wind	Cloud cover, %	Viviparous Lizards				Slow worms				Grass snakes			Adders			Other notes
						adults		Sub-adult	juveniles	adults		Sub-adult	juveniles	adults	Sub-adult	juveniles	adults	Sub-adult	juveniles	
						Male	Female			Male	Female									
1	15th April 2025	13:00	15	2	70%					4	1					1				Surveyed after rain
2	18th April 2025	11:30	16	2	10%					4	7									
3	22nd April 2025	16:00	16	2	40%	1				6	4			1						
4	27th April 2025	16:30	15	1	10%					2	2			1						
5	5th May 2025	9:30	11	2	70%					1		1								
6	7th May 2025	14:00	14	2	95%	3				3	4		1			1				
7	16th May 2025	18:00	15	1	10%					1		1								
					Highest Seen:	3	0	0	0	6	7	1	1	1	0	1	0	0	0	

3 Management

3.1 Historical and current management

Although the batwing topper management under the Countryside steward scheme (GS6) would have been very successful for the ground flora, such uniform management and timing mean that both fields end up with a uniform habitat, with the same habitat structure and that the reptile population would most likely suffer some deaths during each management episode (as it would take place when animals are active).

This is indeed reflected in the fact that, during the 2025 survey, reptiles were only found in the boundary habitats, nearer the woodland, where the topper is less likely to reach.

The Amphibian and Reptile Conservation Trust provides guidelines with regards to habitat management for reptiles[2] and some of the salient points are:

1. *Management of a habitat should aim to maintain:*
   - *A diverse vegetation structure.*
   - *Sunlight at ground level - open areas within habitats.*
   - *Continuity of sufficient and appropriate habitat over time.*
   - *Connectivity of areas occupied and used by reptiles.*
   - *Features for breeding/egg-laying where appropriate.*
   - *Hibernation areas.*

2. *Management should also avoid:*
   - *Damaging activities that impact adversely on vegetation structure.*
   - *Activities that can cause direct killing or injuring of animals or significant disturbance.*

The need to control body temperature governs much of the day to day activity of reptiles. Typically, reptiles aim to maintain body temperatures between 20 and 30oC. Habitats need to provide a structure that allows reptiles to bask or otherwise warm up using the sun's energy, but also to avoid extremes of heat and cold.

3. *Avoid uniform habitat*

Mowing or burning large areas of ground can create habitats that are too uniform and so may harm reptile populations. These approaches need to be timed to avoid direct harm to reptiles.

4. *Reduce trees and scrub*

[2] https://www.arc-trust.org/for-reptiles and https://groups.arguk.org/images/users/113/downloads/Reptile_Habitat_Management_Handbook.pdf

Open habitat can be created by removal of trees and scrub; shading can be caused by trees both on a site or adjacent to it. Low levels of tree cover can benefit reptiles by providing a greater variety of ground temperatures; they also provide shelter from the wind and shade on very hot days. Tree roots can provide hibernation areas.

The underlined text above are the items for which the current management would have negatively impacted the local reptile population. By acting on these, it will be possible to increase the carrying capacity of the North field for reptiles, so that it can be used as a reptile receptor site.

3.2 Proposed management

The North field will be managed to keep it in a mid-successional state and establish a grassland/scrub mosaic – a key reptile habitat which creates transitional areas of shelter for reptiles from the elements and predators.

To reach this mosaic, the site would be subdivided into three plots and managed by experienced operatives on a six-year rotation with one plot cut every two years.

Cutting should be undertaken when reptiles are least likely to be killed, ideally during the winter period of inactivity. In general, cutting should take place from November to February. Cutting can be undertaken by tractor-mounted forage harvester, hand-operated reciprocating cutter, brush-cutter, strimmer or hand scythe.

Cut vegetation shall be raked and carted off site, but some shall be composted in four heaps for the benefit of grass snakes and other wildlife.

As the previous management was only every 5 years or so, it is expected that the proposed management will not be detrimental to the ground flora interest of the site in the long term. However, should cutting need to take place during the reptile active season (which extends April to October included), for botanical interest potentially, then the cut should be made as high as possible (minimum 15 cm) and thus may preclude the use of tractor-mounted equipment, to ensure no animals are harmed in the process.

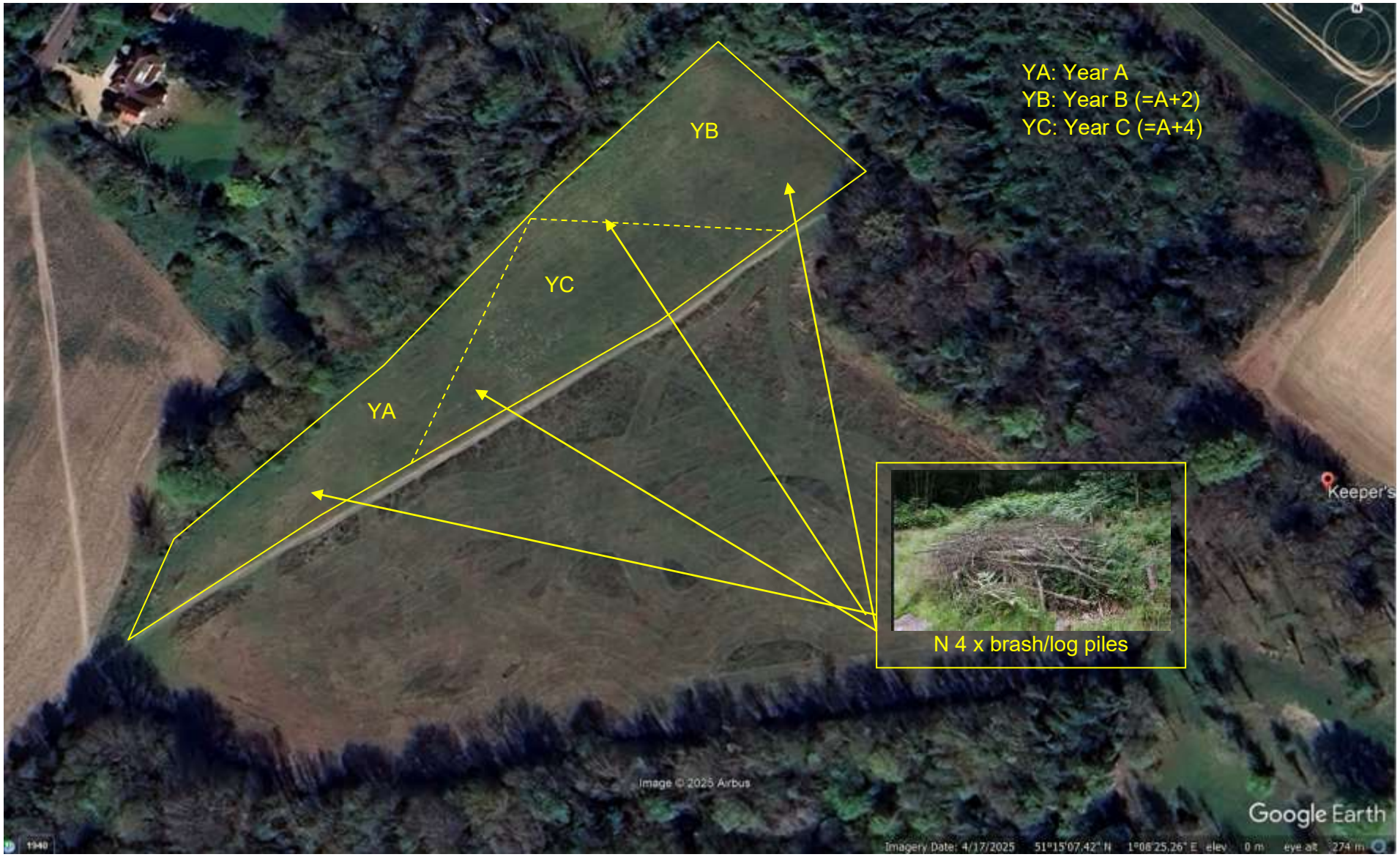
Four large brash/log piles[3] would also be created to provide additional cover features. Buffer zones of longer vegetation shall be kept around the brash/log piles.

The owner agrees that the receptor site will be subject to long-term security from future development. In addition, the site will be managed for the benefit of reptiles in the long-term with sufficient funding secured to secure the implementation of the management in the long-term.

3.3 Proposed Monitoring

An annual survey will take place in September (with 10 visits over one month), for five years, starting the first September after a full year once the relocation has taken place. This will be used to amend the management plan, should the surveys conclude that it is not optimal for reptiles.

[3] Brash and log piles will be at least one meter high and two metres in diameter. They will comprise a mix of large/small diameter material. The centre of the pile will be compacted, but the outer part will be un-compacted. They will be topped up periodically (for example every five years) with further material.


YA: Year A
YB: Year B (=A+2)
YC: Year C (=A+4)
YB
YC
YA
N 4 x brash/log piles
Keeper's
Image © 2025 Airbus
Google Earth
Imagery Date: 4/17/2025 51°15'07.42" N 1°08'25.26" E elev 0 m eye alt 274 m

Photos of Site on 7th May 2025

IMG_4812

IMG_4813

IMG_4814

IMG_4816

IMG_4817

IMG_4837

IMG_4838

IMG_4839

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