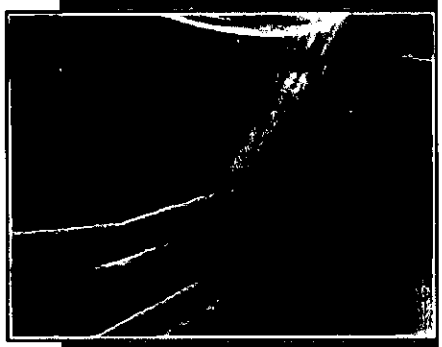


Landscape Architecture

GEORGE H AUSTIN (BUILDERS) LTD



Environmental Design

The Former Willows School, Lancing, West Sussex

Badger Sett Monitoring Report



Landscape Planning

Approved By: Joe Jackson

Signed: .....

Position: Principal

Date: 20th December 2012

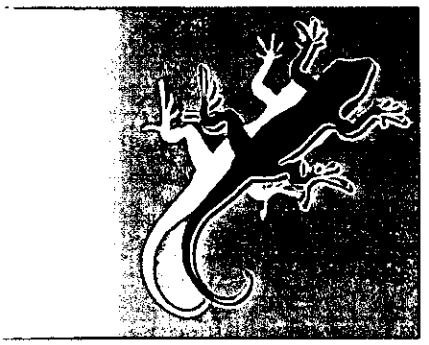
December 2012 – Planning Issue

LLD501.TheFormerWillowsSchool.BadgerSurveyReport.Rev0.20.12.12

Lizard Landscape Design

Lizard Landscape Design, 19 Broadwater Street East, Worthing, West Sussex, BN14 9AA
Tel. 01903 216033 Fax. 01903 214777 Email. lizard.landscape@btconnect.com

Lizard Landscape Design



CONTENTS

		PAGE
SUMMARY		01
1.0	INTRODUCTION	03
2.0	SCOPE OF SURVEY	04
3.0	SURVEY METHODOLOGY	04
4.0	RESULTS	05
5.0	EVALUATION	07

TABLES

Table No. 1 - Summary of Badger Sett Monitoring Results

APPENDICES

Appendix No. 1 – Site Photographs

SUMMARY

George H Austin *(Builders)* Limited has commissioned Lizard Landscape Design to undertake a detailed Badger *(Meles meles)* Sett Monitoring Survey in the grounds of the former Willows School, Lancing, West Sussex *(Grid Reference: TQ180052 – hereafter referred to as 'the site')*. The presence of a potential badger sett was highlighted by Mr Tony Slow, Sussex Badger Trust through the planning consultation process. The potential presence of a badger sett was highlighted beneath the base of the West Lane Youth Centre within the proposed development site.

Lizard Landscape Design consulted with Mr Tony Slow, Sussex Badger Trust; and it was agreed that a 'stick and sand' badger monitoring survey should be implemented within the affected area. It was also agreed to remove the floor boards within the Youth Centre, above the area concerned to retrieve the most information possible regarding badger presence and usage.

The Protection of Badgers Act 1992 provides strict protection of badgers and their setts, including those found on development sites. This report outlines the results of this monitoring exercise and has been prepared by an experienced ecologist; Mr Mark Vivian *(IEEM; BSc MSc; Ecologist; Lizard Landscape Design)*.

The survey data reveals that the enclosed space and void underneath the West Lane Youth Centre was not used by badger or fox between the 26th November 2012 and 11th December 2012. This has been revealed by no breaches of the dead wood barrier by badger or fox recorded at any survey visit. Badger and fox tracks have been found in the sand trap surrounding the entrances; however these did not correspond to a breach in the adjacent dead wood barrier. The results of the test-hole exploration revealed the presence of a dead fox, fox faeces, and various other indicators of fox. No evidence in favour of a badger sett beneath West Lane Youth Centre was recorded.

There is a *'negligible'* risk of the development proposals committing an offence under *The Protection of Badgers Act 1992*. It is advisable for the developer to devise a scheme for demolition that avoids caving in the enclosed space beneath West Lane Youth Centre to avoid committing an offence under *The Wild Mammals (Protection) Act 1996*. Wild mammals are protected against crushing and asphyxiation under this legislation.

It is believed that the quality of badger foraging habitat that is to be lost through development is somewhat impoverished and that the value of the site at present is in the access and connectivity it provides within the local landscape. A well-used mammal path is present immediately adjacent to the hedgerow that lines the northern site boundary. The developer has agreed to retain this feature to facilitate badger movement through the site in the post-development landscape.

1.0 INTRODUCTION

1.1 George H Austin *(Builders)* Limited has commissioned Lizard Landscape Design to undertake a detailed Badger *(Meles meles)* Sett Monitoring Survey in the grounds of the former Willows School, Lancing, West Sussex *(Grid Reference: TQ180052 – hereafter referred to as 'the site')*.

1.2 The presence of a potential badger sett was highlighted by Mr Tony Slow, Sussex Badger Trust following a site visit during October 2012 and conversations with neighbouring residents who regularly feed badgers. Lizard Landscape Design consulted with Mr Tony Slow, Sussex Badger Group, and it was decided to initiate a 'stick and sand' badger survey around the 3 no. gaps that exist underneath the northern section of the West Lane Youth Centre within the proposed development site. It was also decided to remove floor boards of the Youth Centre above the enclosed space behind the 3 no. gaps to retrieve the most information possible regarding badger presence and usage.

1.3 The gaps were not the typical place badgers would be expected to make a sett however the urban badger will often adapt to its environment in ways that are less predictable than a rural badger. In addition, the space behind the potential access points could not be viewed clearly, and sufficient doubt existed to necessitate further investigation and survey work.

1.4 *The Protection of Badgers Act 1992* provides strict protection of badgers and their setts, including those found on development sites. This report outlines the results of this monitoring exercise and has been prepared by an experienced ecologist; *Mr Mark Vivian (IEEM; MSc BSc; Ecologist; Lizard Landscape Design)*.

Site Information

1.5 The proposed development area is approximately 0.70 hectares and approximately 15.0 metres above sea-level. The site is within private ownership and no existing public rights of way exist across the site. The site has been fenced-off to protect it from vandalism, squatters and theft, and permission has been sought to access the site.

1.6 West Lane Youth Centre is found to the east of the development site oriented on a north-south orientation. The building is raised from the ground being supported by concrete 'pillar' foundations. The northern section of the building is however not raised and 3 no. gaps and access points can be found along the southern edge of this section. This set-up potentially allows badger and other mammals such as fox easy access to the enclosed space that exists underneath the northern section of the Youth Centre building.

Development Proposals

1.7 The land is proposed for the demolition of the existing structures and the residential development of 23 no. dwelling houses.

2.0 SCOPE OF SURVEY

2.1 The aim of the detailed Badger Sett Monitoring Survey was;

- *To establish whether the potential Badger Sett was active during the survey period;*
- *To establish the most likely type of Badger Sett such as; Main, Annex, Subsidiary or Outlier Sett; and;*
- *To use the information and data collected to inform the formation of an appropriate Mitigation Strategy and Programme if required.*

3.0 SURVEY METHODOLOGY

3.1 Dead wood large enough to cover all the entrances to the potential badger sett was laid and sand was spread around the potential entrance within an approximate 1.0 metre radius. The dead wood was not robust enough to prevent a badger from entering or exiting the potential sett and was arranged in such a way as to make a disturbance indicative of a badger entry / exit obvious to the surveyor. The adjacent sand trap was laid to a depth that would also have recorded badger tracks if present.

3.2 6 no. survey visits were undertaken during the period of 26th November 2012 to 11th December 2012 to monitor disturbance to the dead wood covering the entrance and any tracks left in the adjacent sand trap.

3.3 Following an initial assessment to ascertain whether the barrier placed across the potential badger sett entrance had been breached the sand trap was inspected for signs of badger and other fauna. Photographs were taken to record the state in which the dead wood was found and any significant tracks left in the sand trap at each survey visit. Subsequently the sand trap was smoothed over and a photograph was taken to record the state in which the survey had been left. The photographs and results are displayed and illustrated in *Appendix No. 1 – Site Photographs.*

3.4 The immediate area in the vicinity of the potential Badger Sett was then searched for signs of badger such as latrines. Badger paths were followed and the area within approximately 50.00 metres of the potential sett was investigated for other signs of badger such as snuffle holes.

3.5 5 no. test-holes measuring approximately 450mm by 450mm were implemented in the floorboards of the northern section of West Lane Youth Centre on 30th November 2012. This exercise exposed the enclosed space that was otherwise unobservable and allowed the surveyor *(Mr Mark Vivian; IEEM; MSc BSc; Ecologist; Lizard Landscape Design)* to conduct an assessment of badger potential. Photographs and results of the destructive search are displayed in Photographs No. 25 - 28; *Appendix No. 1 – Site Photographs.*

4.0 RESULTS

4.1 The results of the badger sett monitoring observed on the site during the survey visits are shown below in Table No. 1.

Table No. 1 - Summary of Badger Sett Monitoring Results

Survey No.	Date	Badger Breach	Badger Tracks	Photograph No.
Set Up	*26.11.12*	N/A	N/A	**No.s 01, 02, 03.**
01	*27.11.12*	No evidence	No evidence	**No.s 04, and 05.**
02	*28.11.12*	No evidence	Badger tracks	**No.s 06, 07, 08, 09, and 10.**
03	*30.11.12*	No evidence	No evidence	**No. 11**
04	*04.12.12*	No evidence	Badger tracks	**No.s 12, 13, 14, 15, and 16.**
05	*05.12.12*	No evidence	No evidence	**No.s 17, and 18.**
06	*10.12.12*	No evidence	Fox tracks	**19, 20, and 21.**
07	*11.12.12*	No evidence	Fox tracks	**22, 23, and 24.**

4.2 The enclosed space at the northern end of West Lane Youth Centre has shown no evidence of being used by badger throughout the official survey period 26th November 2012 – 11th December 2012. No breaches of the dead wood barrier have been recorded.

4.3 Badger tracks have been recorded in the sand trap on 28th November 2012 and 4th December 2012 however these did not correspond to any breach of the dead wood barrier. The presence of badger in the locality was known from the presence of latrines, dung pits and snuffle holes recorded on site during the Preliminary Ecological Appraisal conducted 12th November 2012.

4.4 No evidence was collected to suggest that the enclosed space beneath the base of the structure is being used by a badger, whereas there were multiple pieces of evidence indicative of this area being used as a fox den. The photographic evidence was taken on 30th November 2012 following the creation of the test holes *(Refer to Photographs No. 25, 26, 27, and 28; Appendix No. 1 – Site Photographs)*.

5.0 EVALUATION

Stick and Sand Survey

5.1 The survey data reveals that the potential badger sett located underneath the West Lane Youth Centre was not active between the 26th November 2012 and 11th December 2012. This has been revealed by no breaches of the dead wood barrier by badger recorded at any survey visit.

5.2 On one occasion the dead wood barrier of entrance No. 1 was disturbed *(Refer to Photograph No. 12 – Appendix No. 1);* however it is believed that this was a result of environmental factors, as no tracks were recorded leading up to the breach so it can be concluded that it was not the result of a fox / badger entry.

5.3 Badger tracks were recorded in the sand trap during 2 no. separate survey visits *(Refer to Photograph No. 09, 10, 15, 16; Appendix No. 1 – Site Photographs)*. These tracks did not correspond with a breach in the dead wood barrier. The direction of the tracks that were found adjacent to entrance No. 1 came from the south-west and then curved around to the south-east. The tracks that were found by entrance No. 3 came from the east and veered south. This means that the badgers did not come from the enclosed area beneath the northern part of the West Lane Youth Centre.

5.4 It is also worthy of note that two different track sizes were recorded in the sand traps on both occasions *(Refer to Photograph No. 10; Appendix No. 1 – Site Photographs)*. This implies that the tracks were left by a badger sow and her offspring and that the area in question lies within this particular female's territory. It would be unusual for a female badger to tolerate another female with offspring in her territory. The fact therefore that no breach has been recorded to correspond with the location of the tracks strongly suggests that no badger was inside the enclosed space of the building and that the badger sett lies elsewhere within the local landscape.

Conclusions

5.10 The evidence suggests that the enclosed space behind the 3 no. gaps found at the northern end of West Lane Youth Centre is not used as a badger sett. Rather, the evidence strongly suggests that this space is used as a fox den. The development proposals therefore stand a *'negligible'* risk of committing an offence under *The Protection of Badgers Act 1992.*

5.11 There is however no doubt that badgers are present within the locality and utilise the site for foraging and transit purposes. A mammal path exists along the northern periphery of the site immediately adjacent to the intact hedgerow illustrating that this is an important landscape feature for local badgers / mammals. The developer, George H Austin *(Builders)* Ltd, has made provision to retain this feature within the post-development layout.

5.12 The site as a whole is currently dominated by hard standing surfaces and the quality and extent of viable foraging habitat on site is considered to be limited. It is the opinion of the surveyor that retaining the hedgerow will provide sufficient mitigation for the development proposals with regard to badger. The creation of green garden areas and communal green space within the development proposals shall enhance badger foraging habitat considerably within the proposed development site.

5.13 The area has however been shown to be used by fox although it has not been shown to be fully active during the survey period; a dead individual fox and fox faeces within the enclosed space were recorded during the test-hole exploration but no breaches of the dead wood barrier were caused by fox. This necessitates a precautionary approach with regard to the demolition of the enclosed space to the northern end of West Lane Youth Centre to avoid committing an offence under *The Wild Mammals (Protection) Act 1996.*

5.14 The crushing and asphyxiation of any wild mammal is prohibited under this act. It is advisable that the developer draws-up a demolition scheme for West Lane Youth Centre that avoids the floorboards above the enclosed space from caving in. Rather, when the appropriate stage has been reached the floorboards should be lifted in an upward direction and safely removed from the affected area. Foxes will generally have numerous dens that are less complex and therefore less important than badgers' setts. Replacement is therefore not believed to be commensurate with the level of disturbance caused.

Lizard Landscape Design, 19 Broadwater Street East, Worthing, West Sussex, BN14 9AA
Tel. 01903 216033 Fax. 01903 214777 Email. lizard.landscape@btconnect.com

Appendix No. 1 – Site Photographs

APPENDIX NO. 1 - SITE PHOTOGRAPHS

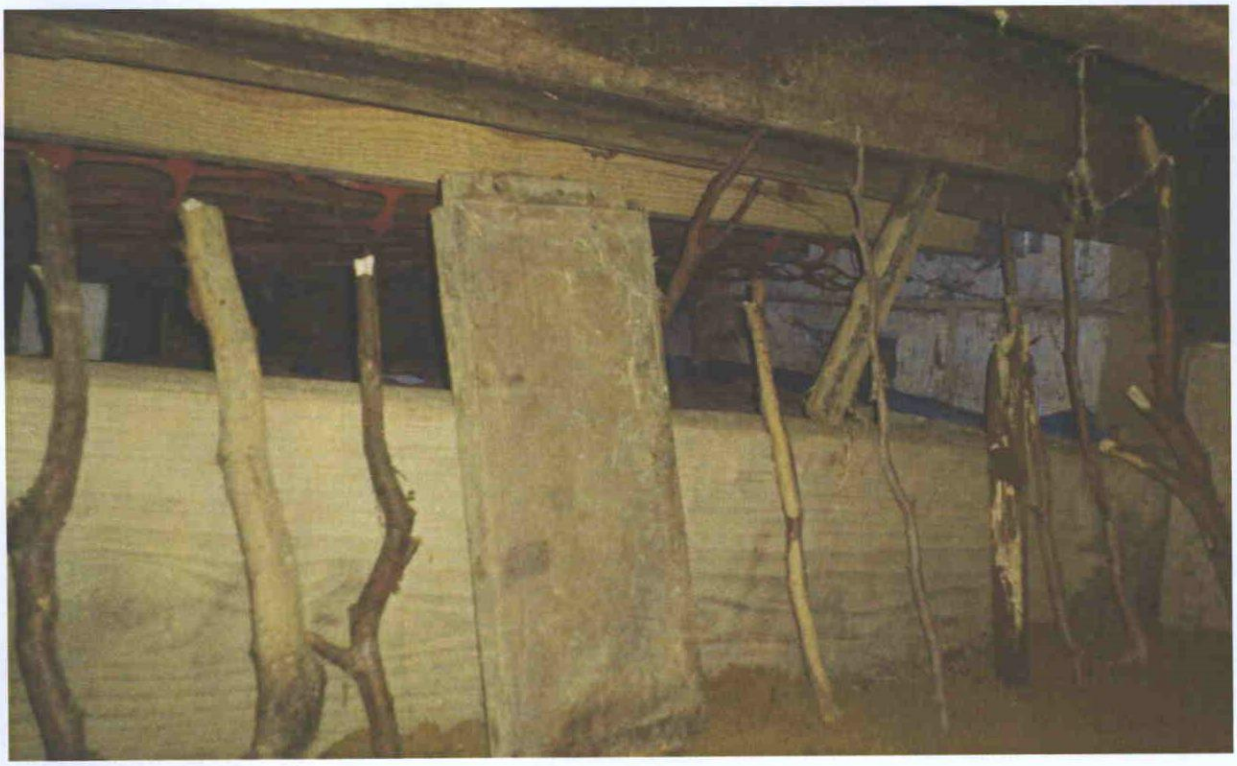


Photograph No. 1 - Entrance No. 1 - Date; 26.11.2012 - Set-up of Badger Survey.

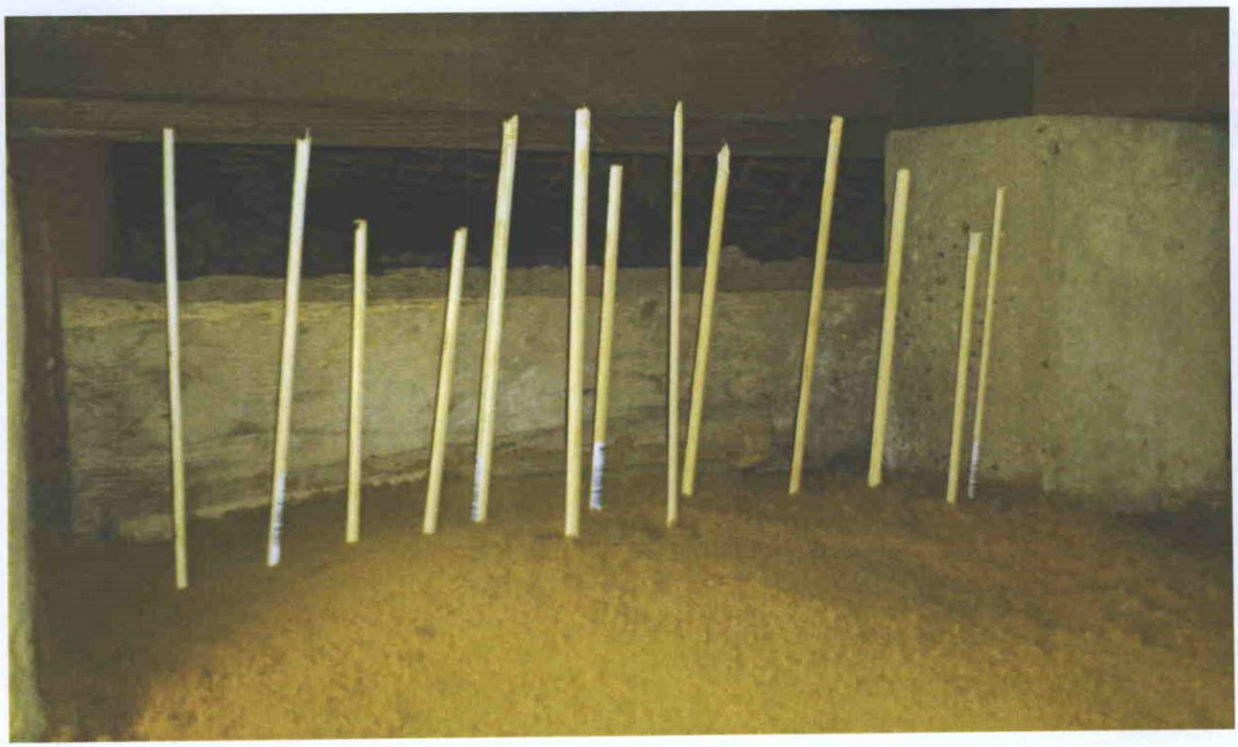


Photograph No. 2 - Entrance No. 2 - Date; 26.11.2012 - Set-up of Badger Survey.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 3 - Entrance No. 3 - Date; 27.11.12 - Set-up of Badger Survey.

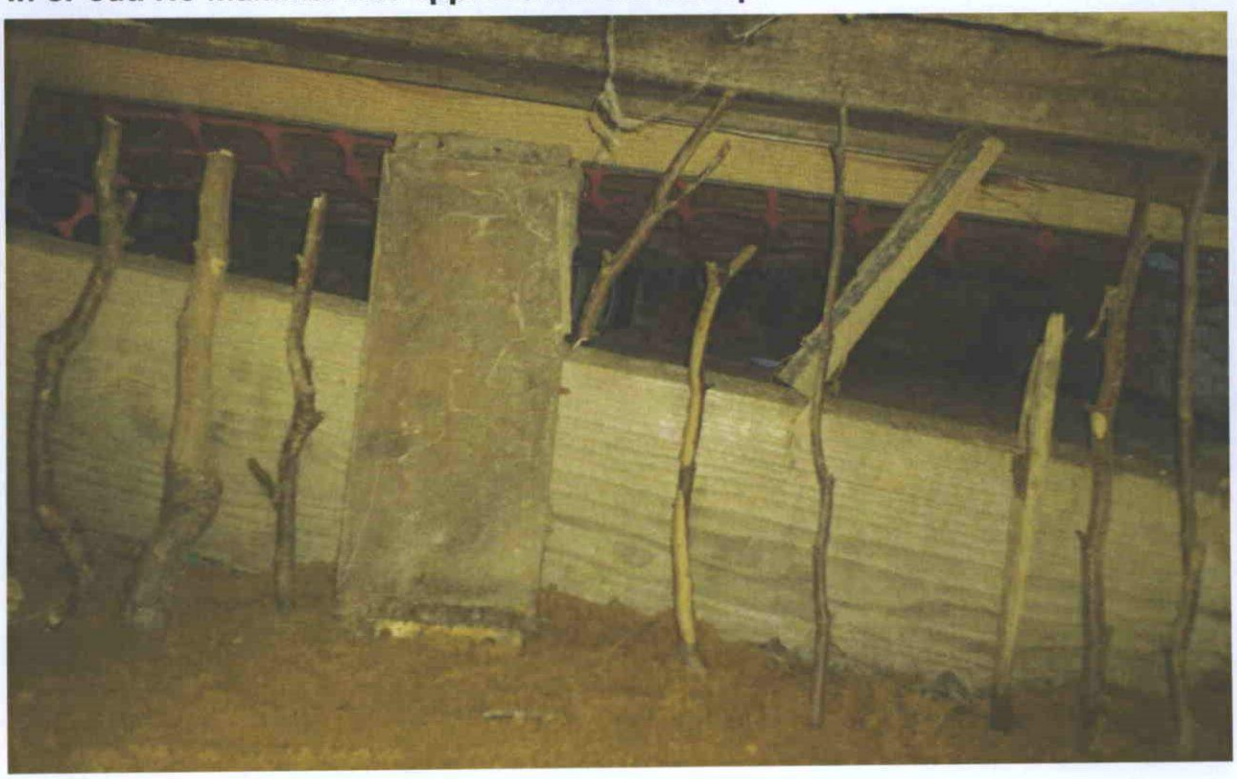


Photograph No. 4 - Entrance No. 1 - Date; 27.11.12 - Result No. 1 - No breach of dead wood barrier; and no mammal tracks in the sand trap. No mammal has come in or out. No mammal has approached the set-up.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 5 - Entrance No. 2 - Date; 27.11.12 - Result No. 1 - No breach of dead wood barrier; no mammal tracks in the sand trap. No mammal has come in or out. No mammal has approached the set-up.



Photograph No. 6 - Entrance No. 3 - Date; 28.11.12 - Result No. 1 - No breach of dead wood barrier; no mammal tracks in the sand trap. No mammal has come in or out. No mammal has approached the set-up.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 7 - Entrance No. 1 - Date; 28.11.12 - Result No. 2 - No breach of dead wood barrier; no mammal has come in or out. Badger tracks in the sand trap suggest that badgers have approached the set-up. ***(See Photo No. 9 & 10).***



Photograph No. 8 - Entrance No. 2 - Date; 28.11.12 - Result No. 2 - No breach of dead wood barrier; no mammal has come in or out. Badger tracks in the sand trap suggest that badgers have approached the set-up. ***(See Photo No. 9 & 10).***

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 9 - Date; 28.12.12 - Badger tracks in the sand trap adjacent to Entrance No. 01 & 02.

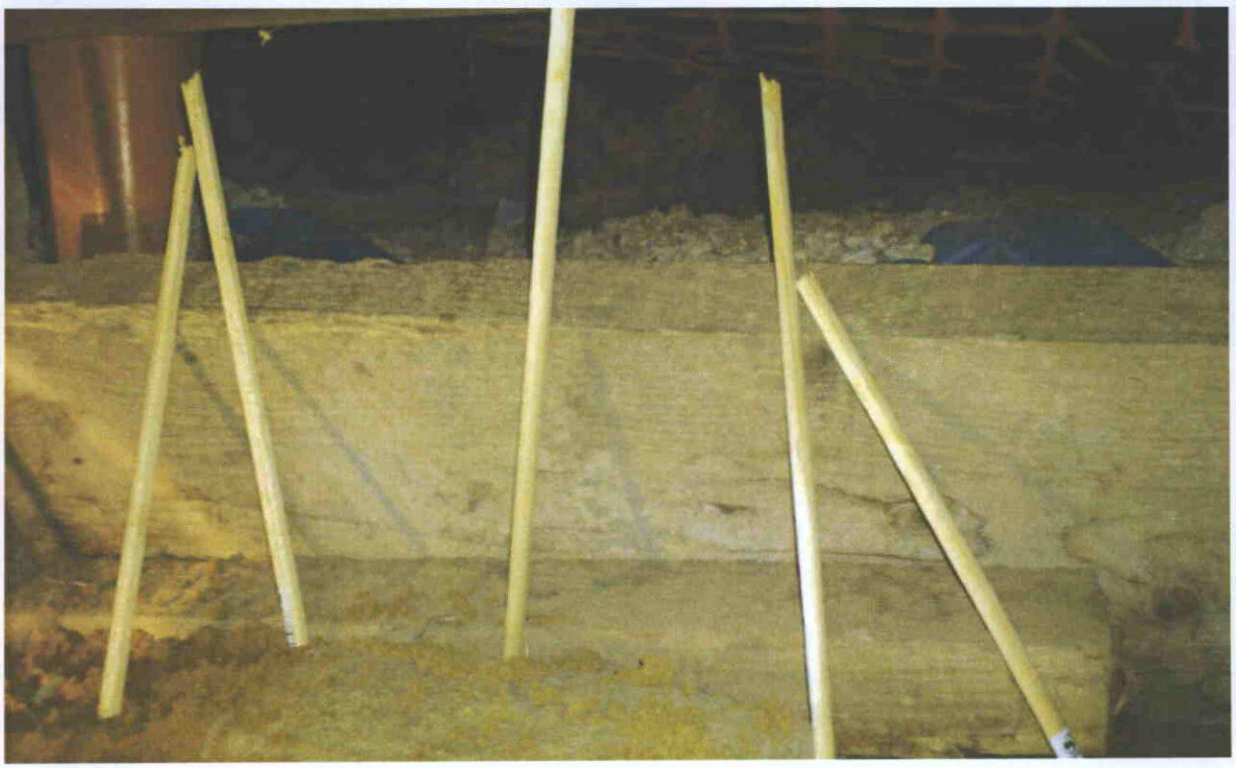


Photograph No. 10 - Date; 28.12.12 - Two sizes of badger tracks in the trap adjacent to Entrance No. 01 & 02 implying mother and cub are foraging locally. The prints do not come out of the void underneath the West Lane Youth Centre.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 11 - Entrance No. 03 - Date; 30.11.12 - Result No. 2 - No breach of dead wood barrier; no mammal tracks in the sand trap. No mammal has come in or out. No mammal has approached the set-up.



Photograph No. 12 - Entrance No. 1 - Date; 04.12.12 - Result No. 3 - Dead wood barrier has moved however no mammal tracks were recorded in the sand trap. It is presumed that the apparent disturbance has been caused by the wind.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 13 - Entrance No. 2 - Date; 04.12.12 - Result No. 3 - No breach of dead wood barrier; no mammal has come in or out. No Badger tracks in the sand trap.



Photograph No. 14 - Entrance No. 3 - Date; 04.12.12 - Result No. 3 - No breach of wood barrier; no mammal has come in or out. Badger tracks in the sand suggest badgers have approached the set-up. *(See Photograph No. 15 & 16).*

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 15 - Badger track found in the sand trap adjacent to Entrance No. 3; Date; 04.12.12.



Photograph No. 16 - Badger track found in the sand trap adjacent to Entrance No. 3; Date; 04.12.12. Tracks lead up to the dead wood barrier, however no breach has been made meaning badgers has not entered the building.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 17 - Entrance No. 01 and 02 - Result No. 04 - Date; 05.12.12 - No breaches of the dead wood barriers to either entrance point.



Photograph No. 18 - Entrance No. 03 - Result 04 ; Date; 05.12.12 - No breach in the dead wood barrier and no Badger tracks in the adjacent sand trap.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 19 - Entrance No. 1 - Date; 10.12.12 - Result No. 5 - No breach to the dead wood barrier. Fox tracks found in the sand track. No badger tracks located.



Photograph No. 20 - Entrance No. 2 - Date; 10.12.12 - Result 05 - No breach to the dead wood barrier. Fox tracks found in the sand track. No badger tracks found.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 21 - Entrance No. 03 - Date; 10.12.12 - Result 05 - No breach to the dead wood barrier. Fox tracks found in the sand track. No badger tracks found.



Photograph No. 22 - Entrance No. 01 - Date; 11.12.12 - Result 06 - No breach to the dead wood barrier. Fox tracks found in the sand track. No fresh badger tracks found.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 23 - Entrance No. 2 - Date; 11.12.12 - Result 06 - No breach to the dead wood barrier. Fox tracks found in the sand track. No badger tracks found.



Photograph No. 24 - Entrance No. 3 - Date; 11.12.12 - Result 06 - No breach to the dead wood barrier. Fox tracks found in the sand track. No badger tracks found.

APPENDIX NO. 1 - SITE PHOTOGRAPHS

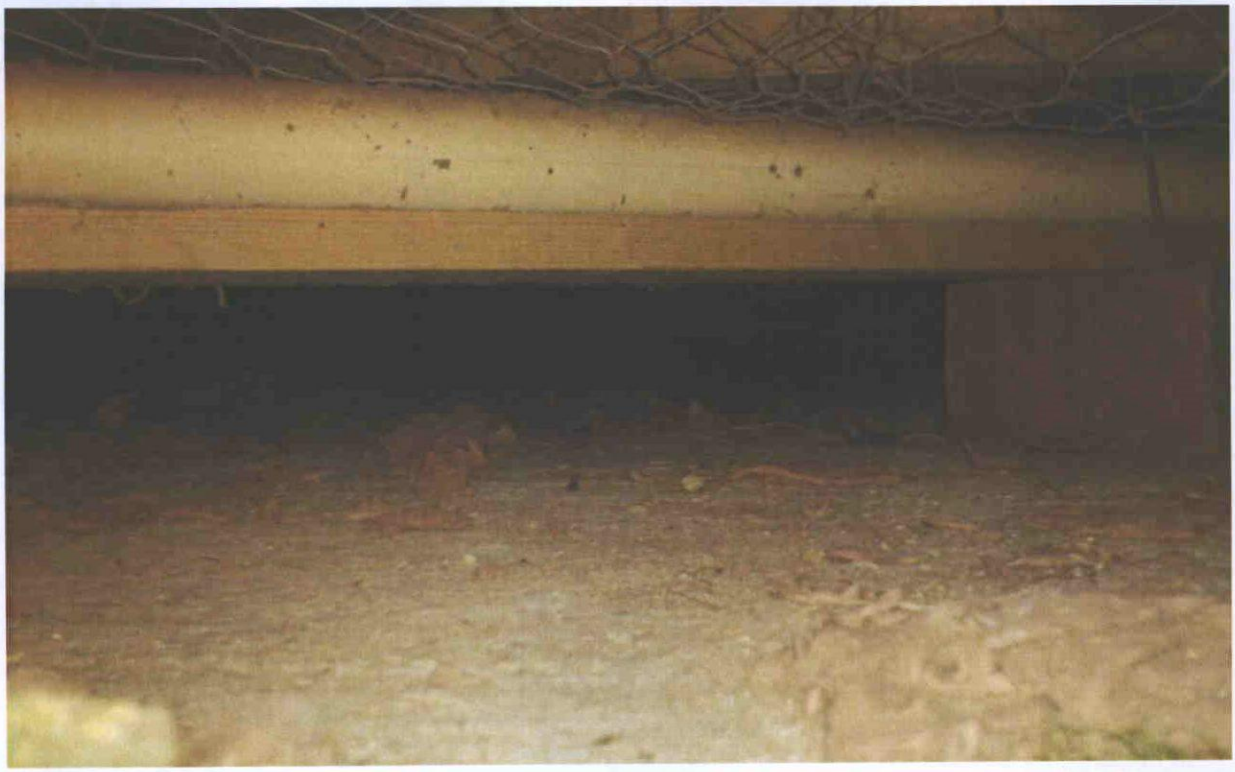


Photograph No. 25 - Dead fox found beneath the floor boards of the youth centre building.

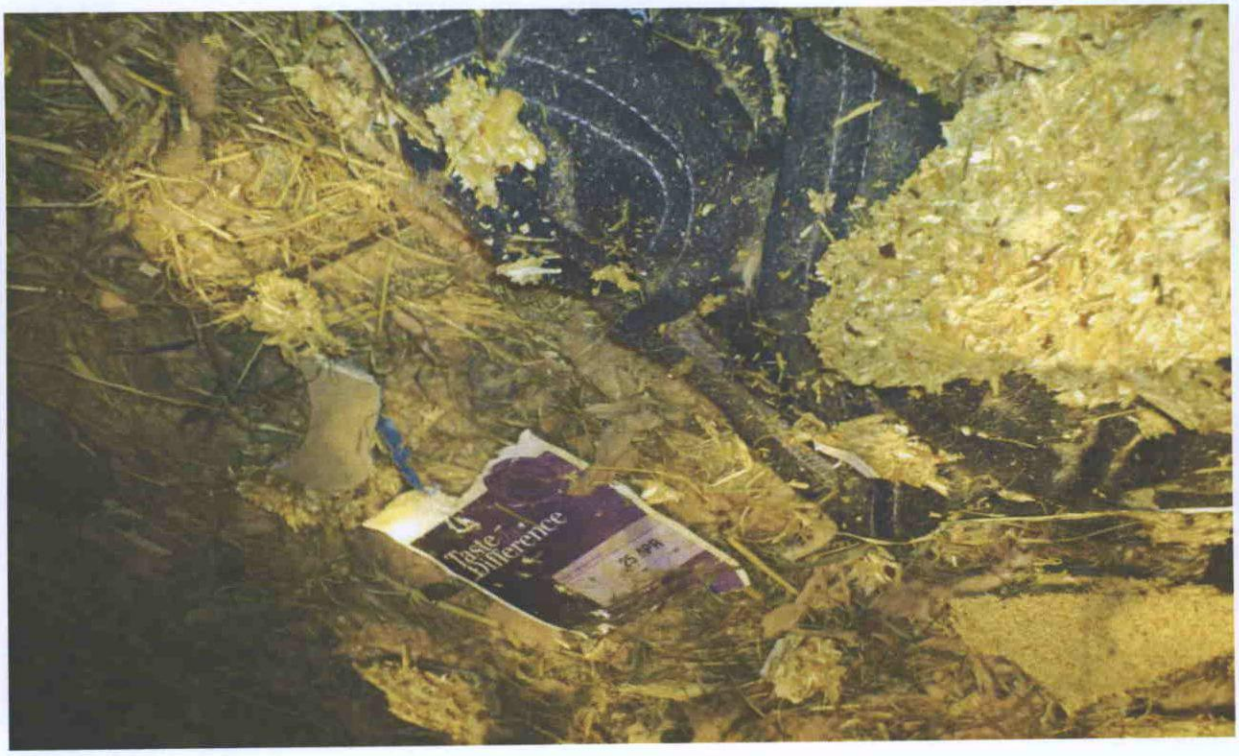


Photograph No. 26 - Mammal faeces found within the building are of a size and shape suggestive of fox rather than badger.

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 27 - The enclosed area has a concrete base that will inhibit the excavation of a badger sett by badgers.



Photograph No. 28 - Debris left by fox beneath the base of the structure.