



**New England Resource Recovery Centre
Nr. Lee Mill, Devon**

Technical Appendix 12-3 – Badger Survey Results

Viridor

**January 2010
SLR Ref: 402.0036.00350**



solutions for today's environment

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1.0 INTRODUCTION

SLR Consulting Ltd (SLR) has undertaken a survey on behalf of Viridor to undertake a survey for badger (*Meles meles*) in support of a planning application for the creation of a Resource Recovery Centre at New England Quarry near Lee Mill, Devon. The aim of the survey was to identify the location of any badger setts and record badger activity to inform an ecological impact assessment of the proposed development.

1.1 Legislative Background

Badgers and their setts are afforded protection under the Protection of Badgers Act (1992 (as amended) which, amongst other actions, makes it an offence to kill, injure, take or possess a badger or attempt to do so; damage, destroy or obstruct access to any structure or place that a badger uses for shelter or protection; or disturb a badger whilst it is occupying a structure or place which it uses for shelter or protection.

1.2 Study Area

The study area covers some 30 hectares and comprises the void of a mothballed quarry and surrounding land, which supports pasture, quarry workings, and woodland. Located near Lee Mill in South Devon, the area is a national stronghold for badger.

1.3 Study Aims and Objectives

The aims of the survey work undertaken in January 2009 were to:

- confirm the presence or absence of badgers within the study area;
- to record the location of badger setts and other field signs indicative of badger activity, should they be present;
- to establish a baseline record of badger activity that can be used to support a Natural England sett exclusion or disturbance licence, should one become necessary in the future; and
- should badger setts be located, to identify potential conflicts between the proposed development plans and the Protection of Badgers Act (1992).

This survey report does not provide details of mitigation proposals, which will be described in the main chapter of the ES when appropriate.

2.0 SURVEY METHODOLOGY

The survey method broadly followed recommendations made in Neal and Cheeseman (2006)¹. A detailed survey method is provided in Section 2.2 below.

2.1 Desk Study

Records of badger and badger activity, including setts, foraging signs, sightings and casualties / mortalities, within a 2km radius of the study area were requested from Devon Biological Records Centre (DBRC).

2.2 Detailed Field Survey Methods

Survey of the study area for badger was undertaken in January 2009. The survey comprised a thorough walkover of the study area during daylight hours to visually inspect and assess site habitats for their potential to support badgers. Particular attention was paid to the inspection of hedgerows, scrub patches, woodland, ditches and banks as these features are particularly likely to support badger setts. Field signs of badger include:

- setts;
- characteristic worn pathways;
- footprints;
- badger hairs;
- latrines; and
- foraging signs, known as snuffle holes.

Further information on the field signs of badger are presented within Appendix 1.

2.3 Survey Personnel

The survey was conducted by Jess Colebrook MIEEM, who has over nine years experience conducting badger activity surveys.

2.4 Limitations to Survey

Lack of evidence of any one protected species during a survey does not necessarily preclude it from colonising a site at a later date. Badgers, whilst not typically being expansionist in character, will extend territories to occupy adjacent land if it is vacant and suitable. An ecological study provides only a “snapshot” of the conditions prevailing at the time of survey. Badgers are capricious animals that move between setts in response to changes in environmental factors and the activity level of the identified setts may fluctuate during the year; as a consequence of this a sett is generally not considered to be inactive unless conclusive field evidence demonstrates that it has not been used for a period in excess of twelve months. Additionally badgers may excavate new setts or re-open setts previously categorised as being inactive.

January is considered to be an appropriate time to conduct badger surveys. Whilst badger activity levels may be reduced (badgers do not hibernate, but do become less active in periods of inclement weather), this is compensated for by the reduction in vegetation that may obscure setts or other field signs. However, it should be noted that in dense woodland and hedgerows autumnal leaf-fall may obscure some field signs or less active setts.

¹ Neal E. and Cheesman C. (2006) *Badgers*. Poyser Natural History, Cambridge, UK.

It is considered that the survey undertaken was sufficient to achieve the aims set out in Section 1 above.

3.0 RESULTS

3.1 Contextual Information and Background Records

The DBRC report included seven records of badger occurring within 2km of the study area, the closest of these being situated approximately 600m south of the study area. The remaining records are situated along roads and therefore presumably comprise casualties in the vicinity of the study area.

3.2 Habitats within the Study Area

The study area comprises a mothballed hard rock quarry void, with surrounding areas of broadleaved woodland and semi-improved agricultural grassland.

The quarry void supports a large area of open water surrounded by unvegetated bare rock and spoil. There is an extensive area of ancient semi-natural woodland to the north and east of the void, with the River Yealm bisecting the woodland to the east. The study area also supports agricultural land of semi-improved pasture to the east and west.

3.3 Field Survey Results

The findings of the badger activity survey, including an assessment of the field evidence recorded at each sett and the sett activity level extrapolated from this, are presented in Appendix 2 and summarised in Table 1 below. Terms relating to sett class and activity level are defined in Appendix 3. Sett locations are plotted on Drawing 1.

Seven setts were identified within the study area during survey. Of these, five are located within the area of woodland to the east of the River Yealm. The remaining two setts are situated to the west of the quarry void.

Table 1 – Setts Status and Activity Level

SETT NO.	NO. OF ENTRANCES	CLASS OF SETT	SETT ACTIVITY STATUS ²
1	28	Main	Active current use
2	4	Annex	In recent use
3	2	Subsidiary	Active current use
4	3	Outlier	Not in recent use
5	9	Subsidiary	Active current use
6	4	Annex	Active current use
7	18	Main	Active current use

² Based on most recent activity observed at sett.

4.0 DISCUSSION AND EVALUATION

4.1 Discussion of Results

As described above, seven setts are located with the badger activity concentrated in the eastern wooded side of the study area.

The majority (five) of the setts identified during the survey are located in the woodland east of the River Yealm. These setts are mostly located along the boundary of this woodland area with the adjacent semi-improved grassland, and evidence of foraging closely corresponded to the woodland / grassland interface. Two setts are also identified on the western side of the main quarry void on the boundary with the adjacent semi-improved pasture. Foraging within the study area close to the void was identified, typically associated with the naturalised margins of the site. The quarry void itself was not found to support either signs of foraging or setts; this area is largely unsuitable for badgers with exposed bedrock and tipped stone spoil offering little in the way of sett construction opportunities or foraging due to the paucity of vegetative cover.

With the River Yealm providing a natural barrier to badger movement, it is considered that the setts found during the survey belong to two separate badger clans. The large setts on the eastern side of the study area are likely to be the Main (Sett 1), Annex (Sett 2) and Subsidiaries (Setts 3 and 5) of the eastern clan which is likely to hold a territory comprising land east of the River Yealm. The two western setts are considered to act as a Main (Sett 7) and Annex (Sett 6) for a separate clan, however the main sett was only partially active at the time of survey with eight out of 18 holes active, and this clan may have another main sett elsewhere within their territory. The territory of this clan is likely to extend west of New England Quarry, although this is likely to also include woodland to the north of the quarry (Mackrells Park and Southwood Woods), while the main quarry site is considered to offer little value to this clan in respect of foraging or sett location and is unlikely to form an important part of the territory of either clan.

4.2 Evaluation

The study area includes part of the territories of two separate badger clans and supports a number of setts in active or recent use. It is considered that the study area supports badgers at or close-to carrying capacity for the area, with all suitable habitats occupied by badgers.

Badger is not included within the UK Biodiversity Action Plan (BAP) or Devon BAP. In addition, guidelines for the selection of County Wildlife Sites (CWS) in Devon³ of up to County ecological value do not include criteria for selection of sites on the basis of badger populations.

Badger is a relatively common and widespread species in the local environment and nationally. The badger populations present within the study area are therefore assessed as being of Parish value.

³ Devon Biodiversity Records Centre (May 2009) *The Devon Local Sites Manual Policies and Procedures for the Identification and Designation of Wildlife Sites*. Version 1.2.

5.0 SUMMARY AND CONCLUSIONS

In January 2009, detailed survey of the study area at New England Quarry, Lee Mill was undertaken by an experienced ecologist from SLR. The survey followed good practice methods and comprised a thorough walkover of the study area for field signs of badger.

Seven setts were identified within the study area during survey. Five setts are located within woodland to the east of River Yealm and two setts are situated to the west of the quarry void. Of these, five setts are in active use, one sett is in recent use and one sett is not in recent use.

Evidence of foraging by badger was observed along the boundary of woodland and grassland habitat in the east of the study area and within semi-improved pasture to the west of the void. No setts or field signs of foraging by badger were observed within the quarry void itself, and this area is considered largely unsuitable for badger due to the paucity of vegetation cover.

It is considered that the setts found during the survey belong to two badger clans. The large setts to the east of the site are likely to include the main setts of the eastern clan although none of these setts lie within the site itself, while the setts in the west are likely to act as a former Main sett and Annex for the western clan, which both lie within the site boundary. The main quarry site is considered to offer little value to either clan in respect of foraging or sett location, although woodland pasture within the wider site is likely to act as a foraging resource.

Badger is a relatively common and widespread species in the local environment and nationally. The badger populations present within the study area are therefore assessed as being of Parish value.

6.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Viridor Waste management Ltd; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

The information presented in this report provides guidance to reduce the risk of offences under UK law. However, SLR is not a legal practice and disclaims any responsibility to the client and others for actions that lead to offences being caused, whether or not the guidance contained in this report is followed. Interpretation of UK legislation is presented in good faith; however for the avoidance of doubt, we recommend that specialist legal advice is sought.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

FIELD SIGNS OF BADGER ACTIVITY

Setts

Badger setts are typically semi-circular in shape, with flattened bases, as opposed to the oval or circular tunnels associated with rabbits and foxes. They are typically larger than the holes of other common burrowing mammals, with entrances usually being approximately 22 to 25cm wide or greater.

The presence or absence of particular field signs and field sign combinations associated with each sett can help indicate the frequency with which badgers are currently using it. For example, the presence of freshly excavated soil and discarded bedding materials on the spoil heap associated with the sett entrance may indicate a currently high level of activity, whereas the accumulation of leaf-litter within the tunnel mouth may indicate a lower frequency of activity. Please note that the season in which the badger survey is conducted will have an impact on the interpretation of such field signs as badger activity fluctuates throughout the year. Badgers are capricious animals, moving between setts within their territory in response to environmental factors such as the availability of seasonal food resources, the accumulation of parasites, or territoriality.

Please note that in areas of confirmed badger activity all mammal burrows of sufficient aperture to permit access by badgers will be recorded, regardless of their origin. Should licensed badger works be required at a future date any displaced badgers may seek shelter within these burrows and, under the auspices of the governing legislation, any such burrow would from then be treated as a badger sett. Therefore, despite not technically being badger setts at the time of survey, it is prudent to record all potential places a badger may seek shelter so that they may be accounted for if a mitigation programme is required at a future date.

Characteristic worn pathways

Badgers are animals with a squat stature and a low profile which, in combination with their long ventral hairs, causes them to effectively sweep the ground as they pass. Over time the passage of the badgers along frequently travelled routes wears away vegetation and results in the formation of characteristic tracks. However, it is usually only possible to definitively confirm that such tracks have been created by badger when they occur close to identified badger setts. This sweeping effect also results in the entrance tunnels to frequently used badger setts being cleared of leaf-litter and other natural debris.

Paw prints

Badger paw prints are characteristic and easily identified. During the survey any patches of damp ground, mud and the surface of spoil heaps were thoroughly searched for the presence of paw prints.

Hairs

Badger hairs are frequently shed within setts or are often caught in fence wires at points where badgers have forced a way underneath. The identification of badger hairs provides conclusive proof of the presence of these animals at a location, but some caution must be employed during the interpretation of such field signs as hairs may persist for several years dependant upon local environmental conditions.

Latrines

Badgers usually defecate into prepared pits, providing a distinctive field sign of their presence. A number of pits may be found together, forming a latrine. Dung pits and latrines are often used by badgers to mark territorial boundaries. Examination of the faeces can provide information as to the badgers' current dietary components.



Foraging signs

As badgers forage for invertebrates they will frequently leave distinctive marks as they tear into the turf with their claws and snout. These are commonly referred to as "snuffle holes".



In addition, the site and its wider surroundings were assessed for their potential to support badgers.

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BADGER SURVEY RESULTS, JANUARY 2009

SETT NO.	ENTRANCE NO.	NOTES	STATUS	CLASS
		Location: N50.22.37 W03.58.17 Huge, well established sett complex within bank at woodland edge and within adjacent field. The 28 sett entrances stretch along approximately 75m of the woodland boundary.		
1	General			Main
	1	Large spoil heap. Fresh digging. Path from sett to adjacent field.	In recent use	
	2	Large spoil heap but entrance filled with leaf litter and obstructed by fallen hazel.	Inactive	
	3	Small spoil heap with rabbit droppings on top and also within entrance. Some leaf litter in tunnel.	Inactive/used by rabbits	
	4	Large spoil heap with rabbit droppings on top. Tunnel entrance clear, but no signs of recent digging or clearing of bedding.	In recent use.	
	5	Small spoil heap but lots of freshly dug soil at entrance, including uprooted bulbs. A collapsed tunnel exists just below this entrance. Lacking in well worn path.	In recent use.	
		Within field, close to fence. Entrance is at ground level, filled with leaves and covered by brambles.		
	6		Inactive	

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7	Large spoil heap with rabbit droppings. Leaves in entrance.	Inactive
8	Entrance level with ground, below and to the left of entrance 7. No path from the burrow, which is filled with leaves.	Inactive
9	Set in the bank above entrance 8. Similar to entrance 8, but with small spoil heap.	Inactive
10	Large entrance with huge spoil heap. Entrance situated directly beneath fence line. Rabbit digging present on spoil mound, entrance filled with leaves.	Inactive.
11	Leaves within entrance, shares spoil heap with entrance 10. A single dung pit occurs just down slope (west of) entrance. Fresh dung inside.	Inactive.
12	Within field, entrance level with ground, no spoil heap. Few leaves entrance.	Not in current use.
13	Southernmost sett entrance within the field. Huge channelled entrance, more than two feet tall and one foot wide. Abundant freshly excavated soil. Path from the entrance leading into the centre of the field, and also into the woodland. 	Active current use.
14, 15 & 16	Just north of entrance 13 and adjacent to entrance 6. All three entrances are within the field, level with the ground. Well trodden paths link all three. A mixture of nettles and brambles obscures the entrances but all have fresh earth present, and a few leaves in the tunnel entrance. 	Active current use.
17	Within field, with surface spoil mound adjacent. Entrance choked with decomposing leaves.	Not in current use.

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Just north of entrance 17, within the field. Large entrance free from debris, surface spoil heap with fresh earth and bedding.

18



In active current use.

19

Just to the west of entrance 18, a path links the two. Evidence of fresh digging.

In active current use.

20

Within field, just north of entrance 19. Small spoil heap at surface with very fresh earth, plus rabbit droppings. Entrance clear of debris.

Unclear. Suspect used by rabbits.

21

Within field, just west of entrance 20. Entrance filled with decomposing leaf litter. Path leads from entrance to adjacent woodland.

Not in current use.

22

Within woodland, beneath fence line close to very large oak tree. Some leaf litter within entrance, no spoil heap or bedding.

In recent use.

23

Beneath tree, adjacent to boulder. Large fresh spoil heap with fresh prints including those of young badger. Entrance clear of leaves.

In active current use.

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24	Entrance largely clear of debris, but no evidence of digging or recent use.	In current use.
25	Large entrance whole and huge spoil heap. No fresh material in spoil. Entrance clear of leaves.	In active use.
26	Above entrance 25. Large entrance filled with decomposing leaves. Recent digging between this entrance and no 25.	Not in recent use.
27	Large spoil heap. Entrance with some leaves. No fresh evidence of use, but largely clear.	In recent use.
28	Just north of entrance 27. Small spoil heap with signs of recent digging and clearance.	In current use.

General	Sett is located 15-20 m north of sett 1.	Annex
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1	Entrance beneath fence line, linked to sett 1 via a path that runs along the fence, just inside the wood. Fresh bedding at entrance, along with some leaves. No spoil heap.	In recent use.
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Within field, entrance choked with decomposing leaves, but entry still possible.





2

2		Not recently used.
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3	Vertical hole within field, no paths to it but edges are worn clear of vegetation.	In recent use.
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4	10m west of entrance 3, within field. Entrance with degraded bedding and	In recent use.
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		some leaves. Path leads from entrance to woodland.	
	General	Location: N50.22.48 W03.58.21 Sett at woodland edge, within the wood, below hedgerow/fence.	Subsidiary
	1	Spoil heap with well trodden entrance but some debris in the hole.	In recent use
		4m left of entrance 1. Large, freshly dug spoil heap, not compacted suggesting this is recently new entrance. Lots of fresh bedding at the entrance.	
3			
	2		Active current use.
		3 dung pits (1 fresh) beneath fallen trees 3m down slope from the above entrance.	
	General	Location: N50.22.64 W03.58.18 (only 32m accuracy though) Sett is located adjacent to a bank with holly trees on top, close to main footpath through the woodland. Paths lead from the set to the footpath.	Outlier
	1	Beneath root plate of leaning /half fallen silver birch. Entrance filled with debris, but entry still possible. Small, compacted spoil heap at surface.	Not in recent use.
		2m from entrance 1. No spoil heap, entrance level with ground, open but containing leaves.	
4			
	2		Not in recent use.
	3	2m from 2, and similar in description. Recent foraging activity between these two entrances.	Not in recent use.
5	General	Location: N50.22.71 W03.58.19	Subsidiary



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	<p>Large sett located to the east of the main footpath within the woodland, just before it emerges from the wood at its north end. The ground is level and the compacted bare spoil haps are quite obvious.</p>	
1	<p>Large entrance with worn channel. No fresh spoil, but entrance clear of vegetation.</p>	<p>In recent use.</p>
2	<p>1m from entrance 1, similar in description.</p> 	<p>In recent use.</p>
3	<p>1m from entrance 2, similar in description, but with two clear worn channels at the entrance.</p> 	<p>In recent use</p>
4	<p>Vertical shaft, edges free from vegetation, with claw marks.</p>	<p>In recent use</p>
5	<p>Large entrance clear of vegetation and very well trodden – a channel has formed.</p> 	<p>In recent use.</p>




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6	As above.	In recent use.
7	<p>Entrance beneath brambles, directly adjacent to footpath. Large clear tunnel with well trodden path and fresh bedding at entrance.</p> 	Active current use.
8	<p>Vertical shaft close to entrance 7. Entrance covered with bramble, but hole is clear.</p>	In recent use.
9	<p>In tree roots at base of tall bank that separates the woodland from the adjacent refuse site. Freshly excavated earth at entrance with young badger prints.</p> 	In active current use.
6	<p>Location: Off site. N50.22.41 W03.58.67 Sett is within relict bank with old gappy hawthorns, within sheep grazed field (SI neutral grass)</p>	Outlier
1	<p>Entrance filled with dry leaves, no path leading to it. Still passable.</p>	In recent use.
2 & 2a	<p>Large compact spoil heap. Fresh bedding at entrance.</p>	In active use

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	3	Small entrance into side of spoil heap.	In recent use.
	4	Directly beneath hawthorn. Rabbit droppings and leaves within the hole, but still passable. Small spoil heap.	In recent use.
7	General	This set occurs on the same hawthorn bank, but within the site.	Subsidiary
	1	Just within field, adjacent to fence/site boundary. Hole is level with ground, with leaves in the entrance.	In recent use
	2	As above.	In recent use.
		In the roots of a hazel bush. Otherwise same as above. Large compacted spoil heap present.	
	3		In recent use.
	4 & 5	Totally filled with leaves.	Not recently used.
	6	Just above 4 &5, hole is level with ground with leaves in the entrance.	In recent use.
	7	3m in from fence. Entrance clear of debris, fresh digging is present. Obscured by bracken. Latrine in front of the entrance with four fresh dung pits.	Active current use.
	8	Medium sized spoil heap, entrance clear of debris but seedlings within tunnel.	Not in current use.

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9	Totally full of leaves.	Not in current use.
10	Compact spoil heap, but no signs of being active. Leaves in entrance but still passable.	In recent use.
11	Same as entrance 10.	In recent use.
12	As 11, fresh dung pit beside the entrance.	In recent use
	Below old ash tree.	
13		Inactive
	Beneath corrugated asbestos. Compact spoil heap with rabbit droppings on top. Leaves in the hole.	
14		Not in current use (used by rabbits)
15	Above 14, full of leaves.	Inactive.
16	Next to traffic cone. Full of leaves.	Inactive.

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17	4m left of 16. Same as 16	Inactive.
18	Above 17 on the "other side" of the bank. Compacted spoil heap, covered in brambles.	Not in current use.

BADGER SETT STATUS AND ACTIVITY LEVEL

Sett Class

Within a territory a social group (or clan) of badgers will have a number of setts of varying size and frequency of use. There will always be a single “main” sett that is constantly occupied and used for breeding, plus, in descending order of rank, a number of smaller setts known as “annexe”, “subsidiary” and “outlier” setts. Whilst one of the factors used in considering the position of a sett within the hierarchy the number of entrances possessed by a sett of each class is variable and is largely dependant upon environmental factors. Setts excavated in food-rich, undisturbed and/or rural areas are likely to possess more entrances than a sett of similar hierarchical position but located within an area of scarce food resources, high disturbance or an urban locality. Setts with a higher position in the hierarchy will be more frequently used with the main sett being more or less constantly occupied and an outlier sett infrequently so. Outlier setts are often only occupied when seasonal local resources are available.

- *Main setts:* possess a comparatively large number of entrances compared to the other setts within the territory (from approximately eight to thirty or more), and are constantly occupied by badgers.
- *Annexe setts:* are clearly linked to the main (or sometimes setts of other rank) sett by well worn badger tracks. They may comprise any number of entrances and are normally in frequent use by the badgers, but they are not necessarily constantly occupied.
- *Subsidiary setts:* support a variable number of entrance holes, normally in the range of three to eight, and are not connected to the main sett by well worn badger tracks. The frequency of use of subsidiary setts varies greatly, but rarely will they be constantly occupied and they are often in sporadic use only.
- *Outlier setts:* usually comprise one or two entrances only and are not connected to the main sett by well worn tracks. They are often in sporadic use only, but may display periods of highly active use when local seasonal resources are available (for example outlier setts near fruit trees may experience periods of high use during the autumn).

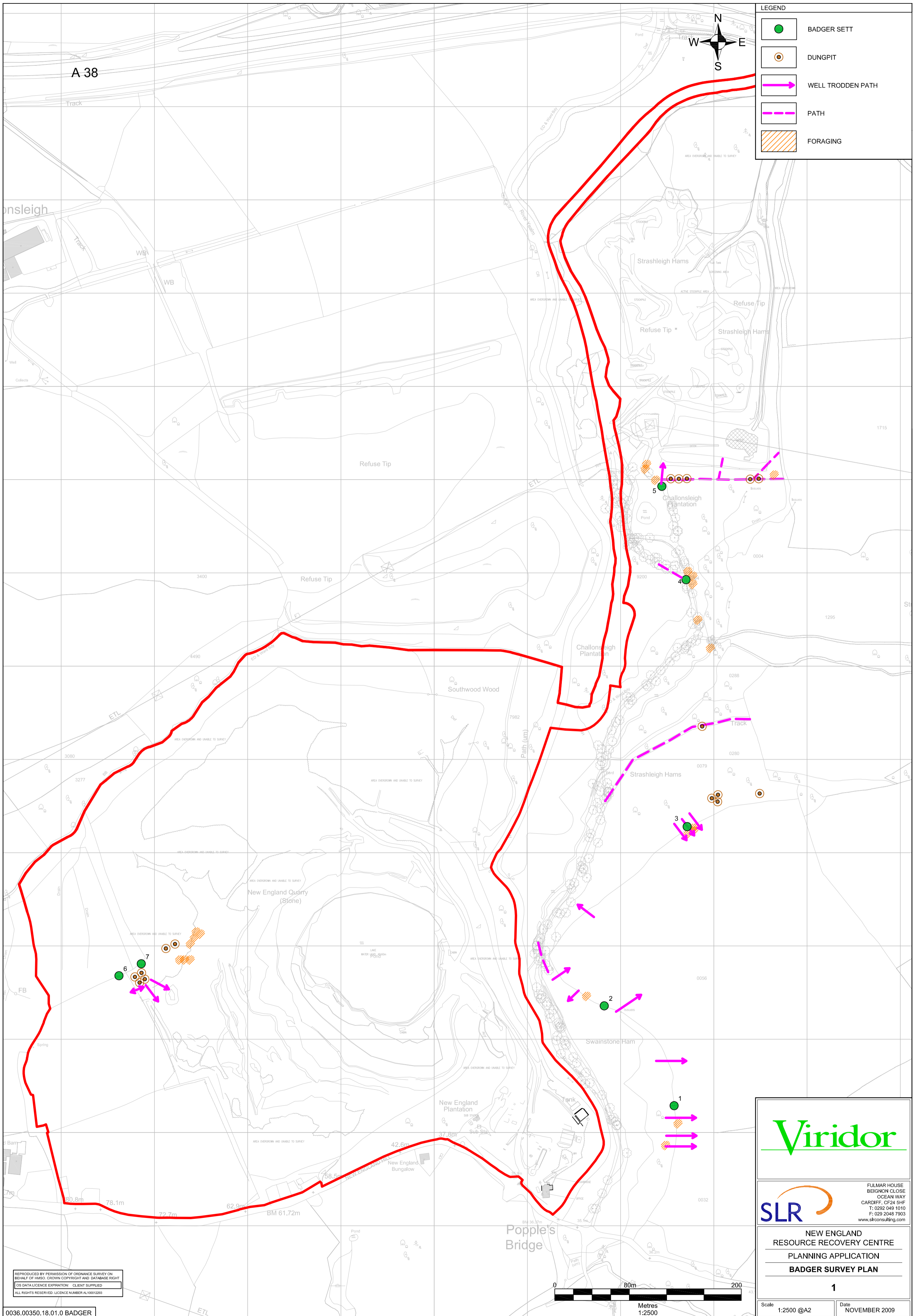
Sett activity level

Without the long-term employment of constant video surveillance, a practice which is both unrealistic and unreasonable, the interpretation of field signs is necessary in order to estimate the current frequency with which a badger sett is being used. Such interpretations are therefore qualitative measures rather than quantitative ones. This report ranks the sett activity level on a scale from inactive to highly active, with estimates of the frequency of use being provided. Please note that as the predicted frequencies of use are based on the surveyor’s interpretation of the field evidence they are estimates only. The divisions in activity level used in this report are made as follows:






- *Inactive:* as previously described, badgers may use a particular sett for only a short period each year. This means that there will sometimes be very few physical indicators of activity at a sett that is never-the-less active and considered to be so under the governing legislation. As a result a sett will not be described as inactive

unless there is conclusive evidence that it has been disused for a period of greater than twelve months.

- *Very low:* a sett described as having a very low frequency of activity will either be blocked or partially blocked with leaf-litter and other natural debris. Vegetation will most likely be encroaching onto the spoil heap and into the mouth of the tunnel, and there will be no freshly excavated soil or discarded bedding on the spoil heap. A sett with a very low activity level is estimated to be used by badgers an average of only once every two or more months or less, but displays evidence of use within the preceding twelve months. Setts where no field signs of badger activity are recorded but the sett cannot conclusively be demonstrated to have been inactive for a period of more than twelve months are recorded as being of very low activity.
- *Low:* setts considered to be of low activity level will contain significant volumes of leaf-litter and other natural debris as the frequency of badger passage will not be sufficient to sweep it from the tunnel mouth, but the tunnel will not usually be blocked and badgers will be able to gain access. There will not usually be significant volumes of freshly excavated earth on the spoil heap but a scattering of soil may be present. There may also be some vegetation encroachment upon the spoil heap or sett entrance. A sett considered to be of low activity level is estimated to be used approximately once per month.
- *Moderate:* setts displaying moderate levels of activity will usually be swept clean of leaf-litter or contain just a scattering of freshly gathered leaves. There will usually be a covering of freshly excavated soil on the spoil heap and this may also contain fragments of discarded bedding materials. Dropped bundles of bedding material may also be present in the vicinity of the tunnel entrance. The passing of the badgers may have begun to sweep a path over the spoil heap and leading away from the sett. A sett described as being moderately active is estimated to be used by badgers approximately on a monthly to weekly basis.
- *High:* a sett with a high level of activity will be swept clear of leaf-litter and debris and there will usually be a significant volume of freshly excavated soil on the surface of the spoil heap (however, very old setts in stable substrates may be highly active without having large volumes of fresh soil on their associated spoil heaps). Fresh paw prints may be noted if the surface of the spoil heap is soft. Large volumes of discarded bedding may be present. There will be no encroachment by vegetation and a well worn path will issue from the tunnel mouth and cross the spoil heap. Highly active setts will be in use several times per month, if not several times per week.
- *Very high:* a sett considered to be very highly active will usually have large volumes of freshly excavated soil and discarded bedding on the associated spoil heaps. Badger paw prints will likely be numerous were the surface of the spoil heap is appropriate. There will be no encroachment by vegetation and a well swept path will issue from some or all of the sett entrances. Where the substrate into which the sett is dug is suitable the frequency of the passage of the badgers may lead to the walls of the tunnel and the path in front of the sett taking on a smoothed or “polished” appearance as they are regularly brushed by the animals’ coats. Such a sett will be in constant or near constant occupation by badgers.



LEGEND

-  BADGER SETT
-  DUNG PIT
-  WELL TRODDEN PATH
-  PATH
-  FORAGING

Viridor

SLR

FULMAR HOUSE
BEIGNON CLOSE
OCEAN WAY
CARDIFF, CF24 5HF
T: 0292 049 1010
F: 029 2048 7903
www.slrconsulting.com

**NEW ENGLAND
RESOURCE RECOVERY CENTRE
PLANNING APPLICATION
BADGER SURVEY PLAN**

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Scale 1:2500 @A2 Date NOVEMBER 2009

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