



Ref: A044029-4

Date: 12th October 2011

Greencore Group Plc.

Email to: Jeremy Gardiner, WYG

Dear Jeremy,

FITZALAN LINK, LITTLEHAMPTON, WEST SUSSEX: BADGER SURVEY

Introduction

WYG Environment (WYG) was commissioned by Greencore Group Plc to undertake a badger (*Meles meles*) survey at Fitzalan Link, Littlehampton, West Sussex ('the site') in order to identify potential ecological constraints to the development that may be imposed by the presence of badgers.

The site lies in the centre of Littlehampton in West Sussex. The site is located between Worthing Road, Highdown Drive and East Street and is centred on Ordnance Survey Grid Reference TQ 031 029.

Objectives

The purpose of the survey was to provide up-to-date records of badger activity within the survey area and the immediate surrounding area, so as to identify potential ecological constraints to the development and to make recommendations regarding further work, mitigation and enhancement.

The scope of work comprised:

- * Identification of any badger setts on or adjacent to the site;
- * Identification of any signs consistent with badger activity on the site; and
- * Provision of preliminary advice on mitigation strategies against any adverse affects on the local badger population which may arise as a result of the proposed development.

Development Proposal

It is understood that the proposed development on site involves the construction of a road – the Fitzalan Link, which will join East Street at the southern limit of the site to Worthing Road at the northern extent of the site.

This development will involve the removal of numerous trees, hedgerows and areas of dense scrub and the clearance of a central area of uncut semi-improved neutral grassland and tall herb vegetation, and the southern areas of grazed neutral grassland and amenity grassland.

Legislative Considerations

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal for any person to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct an entrance to a badger's sett, or to disturb badgers whilst within a sett.



In addition, the likelihood of disturbing a badger sett, adversely affecting badgers' foraging territory or links between them, or significantly increasing the likelihood of road casualties amongst badger populations, are capable of being material considerations in planning decisions (PPS 9: Office of the Deputy Prime Minister, 2005).

Works within approximately 30m of any sett entrance have the potential to affect a sett (English Nature, 2002). Works which would otherwise cause an offence under current legislation (e.g. disturbing a sett) may in some cases be permitted under licence from the relevant statutory authority, which in this case is Natural England. Licences are usually only valid between July and November (inclusive) of any year, to avoid the badger breeding season.

Method

Desktop Review

As part of the extended Phase 1 habitat survey, information was gathered from the local ecological records centre, Sussex Biological Records Centre (SxBRC), regarding the presence of protected/notable species, including badger records, within 2km of the site.

Extended Phase 1 Habitat Survey

An extended Phase 1 habitat survey was conducted on site in October 2009. All areas of the site were investigated, including those parts that are not expected to be affected directly by the works but may be indirectly impacted upon.

Badger Survey

A badger survey was conducted within the predicted zone of influence¹ on 12th September 2011 by Nancy Davies, a suitably experienced ecologist from WYG. Where possible and as recommended by English Nature's *Badgers and Development* (2002), a minimum of a 30m buffer to either side of the proposed works was investigated for evidence of badger activity.

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines, footprints or signs of foraging. Methodologies used and any setts recorded were classified according to the published criteria (Harris, Cresswell & Jefferies, 1989).

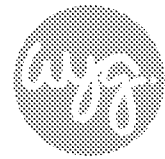
The following signs of badgers were searched for:

- ✧ Setts
- ✧ Footprints
- ✧ Paths
- ✧ Dung pits and Latrines
- ✧ Hairs

Survey Limitations

The area surveyed included, where possible, a buffer around the application boundary of 30m to ensure that any development activities comply with guidance from Natural England (2009a & b) and legal requirements under the Protection of Badgers Act 1992. However the presence of residential properties and college, which delineated much of the red line boundary, prevented an inspection of a 30m buffer zone in some areas.

¹ **Zone of influence:** the area that may be affected by the biophysical changes caused by the activities associated with the proposed works.



Whilst every effort was made to fully inspect areas of dense vegetation, inspections were occasionally limited to the perimeter of such stands when it was not possible to enter the area sufficiently. In these instances evidence of badger paths, footprints and hairs entering or caught on these stands was searched for.

Badger activity at any given sett shows seasonal patterns over the course of a year. As a consequence and despite the survey being completed at a suitable time of year, the evidence of activity recorded during this survey should be interpreted as a snapshot of activity at the time when the survey was conducted. Badgers are highly mobile creatures and can easily establish new setts over a short period of time or begin reusing setts previously thought to be abandoned.

Results

Desktop Review

SxBRC informed that it did not hold any records for badger.

Extended Phase 1 Habitat Survey

The extended Phase 1 habitat survey was undertaken in October 2009.

The site is composed of two areas: Area 1 is dominated by rough tussocky, semi-improved neutral grassland. This area is typically surrounded by residential developments, the majority of which have their rear gardens backing directly onto the site. The southern and eastern boundary is shared in part with Littlehampton College. Towards the south of the site it becomes increasingly narrow and ends by a small private drive leading out into further residential development.

Area 2 continues further south beyond the College with a narrow section of horse grazed rough semi-improved neutral grassland with small ruderal and scrub margins, flanked by a mature Leyland cypress hedge along the eastern boundary.

A badger survey was recommended based on the presence of badger foraging/territorial signs. A number of badger latrines were found under an apple tree in a residential garden, close to the western boundary in Area 1 (refer to target note 2 in the Habitat Survey Plan - Drawing No. GLTD/A044029-2/HAB/02; Appendix A) and the possible mammal paths and excavations through the woodland on the eastern boundary of Area 1 (refer to target note 6 in Appendix A).

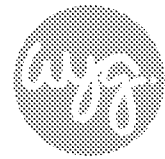
Badger Survey

The badger survey was undertaken in September 2011.

Setts

Badgers typically construct setts on land with a gradient, such as embankments. The site is largely flat with the only obvious areas of graded land located along the woodland strip, which appeared to be an old boundary feature. No setts were found during the survey in September 2011 or during the walkover survey in October 2009.

An inspection of the woodland (as identified by target note 6) was undertaken to identify if badgers were using this area for sett construction, as excavations had previously been recorded in the October 2009 survey. A number of mammal paths were observed through the woodland strip; however, no areas of excavation were noted. The woodland strip appeared frequently disturbed by the public, with numerous 'camps' scattered along its length. It is likely that a large component of the mammal paths were attributable to human activities.



Foraging Areas

Badgers typically forage for insect larvae/worms in grassland habitats, fruit within scrub/orchard habitats and vegetables within arable habitats. The majority of habitats on site (grassland and scrub) were considered suitable to provide foraging opportunities to badgers. However, no foraging signs were noted on site during the survey or the previous site visit in 2009. The scrub and apple trees could potentially offer badgers with some foraging habitat, although no signs (snuffle holes, foraging remains) were seen. The grassland habitat on site and within the residential properties/gardens could provide badgers with a large component of their foraging requirements; however an investigation of accessible habitat did not yield any conclusive badger signs.

A number of latrines were found in 2009 beneath an apple tree within a residential garden close to the western boundary (as identified by target note 2). No access was made into the garden during the survey in September 2011; however, a mammal path was noted under the fenceline (push-under) of the residential properties, suggesting that mammals were continuing to move between the site and residential gardens. No mammal hair was noted under the fence, therefore the push-under could not be assigned to a species, however based on the presence of latrines in the previous in the 2009 survey, it is considered likely that the push-under was created by badger.

Commuting Areas

Numerous mammal paths were noted during the surveys in 2009 and 2011. The paths were present throughout the grassland in Area 1 and along the woodland strip. However, the majority of the paths are likely to have been created by the public given the use of the site as a cut through and dog-walking area and the incidence of refuse along some of the routes.

The mammal push-under, located in close proximity to target note 2, suggests that mammals are commuting to/from the site from the residential gardens along the western boundary. However, conclusive evidence regarding badger use across the site is not obvious, as there were no clear signs such as latrines, prints or hair to suggest use of the area by badgers.

Conclusion

No badger setts were found on site or within 30m of the development footprint (where access was permitted) during the surveys, and therefore it is considered unlikely that the development will contravene the Protection of Badgers Act 1992.

The badger signs recorded on site during the surveys in 2009 and 2011 are sporadic and comprise the following: collection of latrines (as identified by target note 2), a push-under (close to target note 2) and a number of mammal paths, some of which are likely to be attributable to the public. Based on the field signs, badger use of the site is considered low.

It is unlikely that the land lost as a result of the road development will result in a significant loss of badger territory, as only a few signs of conclusive badger signs have been found. Residential properties and other possible badger foraging grounds, such as the allotments immediately to the north of the Worthing Road, will not be impacted by the current development proposals and as such a large component of the likely foraging area of the local badger clan will be retained.

The main impact as a result of the road is potential fragmentation of territories and the potential risk of badger mortalities as badgers move across the road from the west to the east and vice versa. However, as badger evidence on site has been inconclusive and the majority of the mammal paths are likely to be attributable to human activities, no detailed mitigation for these animals is considered necessary at this time.

As it is understood that the proposed road construction will not be started for another couple of years, it is recommended that the following measures are undertaken, in order to update the badger information and inform any potential mitigation plans:



1. An update badger survey should be carried out annually in winter/spring until the development commences, with the survey following the methods above. In addition, data should be sought annually from SxBRC and/or the local badger group to supplement the badger information held on badgers in the local area. The update surveys and the desk studies will help to provide information on badger use on site/in the local area.
2. If conclusive badger evidence be found on site, measures should be designed into the scheme to help avoid any negative impacts to badgers. For example, badgers might need to be excluded from the road alignment, through the provision of suitable badger-proof fencing or the animals might need to be provided with access across the road, through the provision of mammal underpasses.
3. Where evidence of badger use on site is inconclusive then it is recommended that the area of scrub delineating the residential gardens along the western boundary is cleared in phases and subsequently managed in perpetuity (complying with any reptile mitigation works), so as to remove any potential badger foraging areas from development and discourage badger activity on site.

The specific details of the mitigation (if any) can be confirmed following the update surveys.

I hope you find the above summary helpful, but should you have any queries, please do not hesitate to contact either myself or one of my colleagues.

Yours sincerely,



Nancy Davies
Senior Ecologist



Claire Wilmer
Regional Director

References

- * English Nature (2002). Badgers and Development. English Nature, Peterborough, UK.
- * Harris, S., Cresswell, P. & Jeffries, D. (1989). Surveying Badgers. An occasional publication of the mammal society – No. 9. Mammal Society, London.
- * The Highways Agency et al. (1997). Design Manual for Roads and Bridges (Volume 10, Section 4) – Part 2 HA 59/92 Mitigation Against Effects on Badgers. The Stationary Office.



Appendix A - Habitat Survey Map