



Competency Standard for Badger Survey, Mitigation and Management

Draft Version: June 2022

Acknowledgements:

Development of this Competency Standard was informed by the Ecological Competences: Skills and Process document developed by the team at Atkins (2019),

Many thanks to those who contributed to the development of this Standard: Nigel Shelton – lead author (Mott Macdonald Ltd); Martina Girvan (Arcadis); Aline Gomes (Network Rail); Paola Reason (RSK Biocensus); Neil Madden (Arcadis); Vicki Thomas (TetraTech)

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Notes:

- a) 'Capable' level requires achievement of all criteria for both 'basic' as well as 'capable'; 'accomplished' requires achievement of all criteria for all levels
 b) 'Experience' means that you have done so on numerous occasions

All practitioners should have knowledge and understanding of:	
Badger ecology and behaviour	<p>Understanding of:</p> <ol style="list-style-type: none"> 1) Basic habitat requirements and preferences; 2) Population structure and social dynamics and how this may vary in different environments and/or landscapes; 3) Breeding season ; 4) Seasonal behaviour; 5) Diet; 6) Sett types and status; 7) Approximate territory ranges/sizes and territorial interactions by social groups; 8) Typical dispersal distances and times of year of dispersal; 9) Typical life expectancy; 9) Range of predators and anti-predation behaviours; Mink ecology, behaviour and distribution, adaptations to predating water voles, and how this affects water vole populations.
Distribution	Knowledge of UK distribution of badger.
Conservation status	Knowledge of conservation status with reference to constituent parts of UK and Europe as a whole.
Field signs, survey methods and techniques	<p>Be able to recognise and identify field signs of badger presence, activity and setts, including: Prints, paths, latrines, scratch marks, hair, bedding, spoil heaps, bedding, tunnel entrance size and shape, setts, foraging evidence – snuffle holes and turves Undertake field signs surveys, interpreting signs and recording information. Camera trapping surveys, including consideration of when they are appropriate to deploy and what information is sought to be gained from use. Bait marking surveys methods, application and timing. Knowledge of where advanced techniques, such as GPS/radio tracking may be considered.</p>
Health and safety	<p>Knowledge and understanding of health and safety issues associated with surveys including identifying safe survey techniques. Able to plan and undertake work in a safe manner.</p>

	Consideration of specific requirements in wooded, scrubby, around livestock and urban areas.		
Biosecurity	<p>Aware of biosecurity measures when surveying.</p> <p>Undertake as standard appropriate biosecurity measures and personal hygiene and working with animals.</p> <p>Be fully aware of the concerns regarding bovine tuberculosis with the species, transmission routes, vectors and potential perturbation effects</p>		
Competency Standards			
Activity	Basic	Capable	Accomplished
Policy, Legislation and Licensing (P1)	<p>Awareness of key legislation (Protection of Badgers Act 1992) and level of protection afforded to species.</p> <p>Awareness of what activities would be unlawful in relation to their own actions and that of others.</p> <p>Awareness of licences available for badger.</p> <p>Works as an assistant to the licensee.</p>	<p>Knowledge and understanding of legislation and offence triggers (kill, injure, take, and 'interference' – destruction, damage of setts and disturbance of badgers when occupying setts).</p> <p>Knowledge of the differing types of licence available for the species, in which country and which is most appropriate to apply.</p> <p>Can confidently interpret the legislation in regard to specific scenarios (e.g. site work) and able to provide accurate advice.</p> <p>Able to suggest correct licence route for a project.</p> <p>Will have sufficient level of knowledge to be named as an additional authorised person on a badger licence.</p>	<p>Provides guidance and training internally on policy, legislation and licensing in respect to badger.</p> <p>In-depth knowledge and experience of badger licences and holding licences, including class licence.</p>
Ecology and behaviour	<p>Has a basic knowledge, with a simple understanding, of badger ecology, including:</p> <p>visual identification of badgers and setts</p> <p>social groups,</p> <p>habits,</p> <p>breeding,</p> <p>territoriality,</p> <p>diet preferences,</p> <p>seasonal activity patterns,</p>	<p>Demonstrates a good understanding of badger ecology and behaviour, being able to articulate, in some detail. Including those required in the basic level competency and:</p> <p>Clear understanding of use of different sett types,</p> <p>Potential seasonal changes in territory occupation,</p> <p>Dispersal periods,</p> <p>Disease and perturbation</p>	<p>Able to display a detailed knowledge of ecology and behaviour, providing guidance and training to others.</p> <p>Able to interpret and provide rationale for any unorthodox behaviours recorded or reaction to environmental changes - natural or anthropogenic.</p>

	sett types		Able to demonstrate knowledge of the differences between urbanised and rural populations
Survey (S1.1)	Awareness of sources of information on known occurrence, distribution and densities of badger (including local biological/environmental records and local contacts/badger group.) Awareness of sensitivity of badger sett location data, and the reasons why.	Experience of obtaining and correctly interpreting desk study information as part of standard, non-complex assessment. Awareness of when data is sensitive and where client owned that permission is granted before release to third party or used in publication.	Displays a detailed knowledge of survey methods and their application across a range of scenarios. Able to review and provide advice on suitable survey approaches and strategies.
Survey (S1.2) – Field signs/evidence surveys	Knowledge of when badger surveys can be carried out (seasonal restrictions and weather conditions etc.) and an understanding of geographical context. Knowledge of main/most effective survey methods used to survey for badgers. Has assisted on surveys under supervision. Under supervision can identify the features typical of a badger sett (entrance size/shape/direction of initial tunnel direction/spoil heaps/bedding) and field signs (footprints/latrines/hair/scratch marks) Awareness of potential issues with identification of badger setts and other commonly encountered species. Awareness of the need to record when uncertain and collect scale images or field signs when appropriate for verification later.	Experience of leading badger surveys. Consistently demonstrates the correct identification of badger field signs. Able to determine activity status of entrances and setts and to accurately classify setts. Able to determine likely extent and direction of the sett, based on location and careful interpretation of tunnel direction. Ability to effectively design and coordinate surveys suitable for a specific outcome e.g. licence application. Awareness of limitations, adverse weather conditions washing away signs, access limitations and effect population dynamics have on visibility of field signs. Able to understand survey bias when setting out survey limitations etc.	Able to successfully design and coordinate surveys for major development project or a landscape scale conservation project, including those requiring varied or beyond basic methods. Able to advise on identification of field signs and/or provide quality assurance for surveys. Can interpret survey data on a larger scale and able to consider difference between environments and social group boundaries/interactions and the potential reasons for these. Able to provide training to others on undertaking badger surveys.

<p>Survey (S1.3) – Pro-active survey methods</p>	<p>Knowledge of proactive methods of surveying for badgers – sticks, hair traps, sand footprint traps, remote cameras and bait marking. To have assisted with employing these techniques in the field and to have knowledge of what methods are appropriate according to the need and circumstances. Be able to interpret results.</p>	<p>Confidently be able to determine which pro-active methods should or could be applied and provide the rationale for doing so. Able to lead field deployment of pro-active survey methods.</p>	<p>Able to successfully design and coordinate surveys for major development project or a landscape scale conservation project. Able to advise on identification of field signs and proactive a survey results and interpretation/or provide quality assurance for surveys. Can interpret survey data on a larger scale and able to consider difference between environments and social group boundaries/interactions and the potential reasons for these. Able to provide training to others on undertaking badger surveys.</p>
<p>Impact assessment (A4)</p>	<p>Must have achieved at least ‘capable’ level in relation to ‘Survey’. Display an awareness of what activities may destroy or damage badger setts, or cause disturbance and how this may occur. Begin to interpret survey results and identify likely impacts, with guidance from a supervisor, to form a sound judgement of potential impacts - whilst acknowledging limitations and uncertainties.</p>	<p>Able to accurately interpret survey results and identify likely impacts to form a sound judgement of potential impacts - whilst acknowledging limitations and uncertainties. Be able to accurately determine the levels of impact on setts themselves and the social group as a whole. Able to apply rational judgement regarding potential damage and disturbance in respect of the activities proposed and tailor this to site specific circumstances (applying</p>	<p>Must have achieved at least ‘accomplished’ in relation to ‘Survey’. Able to accurately interpret surveys results relating to larger scale projects including impacting more than one badger social group, to form a sound judgement or hypothesis of badger use of the site(s) whilst acknowledging limitations and uncertainties.</p>

	Be aware of guidance with regard to distances and activities which may impacts badgers and their setts, and begin to use these to guide interpretation	ecological judgement of baseline levels, not merely applying a set 10, 20, 30m distance approach)	Able to advise and train others.
Mitigation design (M2)	<p>Awareness of standard mitigation techniques – appropriate stand off distances, timing of works, use of protective barriers and when they could be used, including any potential limitations and challenges.</p> <p>Aware of activities which may require closure of a sett and when an artificial sett is required.</p> <p>Can show an awareness of the methods used to prevent access and exclude badgers from setts.</p>	<p>Able to design appropriate mitigation in standard non-complex cases, including timing of development works, protective fencing, sett closures and requirements for artificial setts.</p> <p>Knowledge of the limitations and challenges involving sett closure, and able to select the appropriate option in different scenarios.</p> <p>Demonstrates a good understanding of what specification materials (fencing, ground meshing, one way gates) should be used, and why this is necessary.</p> <p>Able to demonstrate understanding of existing limitations on badger social group(s) and address these through mitigation.</p> <p>Demonstrates an awareness of potential conflicts arising from sett closures (perturbation, territoriality, displacement into areas of increased conflict – gardens/allotments etc)</p> <p>Able to clearly explain the licensing requirements of different mitigation options to others.</p>	<p>Must have achieved at least ‘capable’ level in relation to ‘Implementing effective mitigation’.</p> <p>Able to design appropriate mitigation in non-standard and complex cases – e.g. those involving larger social groups, complex territories, main sett loss or more than one social group and setts affected.</p> <p>Can demonstrate an ability to apply mitigation on a wider scale to increase the chances of successful exclusions and/or territory loss.</p> <p>Able to advise and train others.</p>
Implementing effective mitigation (M3)	Must have achieved at least ‘capable’ level in relation to ‘Survey’.	Will have observed multiple exclusions of different sett types and in varied ground conditions.	Able to advise and train others.
Exclusion	Be aware of how exclusion gates and ground meshing must be fitted to be effective and	Be able to confidently oversee implementation of exclusion methods –	Able to determine when alternatives to exclusion are

	<p>specification for ground mesh and fencing wire, as well as fitted specifications.</p> <p>Will have observed (and where possible assisted with) the fitting of exclusion gates, ground meshing and exclusion fencing gates.</p>	<p>fencing, fitting of one-way gates and ground meshing.</p> <p>Able to advise and ensure that the correct specifications - heights and depths for fencing and strength of gauge for wire (2.5mm/10 gauge minimum) - are used.</p> <p>Able to fit and advise upon correct fitting of one way gates, including 'non-standard' fitting.</p>	<p>possible (eg, partial 'live dig', trenching etc)</p>
<p>Implementing effective mitigation (M3)</p> <p>Artificial sett design and construction</p>	<p>Must have achieved at least 'capable' level in relation to 'Survey'.</p> <p>Awareness of the purpose of an artificial sett and where their use should be considered.</p> <p>To understand where an artificial sett should be located and the basics of design and materials.</p> <p>To have observed artificial sett construction, under the guidance of a supervisor.</p>	<p>To be able to confidently determine when an artificial sett will be required.</p> <p>Be able to undertake design, including identifying suitable location(s) and providing outline layout of size and structure.</p> <p>Be able to produce a material specification and design for the sett.</p>	<p>Has designed and implemented artificial setts and able to review designs and advise others where they are not suitable or required.</p> <p>Provides training to others. And able to internal guidance on artificial sett design and implantation.</p>
<p>Advising on habitat design and management (M1)</p>	<p>Has an awareness and understanding of the range of enhancement options suitable for the species</p> <p>Can recommend suitable enhancement options for simple projects.</p>	<p>Can apply good knowledge and understanding of a range of enhancement options, including those of benefit to multiple species.</p> <p>Has provided suitable enhancement options on projects, demonstrating an understanding of existing habitats, wider ecological benefits and the importance of location.</p>	<p>Able to demonstrate extensive experience in determining and implementing successful habitat design, including that at a territory or multiple territory scale.</p> <p>Provides training to others.</p>
<p>Interpretation and evidence-</p>	<p>Able to complete a simple badger survey proforma and very simple survey or</p>	<p>Competent at producing less complex survey and mitigation reports, including</p>	<p>Able to produce complex reports, such</p>

<p>based reporting and/or licence application production.</p>	<p>constraints reports, with guidance from a supervisor.</p>	<p>recommendations for further surveys or mitigation requirements. With guidance, able to produce more complex reports, including EcIA and EIA chapters, results of badger bait marking surveys with appropriate mapping. Can draft simple method statements for licence applications for checking by Accomplished level.</p>	<p>as EIA badger chapters, DCO applications (and equivalent) Able to produce method statements for extensive, multiple or complex exclusions with appropriate mitigation. Has experience level sufficient to be able to qualify for Class licences (where available)</p>
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