MKA

Water vole and otter survey

Land off Hogshaw Road, Granborough

Site	*Land off Hogshaw Road, Granborough*
Project number	*130322*
Client name / Address	*Statera Energy Limited, 1st Floor, 145 Kensington Church Street, London, W8 7LP*

Version number	**Date of issue**	**Revisions**
1.0	*20 October 2023*	*Original*

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Surveyor(s)	*Callan Denham* *Hazel Dudley* *Lydia Ennis ACIEEM* *Matthew Simmons* *Rebecca Haines*	
Reviewed by	*Felix Bird*	

Declaration of compliance

The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

We are a Chartered Institute of Ecology and Environmental Management (CIEEM) Registered Practice. We employ ecologists include those who are members of CIEEM and between them carry licences for the majority of protected species.

Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints

CONTENTS

1. EXECUTIVE SUMMARY

In June 2023, MKA Ecology Ltd was commissioned to undertake a water vole and otter survey at Land off Hogshaw Road, Granborough. Suitable habitat was identified during a Preliminary Ecological Appraisal of the Site. Early season surveys were completed on 5 June and 19 June 2023, and late season surveys were completed on 15 September, 18 September, and 29 September 2023.

The Site is located west of the village of Granborough and falls under the authority of Buckinghamshire Council. The Site consists of agricultural fields surrounded by hedgerows, with a stream running along the north, west and south boundary. The entirety of this watercourse provided suitable habitat for water vole and otter but there are no known populations of these species along this watercourse prior to the surveys.

The proposed development is for a 500MW Battery Energy Storage System (BESS) facility requiring a cable connecting itself to the nearby existing National Grid East Claydon Sub-Station via facility tunnel dug underneath the brook. Temporary bridges will be installed to facilitate access to the site during construction.

The total length of the watercourse adjacent to the site boundary plus 100m upstream and downstream was surveyed.

No evidence of water vole was found during the surveys and as a result this species does not form a constraint to development. No otter holts were identified; however, a low number of field signs were recorded including feeding remains, tracks and spraints, which indicated the watercourse is used for foraging and commuting.

It is recommended a 10m buffer of the watercourse is maintained to avoid potential impacts on otter. The proposed temporary stream crossings will lie within this buffer zone and so a Construction Ecology Management Plan is recommended detailing safe working methods to avoid impacts on otter should they be present during construction. Any proposed lighting during construction or post-development should be designed sensitively to avoid light spill upon the stream.

The development provides an opportunity to enhance the site for otter post-development. The soft landscaping proposes new ponds, and it is recommended these habitats are planted with native marginal and bankside plant species to provide enhanced foraging and shelter for otter. The new woodland and scrub habitats are also likely to provide additional areas for shelter.

2. INTRODUCTION

2.1. Aims and scope of water vole and otter survey

In June 2023 MKA Ecology Ltd was commissioned by Statera Energy Ltd to undertake a water vole *Arvicola amphibius* and otter *Lutra lutra* survey at the Land off Hogshaw Road, Granborough, in order to support a planning application for a 500MW Battery Energy Storage System (BESS) facility. The aims of the surveys undertaken were to:

Establish the presence or absence of otter and water vole within the area of the proposed development prior to any potential disturbance to the watercourses; and

Outline any strategies for potential mitigation, if required, to maintain or improve the conservation status of these species on site.

This report details the results of the surveys undertaken and gives recommendations for appropriate actions to be implemented during the course of the development.

2.2. Site description

The survey area is shown on the map in Figure 1. Within this report this area is referred to as the Site or the Land off Hogshaw Road, Granborough.

The Site is located west of the village of Granborough within Buckinghamshire (grid reference: SP 75515 25296) and falls under the authority of Buckinghamshire Council. The Site consists of agricultural fields with narrow neutral grassland margins, surrounded by hedgerows, with a stream running along the north, west and south-west boundaries of the Site.

2.3. Summary of previous survey effort

A Preliminary Ecological Appraisal and desktop study were undertaken on 30 June 2023 (MKA Ecology Ltd, 2023). The data search returned no records for water vole or otter within 2km of the Site boundary, and no field signs were found during the site visit, however the stream was considered to provide suitable habitat for both species.

2.4. Proposed development

The proposed development is for a potential 500MW Battery Energy Storage System (BESS) facility. The proposal involves the installation of 1,204 battery containers, 38 inverter buildings, seven control rooms and an attenuation pond. The proposed soft landscaping also includes areas of wildflower

grassland, new woodland, scrub and pond creation. The BESS will require a cable connecting itself to the nearby existing National Grid East Claydon Sub-Station via a tunnel dug underneath the brook. In addition a temporary haul route from the north will require two crossings over the stream. The bridges' design will span both banks, avoiding impacts to their profiles. The bridges will be removed on completion of the development.

2.5. Legislation and planning policy

Otters are listed on Schedule 5 of the Wildlife and Countryside Act (1981), as amended, and are protected under Section 9(4)(b) and (c) and (5). They are also fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended)).

In summary, it is illegal to:

- Deliberately capture, injure or kill an otter;
- Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young;
- Intentionally or recklessly disturb any otter whilst it is occupying a holt;
- Damage or destroy or intentionally or recklessly obstruct access to an otter holt;
- Possess or transport an otter or any part of any otter; and
- Sell (or offer for sale) or exchange an otter.

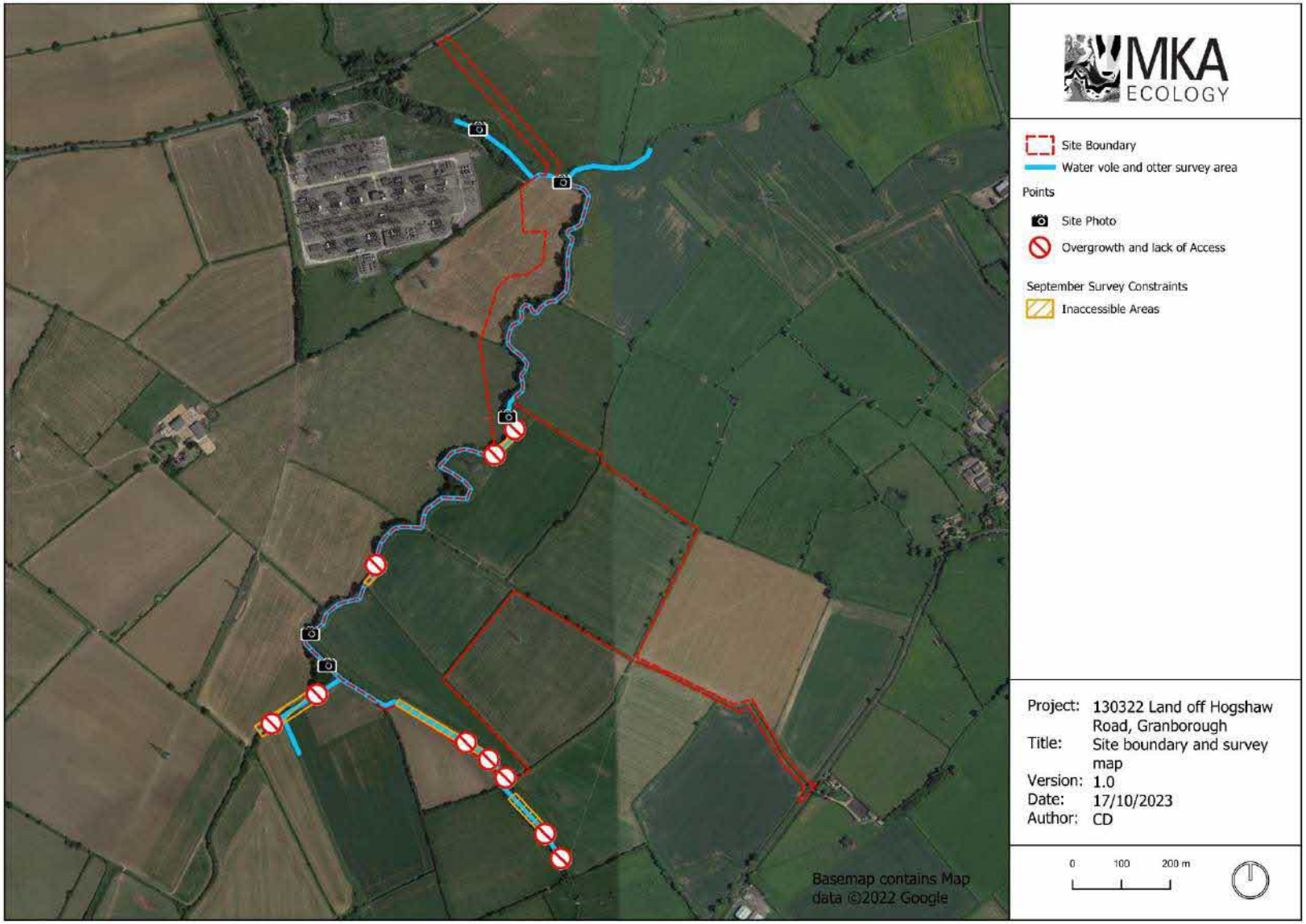
Water voles are covered by the provisions of Section 9 of the Wildlife and Countryside Act 1981 (as amended). This legal protection makes it an offence to:

- Intentionally kill, injure or take water voles;
- Possess or control live or dead water voles or derivatives;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose;
- Sell water voles or offer or expose for sale or transport for sale; and
- Publish or cause to be published any advertisement which conveys the buying or selling of water voles.

Water vole and otter are also listed under Section 41 of the Natural Environment and Rural Communities Act (2006) and are also priority species in the UK post-2010 Biodiversity Framework. Both water vole and otter are priority species in Buckinghamshire and listed as species of importance in the Buckinghamshire & Milton Keynes Natural Environment Partnership's Biodiversity Action Plan**.**

Following the issue of the National Planning Policy Framework (NPPF, see Appendix 1), all planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests.

Figure 1: Site location and survey area



3. METHODOLOGIES

3.1. Otter survey

Otter surveys was undertaken along the Site's watercourse on 05 and 19 June 2023 for Survey 1, and 15, 18, and 29 September 2023 for Survey 2. The survey area displayed on Figure 1 was surveyed for signs of otter.

Habitat information was recorded along the entire watercourse within the site using a River Corridor Survey Form. This allows for an accurate assessment of the potential for the site to support otter. Site details were recorded on a standard form and included;

Accurate Ordnance Survey grid reference;
Habitat;
Shore/bank;
Bordering land use;
Vegetation cover;
Disturbance;
Bank profile;
Depth;
Width;
Current;
Wildlife Information;
Sketch map of site; and
Additional comments.

The following signs were searched for along the length of the watercourses and recorded on a standard survey form (and photographed):

Spraint / faeces;
Holts;
Footprints;
Runways;
Slides and haul-out places; and
Partially eaten remains of prey.

3.2. Water vole survey

The survey methods followed best practice guidelines as outlined in The Water Vole Mitigation Handbook (Dean *et al*., 2016). Two surveys for water vole were conducted between April and October in line with these guidelines. The early season survey was undertaken on 05 and 19 June 2023, and the late season survey on 15, 18, and 29 September 2023.

The exact location of pipe installation was unknown at the time of the survey and so the full length of the watercourse adjacent to the site boundary was surveyed, plus 100m upstream and downstream (shown in Figure 1). The banks of the water bodies were systematically searched for evidence of:

Burrows: oval shaped holes in the bank with a diameter of between 4-8cm, usually at the water's edge and sometimes with a cropped 'lawn' of grass;
Latrines: piles of water vole droppings used in territory marking;
Feeding stations: piles of small pieces of vegetation; and
Footprints.

This information, in addition to detailed habitat features of the water body as listed in 3.3.5 of the Water Vole Mitigation Handbook, were recorded on a standardised water vole survey form. The habitat information was used to inform a habitat suitability assessment of each feature in order to evaluate its suitability for supporting water vole based on the species' ecology.

In addition, the weather conditions at the time of the survey were recorded. These are summarised in Table 1 below.

Table 1: Summary of weather conditions

Date	Survey number	Time of survey	Weather conditions*	
05/06/2023	1	10:00	Wind: 1 Cloud: 2/8	Temp: 18 °C Rain: None
19/06/2023	1	09:30	Wind: 4 Cloud: 5/8	Temp: 17°C Rain: None
15/09/2023	2	10:36	Wind: 1 Cloud: 1/8	Temp: 18°C Rain: None
18/09/2023	2	10:55	Wind: 3 Cloud: 6/8	Temp: 18°C Rain: None
29/09/2023	2	10:30	Wind: 2 Cloud: 1/8	Temp: 17°C Rain: None

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

3.3. Survey Area

The survey area is shown in Figure 1. The stream running adjacent to the western boundary, in addition to 100m upstream and downstream, was surveyed for the presence of otter and water vole.

3.4. Surveyors

The survey was undertaken by:

Callan Denham, Graduate Ecologist, MKA Ecology Ltd. Callan has one years' experience in undertaking professional water vole and otter surveys.
Hazel Dudley, Graduate Ecologist, MKA Ecology Ltd. Hazel has one years' experience in undertaking professional water vole and otter surveys.
Lydia Ennis ACIEEM, Senior Ecologist, MKA Ecology Ltd. Lydia has over seven years' experience in undertaking professional water vole and otter surveys.
Matthew Simmons, Graduate Ecologist, MKA Ecology Ltd. Matthew has one years' experience in undertaking professional water vole and otter surveys.
Rebecca Haines, Graduate Ecologist, MKA Ecology Ltd. Rebecca has two years' experience in undertaking professional water vole and otter surveys.

The report was drafted by Callan Denham and reviewed by Felix Bird, Senior Ecologist at MKA Ecology Ltd. Felix has five years' experience as a consultant ecologist.

3.5. Constraints

Short sections of the watercourse were inaccessible during the late season survey due to the density of vegetation (shown on Figure 1). The majority of these sections were to the south and not predicted to be impacted, however there was a small section which is likely to be the location of a temporary bridge.

No access constraints were experienced during the early season visit, and no evidence of water vole or otter were found in this section, although signs of otter were found nearby. A precautionary approach has been recommended to overcome this minor constraint.

4. RESULTS

The location and type of field signs recorded during the water vole and otter surveys undertaken between 5 June to 29 September 2023 are displayed in Figure 2.

4.1. Otter

Evidence of otter was recorded at the Site during the early season and late season surveys. This includes feeding signs of mussels *Anadonta* spp., signal crayfish *Pacifastacus leniusculus*, and common toad *Bufo bufo*. Tracks and spraint were encountered on 19 June 2023, as well as the 15 September 2023.

No evidence of otter holts, couches or natal dens were recorded.

4.2. Water vole

Five burrows were identified during the field visits (locations shown on Figure 4 and Figure 5), however due to the overlap in dimensions between small mammal burrows, these could not definitively be identified as water vole burrows.

The stream banks comprised steep (>45°) slopes of earth substrate with occasional undercut sections providing suitable burrowing habitat. The stream was found to be shallow, slow flowing to sluggish on both site visits. The banksides were covered in tall ruderal vegetation and scrub, marginal vegetation was present (such as *Tyhpa sp*.) and increased over the growing period of the year, providing suitable foraging habitat for water vole.

However, no feeding remains, latrines, footprints or other field signs of water vole were recorded during the survey visits.

Brown rat tracks and droppings were identified during the surveys, suggesting the burrows were likely brown rat burrows.

Figure 2: Location and type of otter field signs at Land off Hogshaw Road, Granborough – June Surveys

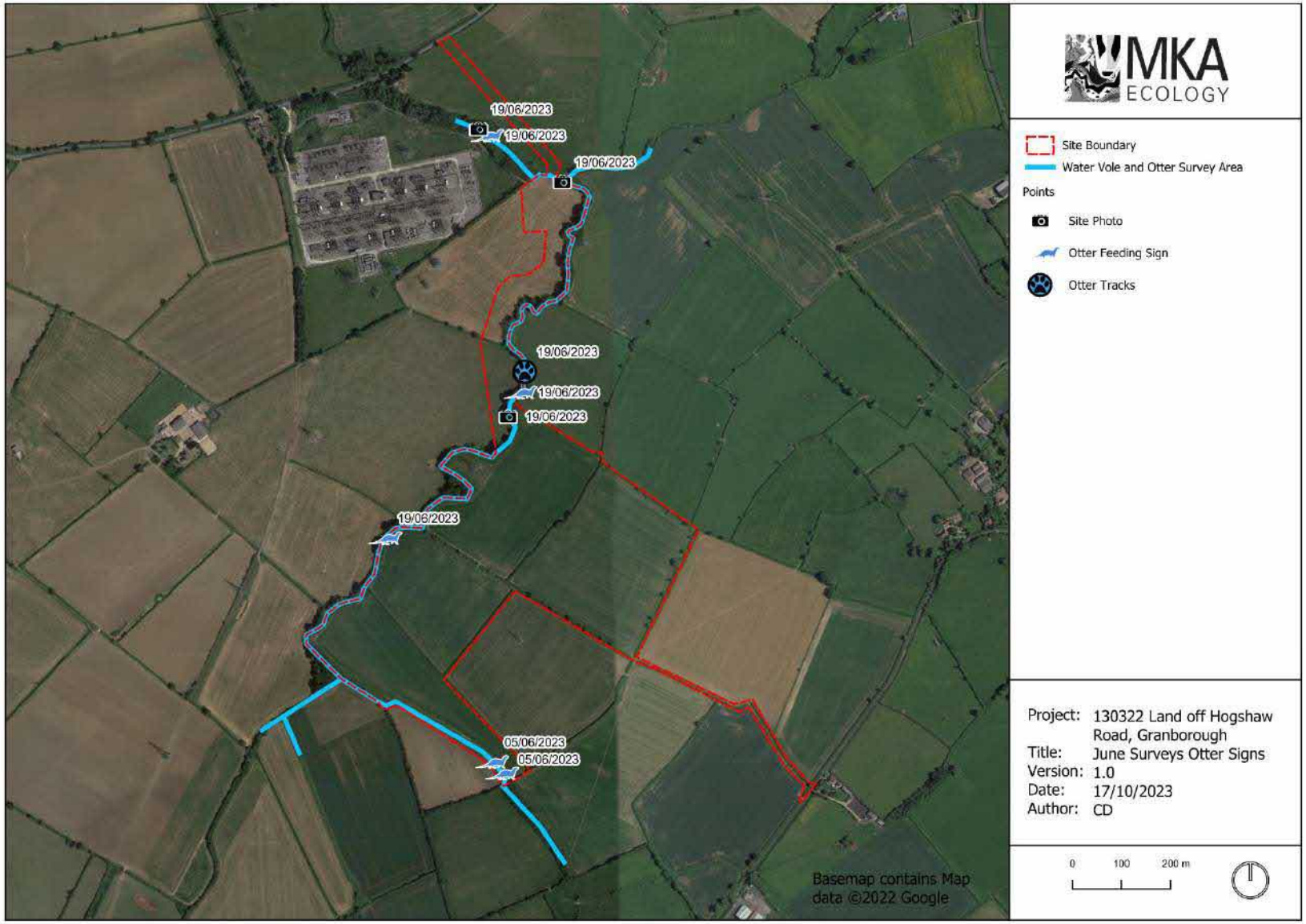


Figure 3: Location and type of otter field signs at Land off Hogshaw Road, Granborough – September Surveys

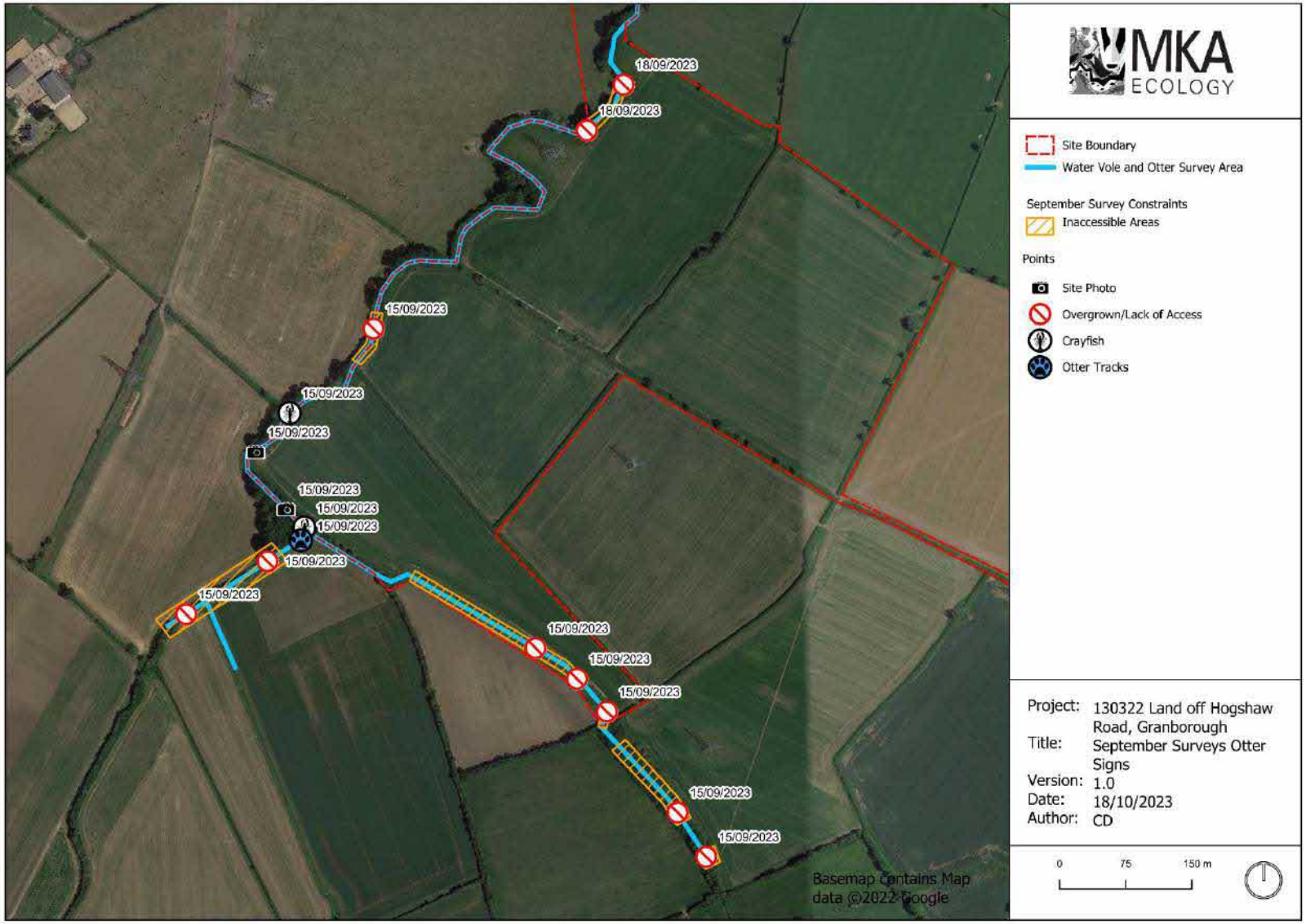


Figure 4: Location and type of rodent field signs at Land off Hogshaw Road, Granborough – June Surveys

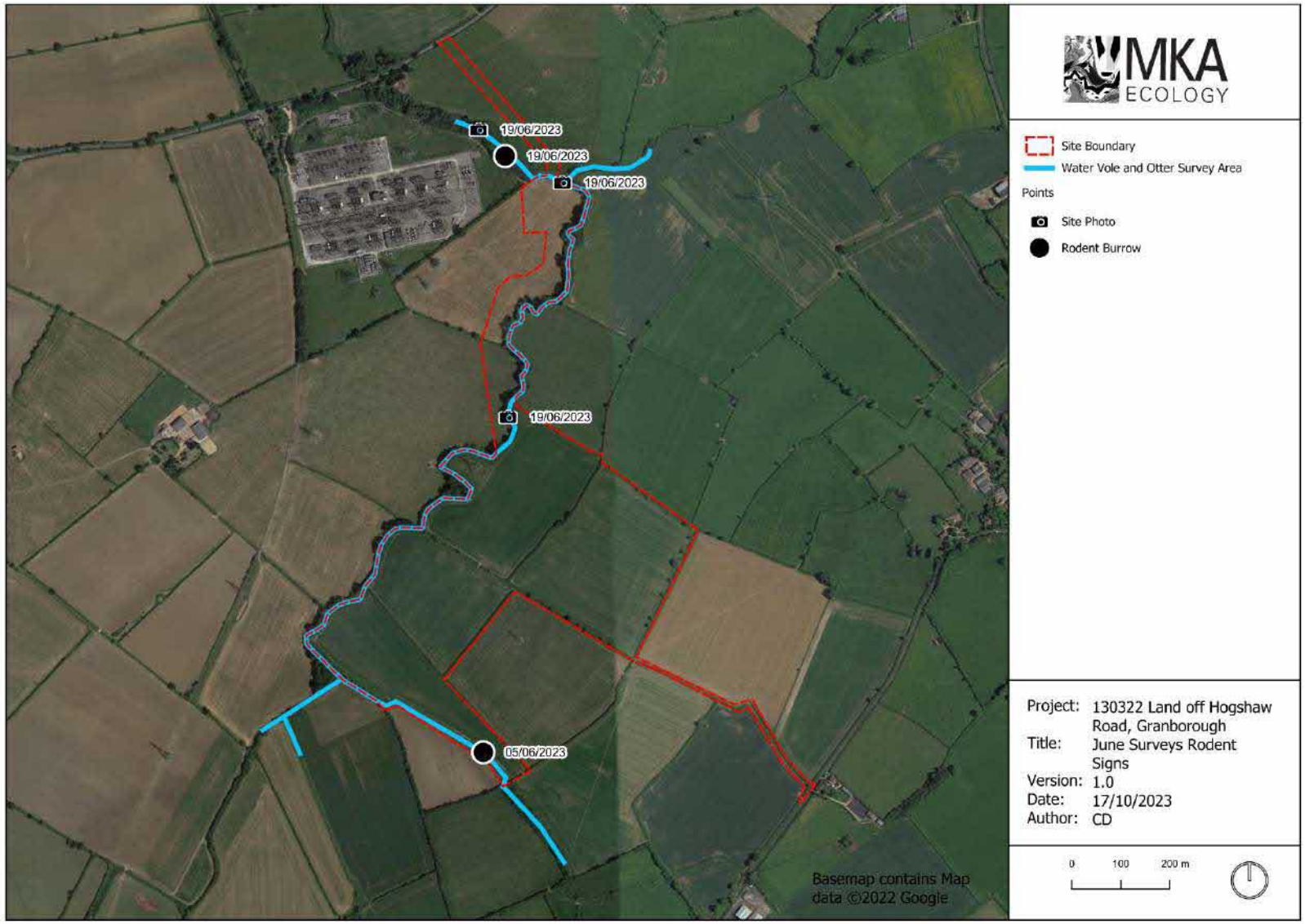


Figure 5: Location and type of rodent field signs at Land off Hogshaw Road, Granborough – September Surveys

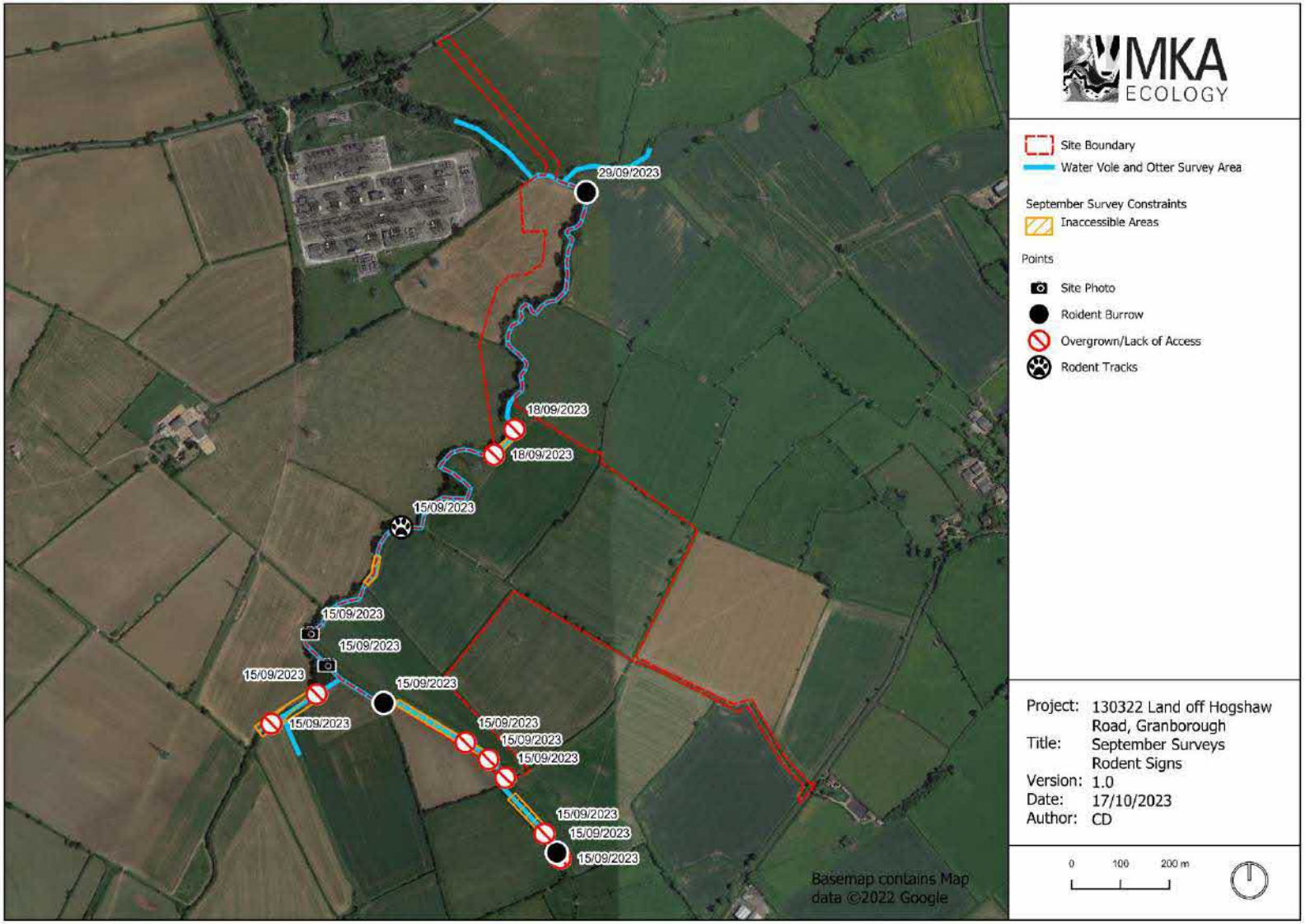


Figure 6: Photograph allocations map 1/2 for points in Figures 2 - 5

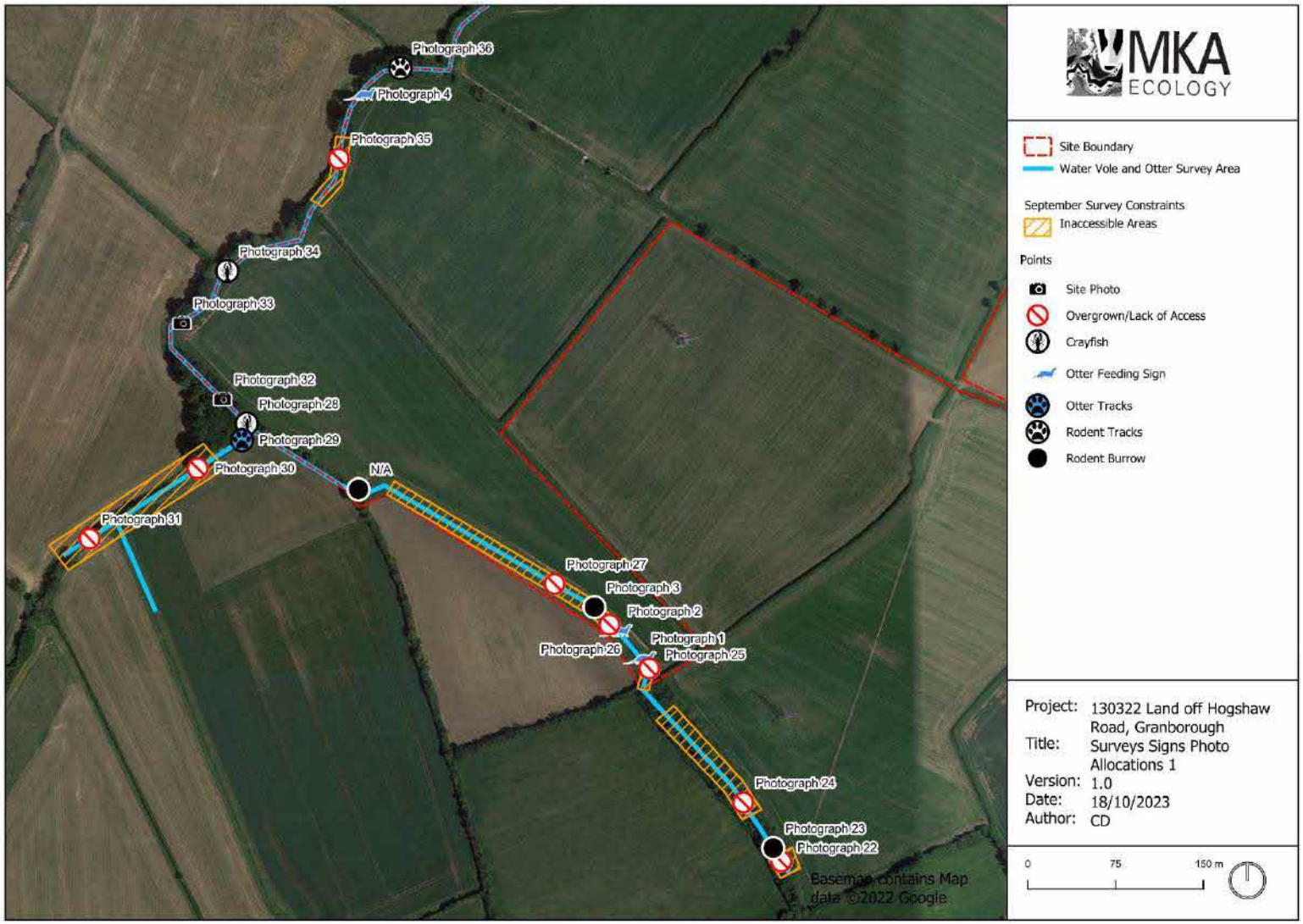
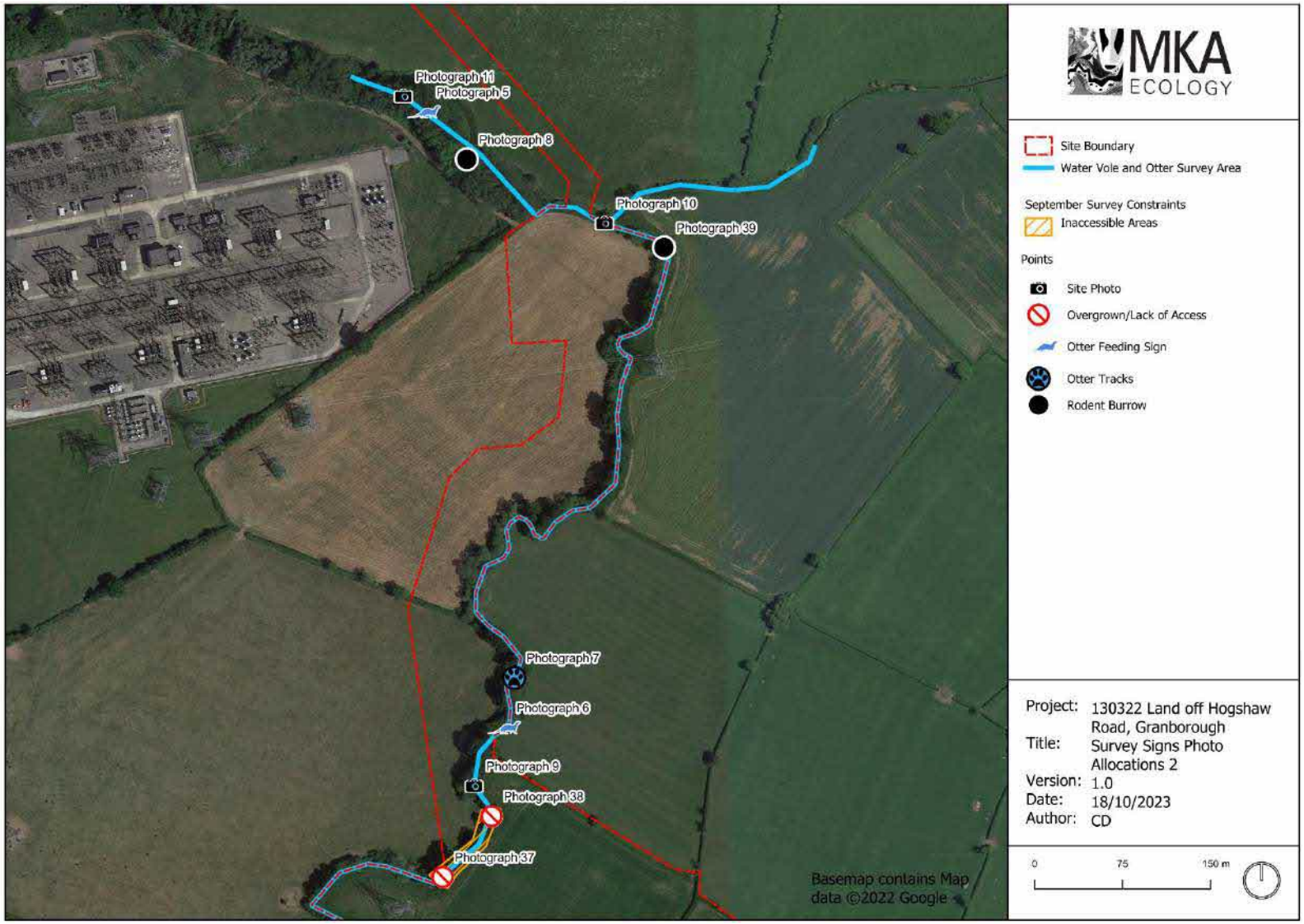


Figure 7: Photograph allocations map 2/2 for points in Figures 2 - 5



5. EVALUATION AND RECOMMENDATIONS

5.1. Otter

A total of five foraging signs, four spraint signs, and four track signs were found. These signs extend along the entire survey area. The watercourse sustains a population of mussels, signal crayfish, common toad, common frog, and grass snake *Natrix helvetica helvetica*, all of which are prey items for otter. Due to these field signs, the slow-flowing nature of the watercourse, and areas which provide deeper, more extensive foraging opportunities and suitable coverage by waterside trees (Photograph 10), it is thought likely that otter use the watercourse for commuting and foraging. No evidence of a couch, holt or natal den was found.

Otters are protected under Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended), meaning that it is an offence to intentionally kill, injure or take otter as well as to intentionally or recklessly damage or destroy any structure used for shelter or protection.

The site design retains the stream and riparian habitat for the majority of its' length, reducing the risk of direct impacts upon otter. It is recommended a 10m buffer is established, where feasible, to ensure impacts upon otter are avoided

Recommendation 1
Maintain a 10m buffer from the watercourse where feasible.

The pipeline connection is anticipated to be installed via directional drilling which will be set back from the watercourse, and avoid direct impacts. Two temporary bridge crossings will be installed to provide access for a haul route and therefore lie within the 10m buffer zone. The bridges proposed will be clear-span in design, retaining the bank profile and vegetation, minimising the potential for impacts upon otter.

There remains a chance that otter may be killed/injured during works, although the risk is considered to be low. It is recommended that a Construction Environment Management Plan (CEMP) is produced, this should detail general safe working measures and a pre-commencement check, to avoid impacts on otter should they be present. Please note that in the event that evidence of an otter holt is recorded during the construction phase, all works must stop and a Natural England derogation licence will be required to continue

Recommendation 2

A method statement should be produced with a CEMP report, detailing safe working practices to prevent harm to otter during works nearby to the watercourse

Otters are most active at night and can be adversely affected by artificial light. Any proposed lighting, during construction or post-development, should be designed so that the waterway and riparian habitat is not lit.

Recommendation 3

Develop a sensitive lighting strategy to avoid additional light spill upon the stream or riparian corridor.

5.2. Water vole

No evidence of water vole was recorded during the survey effort. The watercourse within the site and 100m upstream and downstream holds suitable habitat for this species, however only evidence of brown rat was recorded.

It is therefore highly unlikely that water voles are present along the surveyed stretch of the stream and no impacts are anticipated on water voles as a result of the proposed works.

5.3. Enhancements

There are numerous ecological enhancements detailed in the proposed plan. The soft landscaping proposes the creation of new waterbodies, species-rich grassland, woodland and scrub habitat. The new waterbodies in particular offer an opportunity to enhance the site for otter, and it recommended these are planted with additional marginal and bankside native species to provide foraging opportunities and shelter for otter.

Recommendation 4

Provide biodiversity enhancements for otter post-development. Plant native species within new wetland habitats to establish additional marginal and bankside vegetation.

6. CONCLUSIONS

A two-survey effort was undertaken at the Land off Hogshaw Road, Granborough, to assess the potential impacts of development on otter and water voles.

The results of the survey, which was undertaken to best practice guidelines, identified no evidence of water vole onsite. As such, no impacts are anticipated on water voles as a result of the proposed works.

Evidence of otter was found along the watercourse, including feeding signs, tracks and spraints. It is considered the watercourse is used by commuting and foraging otter, although no evidence of couches, holts or natal dens was found.

A Construction Ecology Management Plan should be produced detailing safe working methods and a pre-commencement check to avoid impacts on otter should they be present. Furthermore any additional lighting should be designed to avoid light spill upon the stream. The proposed landscaping includes new ponds, woodland and scrub habitats, all of which offer an opportunity to provide enhanced foraging and sheltering habitat for the local otter population.

7. REFERENCES

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* Eds Fiona Mathews and Paul Channing. The Mammal Society, London.

MKA Ecology Ltd (2023) *Preliminary Ecological Appraisal – Land off Hogshaw Road, Granborough.* MKA Ecology Ltd: Cambridge

Strachan, R., Moorhouse, T.J., and Gelling, M. (2011) *Water Vole Conservation Handbook*, WildCRU, Oxford.

The Buckinghamshire & Milton Keynes Natural Environment Partnership (2021) *Forward to 2030: Biodiversity Action Plan*. [ONLINE] Available at: https://bucksmknep.co.uk/forward-to-2030/

8. APPENDICES

Appendix 1: Legislation and planning policy

The Conservation of Habitats and Species (EU Exit) Regulations 2019 (as amended)

Full legislation text available at: http://www.legislation.gov.uk/uksi/2019/579/contents/made

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: http://www.legislation .gov.uk/ukpga/1981/69

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: http://www.legislation .gov.uk/ukpga/2006/16/contents

UK Post 2010 Biodiversity Framework

Full legislation text available http://jncc.defra.gov.uk/page-6189

National Planning Policy Framework (NPPF)

Full text is available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

The revised NPPF was updated on 5 September 2023 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 174 to 182 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

> Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
> Recognise the wider benefits of ecosystem services; and
> Minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in National Parks, Sites of Specific Scientific Interest, the Broads or Areas of Outstanding Natural Beauty other than in exceptional circumstances.

Where possible, planning policies should also

“Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.

Appendix 2: Photographs

05/06/2023 Survey

Photograph 1: Mussel shells, otter feeding sign

Photograph 2: Mussel shells, otter feeding sign

Photograph 3: Rodent hole

19/06/2023 Survey

Photographs allocated to points in Figure 2 - 5:

Photograph 4: Mussel shells, otter feeding sign

Photograph 5: Crayfish abdomen, otter feeding sign

Photograph 6: Common toad, otter feeding sign

Photograph 7: Otter tracks across mud bank

Photograph 8: Rodent burrow

Photograph 9: Site photo

Photograph 10: Site photo

Photograph 11: Site photo

Photograph 12: Otter track and spraint

Photograph 13: Otter track

Photograph 14: Otter trackway

Photograph 15: Otter spraint and track

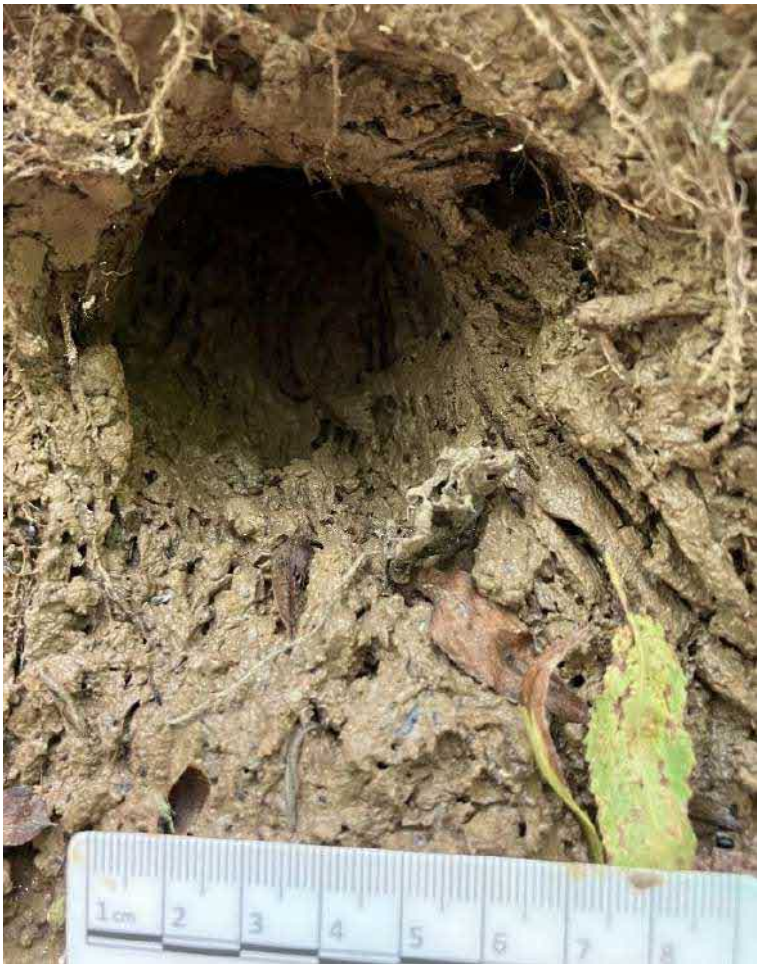
Photograph 16: Otter spraint

Photograph 17: Otter spraint

Photograph 18: Brown rat tracks

Photograph 19: Rodent burrow

Photograph 20: Rodent burrow



Photograph 21: Crayfish burrow

Photograph 22: Overgrown area, lack of access

Photograph 23: Rodent burrow

Photograph 24: Overgrown area, lack of access

Photograph 25: Overgrown area, lack of access

Photograph 26: Overgrown area, lack of access

Photograph 27: Overgrown area, lack of access

Photograph 28: Deceased crayfish, not foraged

Photograph 29: Otter track

Photograph 30: Overgrown area, lack of access

Photograph 31: Overgrown area, lack of access

Photograph 32: Site photo

Photograph 33: Site photo

Photograph 34: Burrows, presumed crayfish

Photograph 35: Overgrown area, lack of access

Photograph 36: Brown rat tracks

18/09/2023 Survey

Photograph 37: Overgrown area, lack of access

Photograph 38: Overgrown area, lack of access

Photograph 39: Rodent burrow

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