
Subject Badger Survey

Date 16 October 2020

Job No/Ref 264848-04

1 Introduction

Ove Arup & Partners Ltd (Arup) were instructed by Indaver (NI) Ltd to undertake updated badger surveys during Summer 2020.

1.1 Site Description

The site is an existing quarry located north-west of Belfast, surrounded largely by farmland (arable and grazed pasture) with residential and industrial areas further to the north-east and south-east. The approximate central OS grid reference of the site is NW 42100 35900.

1.2 Scope of Surveys

The purpose of this report is to update the badger information for the site. The survey provides an update on recommendations and notes any changes from the previous surveys/reports produced to inform the project.

2 Methodology

Desk study records were requested from the Centre for Environmental Data and Recording (CEDaR) in August 2020. This updated the most recent CEDaR data for the proposed development.

A badger survey of the site was undertaken on 10 July 2020. Signs were searched for in accordance with standard survey methodology (NIEA, 2017).¹ This included searching for setts, mammal paths, latrines, snuffle holes etc. Signs were also searched for during other surveys on site.

In addition, two Bushnell camera traps were installed on trees in close proximity to a recorded sett entrance on the east of the site. The cameras were set to take videos when the infrared motion sensors were triggered by movement. Cameras were left in place for 25 days from 21st July to 14th August 2020. Data was analysed for the recorded 24 nights of deployment.

Badger are a highly mobile species and can occupy a number of different setts over a number of years and seasons. Consequently, the absence of any badger signs should not be taken as definitive proof that the species is not present or that it will not be present in the future. However, professional judgement allows for the likely presence of the species to be predicted with sufficient certainty to not significantly limit the validity of the survey results.

Any grid references provided within this report are approximate (obtained through handheld GPS devices) and are to be used as a guide only.

¹ NIEA (2017) Badger Surveys NIEA Specific Requirements. Available at: <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/badger-survey-specifications.pdf>

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3 Results

One badger sett was recorded at the northern end of the site with one sett entrance recorded (TN5). The single sett entrance was approximately 25m from the access road to the site. The sett entrance had fresh spoil adjacent but was hard to access due to thick bramble cover. The results of the camera trap monitoring are summarised in Table 1. It is considered likely that the sett was an outlier sett.

Table 1: Badger activity at each camera.

Location	Camera	Survey dates	Number of nights badger activity was recorded/Total nights analysed
TNX	Bushnell	21/07/20 to 14/08/20	Badger recorded 5/24 nights latrining, playing and moving through. Two badgers record on 2/24 nights.
TNX	Bushnell		Badger recorded 08/24 nights, moving through collecting material for bedding. Two badgers recorded 1/24 nights playing.

Some snuffle holes and mammal paths were recorded throughout the site during the survey, however no latrines were identified.

The results of the camera trapping footage show that there was partial activity near the sett entrance during the time of survey. Camera 1 recorded a total of five nights activity and camera 2 recorded a total of eight nights activity. Both cameras recorded two badgers playing on multiple nights as well as individual badgers moving through the area. In addition, camera 2 recorded an individual badger gathering material which is likely to have been used as bedding.

The results confirm that this is an active sett and given that it is a single entrance it is considered likely to be an outlier sett.

Any works within 25m of the sett will potentially require a licence to disturb badgers, obtainable from NIEA. There are no significant works proposed within 25m of the sett location. Discussion with NIEA Wildlife Officer of specific avoidance and/or mitigation to minimise impacts on this local badger population is best carried out during detailed design.

Subject Breeding Bird Survey

Date 16 October 2020

Job No/Ref 264848-04

1 Introduction

Ove Arup & Partners Ltd (Arup) were instructed by Indaver (NI) Ltd. to undertake updated breeding bird surveys during Summer 2020.

1.1 Site Description

The site is an existing quarry located north-west of Belfast, surrounded largely by farmland (arable and grazed pasture) with residential and industrial areas further to the north-east and south-east. The approximate central OS grid reference of the site is NW 42100 35900.

1.2 Scope of Surveys

The purpose of this report is to update the breeding bird survey providing a summary of the survey results. It also provides an update on recommendations and any changes from the previous surveys undertaken.

2 Methodology

Desk study records were requested from the Centre for Environmental Data and Recording (CEDaR) in August 2020. This updated the most recent CEDaR data for the proposed development.

There were no limitations associated with the breeding bird survey. Any grid references provided within this report are approximate (obtained through handheld GPS devices) and are to be used as a guide only.

Three site visits were undertaken during April to June 2020 under suitable weather conditions utilising recommended survey methodology (Gilbert *et al.*, 1998)¹.

3 Results

Forty-two bird species were recorded within the survey area. This included nine possibly or probably breeding² Northern Ireland Priority Species (NIPS).

Confirmed nesting was recorded within the quarry i.e. on the quarry floor (ringed plover) or on the quarry face (raven). Marginal vegetation and mature trees supported most of the breeding birds within the survey area.

The species recorded were similar to those recorded during the previous survey in 2013. A few species such as peregrine falcon, were not recorded during 2020, and additional species were

¹ Gilbert, G., Gibbons, D.W. and Evans, J. (1998) Bird Monitoring Methods. RSPB, Sandy, Bedfordshire.

² Terminology regarding breeding status is discussed in separate Breeding Bird Report

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recorded in 2020 which were not previously recorded, lesser redpoll, bullfinch and skylark. Table 1 summarises species recorded in 2013 and 2020.

Table 1: Species recorded in 2013 and 2020 breeding bird surveys (NIPS or Pending NIPS in bold)

Species common name	Species latin name	Possible/probable or confirmed breeding status on site (X for presence)	
		2013	2020
Blackbird	<i>Turdus merula</i>	X	X
Blackcap	<i>Sylvia atricapilla</i>	X	X
Blue Tit	<i>Cyanistes caeruleus</i>	X	X
Buzzard	<i>Buteo buteo</i>	X	X
Chaffinch	<i>Fringilla coelebs</i>	X	X
Chiffchaff	<i>Phylloscopus collybita</i>	X	X
Coal Tit	<i>Periparus ater</i>	X	X
Dunnock	<i>Prunella modularis</i>	X	X
Goldfinch	<i>Carduelis carduelis</i>	X	X
Great Tit	<i>Parus major</i>	X	X
Herring Gull	<i>Larus argentatus</i>	X	N/A
Hooded Crow	<i>Corvus cornix</i>	X	X
House Martin	<i>Delichon urbicum</i>	X	X
House Sparrow	<i>Passer domesticus</i>	X	N/A
Jackdaw	<i>Corvus monedula</i>	X	X
Linnet	<i>Linaria cannabina</i>	X	X
Magpie	<i>Pica pica</i>	X	X
Mallard	<i>Anas platyrhynchos</i>	X	X
Meadow Pipit	<i>Anthus pratensis</i>	X	X
Moorhen	<i>Gallinula chloropus</i>	X	X
Peregrine Falcon	<i>Falco peregrinus</i>	X	N/A
Pied Wagtail	<i>Motacilla alba ssp. yarrellii</i>	X	X
Raven	<i>Corvus corax</i>	X	X
Reed Bunting	<i>Emberiza schoeniclus</i>	X	X
Ringed Plover	<i>Charadrius hiaticula</i>	X	X
Robin	<i>Erithacus rubecula</i>	X	X
Sedge Warbler	<i>Acrocephalus schoenobanus</i>	X	X
Song Thrush	<i>Turdus philomelos</i>	X	X
Common Starling	<i>Sturnus vulgaris</i>	X	X
Stock Dove	<i>Columba oenas</i>	X	N/A
Swallow	<i>Hirundo rustica</i>	X	X
Common Swift	<i>Apus apus</i>	X	X
Wheatear	<i>Oenanthe oenanthe</i>	X	X
Whitethroat	<i>Sylvia communis</i>	X	X
Willow Warbler	<i>Phylloscopus trochilus</i>	X	X
Woodpigeon	<i>Columba palumbus</i>	X	X
Lesser Black-Backed Gull	<i>Larus fuscus</i>	N/A	X
Grey Wagtail	<i>Motacilla cinerea</i>	N/A	X
Wren	<i>Troglodytes troglodytes</i>	N/A	X
Goldcrest	<i>Regulus regulus</i>	N/A	X
Long-Tailed Tit	<i>Aegithalos caudatus</i>	N/A	X
Greenfinch	<i>Chloris chloris</i>	N/A	X
Lesser Redpoll	<i>Acanthis cabaret</i>	N/A	X
Bullfinch	<i>Pyrrhula pyrrhula</i>	N/A	X
Skylark	<i>Alauda arvensis</i>	N/A	X

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A variety of foraging and nesting opportunities continue to exist within the site for breeding birds. The species recorded during the surveys in 2020, were sufficiently similar to those recorded in the previous surveys in 2013 (Table 1). Consequently, the identified impacts and proposed mitigation outlined in the Ecology ES Chapter (Ecology Solutions, 2016)³ are still suitable.

³ Ecology Solutions (2016) Ecology ES Chapter, Hightown Quarry.

Subject	Common Lizard Survey		
Date	16 October 2020	Job No/Ref	264848-04

1 Introduction

Ove Arup & Partners Ltd (Arup) were instructed by Indaver (NI) Ltd to undertake updated protected species survey during Summer 2020.

1.1 Site Description

The site is an existing quarry located north-west of Belfast, surrounded largely by farmland (arable and grazed pasture) with residential and industrial areas further to the north-east and south-east. The approximate central OS grid reference of the site is NW 42100 35900.

1.2 Scope of Surveys

The purpose of this report is to update the common lizard information for the site. The report provides an update on recommendations and any changes from the previous surveys/reports produced to inform the project.

2 Methodology

Desk study records were requested from the Centre for Environmental Data and Recording (CEDaR) in August 2020. This updated the most recent CEDaR data for the proposed development.

All available ecological reports relating common lizard site including the Environmental Statement and Further Environmental Information chapters, and specialist ecological reports were reviewed to identify any significant changes in baseline since the most recent completed surveys.

Any incidental sightings of common lizard *Zootoca vivipara* were recorded during all other site surveys as was the suitability of habitats to support this species.

Any grid references provided within this report are approximate (obtained through handheld GPS devices) and are to be used as a guide only.

3 Results

During the protected species surveys in 2020, no incidental records of common lizard were recorded. The sole record returned from the CEDaR request was a 2015 record approximately 2.2km from the site boundary in the Belfast Hills.

Previous reptile surveys were undertaken in 2012 (Ecology Solutions, 2012).¹ No reptiles were found to be present and were not considered to be present within the site. Consequently, in line with previous recommendations, no further assessment for common lizard is required.

Subject Otter Survey

Date 16 October 2020

Job No/Ref 264848-04

1 Introduction

Ove Arup & Partners Ltd (Arup) were instructed by Indaver (NI) Ltd. to undertake updated otter surveys during Summer 2020.

1.1 Site Description

The site is an existing quarry located north-west of Belfast, surrounded largely by farmland (arable and grazed pasture) with residential and industrial areas further to the north-east and south-east. The approximate central OS grid reference of the site is NW 42100 35900.

1.2 Scope of Surveys

The purpose of this report is to update the otter information for the site. The survey provides an update on recommendations and notes any changes from the previous surveys/reports produced to inform the project.

2 Methodology

Desk study records were requested from the Centre for Environmental Data and Recording (CEDaR) in August 2020. This updated the most recent CEDaR data for the proposed development.

An otter survey was undertaken in all accessible areas approximately 100m upstream and downstream on the River Flush and its tributary where it is bisected by Boghill Road and the quarry access road (TN1 and TN2;). The survey was undertaken in accordance with standard survey methodology (NIEA, 2017).¹

The following signs of otter were searched for and recorded where identified:

- spraints (including number, recent or older);
- food remains;
- rolling places;
- slides down to riverbanks;
- footprints or paths; and
- shelters (holts, couches or lay-up sites).

¹ NIEA (2017) Otter Surveys NIEA Specific Requirements. Available at: <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/otter-survey-specifications.pdf>

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The survey was undertaken in July 2020 during favourable weather conditions (Table 1) i.e. when water levels were low and water levels had not been high in the two weeks preceding the survey. This ensured high water levels had not removed field signs.

Table 1: Weather conditions during the otter survey.

Date	Weather conditions
10/07/20	Temperature: 16 Wind speed: 12mph Cloud cover: 15% Precipitation: None

Otters are a highly transient species, travelling large distances and occupying numerous sites along different watercourses over a number of seasons/years. Consequently, the absence of any signs should not be taken as definitive proof that the species is not present or that it will not be present in the future. However, professional judgement allows for the likely presence of the species to be predicted with sufficient certainty to not significantly limit the validity of the survey results.

Any grid references provided within this report are approximate (obtained through handheld GPS devices) and are to be used as a guide only.

3 Results

No signs of otter e.g. spraints, footprints, holts were observed within the survey area during summer 2020. Signs of otter (spraint) were recorded during previous surveys in close proximity to the bridge over the River Flush. No holts were identified during previous surveys within the survey area and it was deemed that otter utilise the watercourses for commuting and foraging.

The identified impacts and proposed mitigation outlined in the Ecology ES Chapter (Ecology Solutions, 2016)² are still suitable.

² Ecology Solutions (2016) Ecology ES Chapter, Hightown Quarry.

Subject Smooth Newt Survey

Date 16 October 2020

Job No/Ref 264848-04

1 Introduction

Ove Arup & Partners Ltd (Arup) were instructed by Indaver (NI) Ltd to undertake updated smooth newt survey during Summer 2020.

1.1 Site Description

The site is an existing quarry located north-west of Belfast, surrounded largely by farmland (arable and grazed pasture) with residential and industrial areas further to the north-east and south-east. The approximate central OS grid reference of the site is NW 42100 35900.

1.2 Scope of Surveys

The purpose of this report is to update the smooth newt ecological information for the site. The survey provides an update on recommendations and notes any changes from the previous surveys/reports produced to inform the project.

2 Methodology

Desk study records were requested from the Centre for Environmental Data and Recording (CEDaR) in August 2020. This updated the most recent CEDaR data for the proposed development.

Two newt surveys were undertaken in May and June 2020 (Table 1) in accordance with survey guidelines (NIEA, 2017)¹. All waterbodies within the site were surveyed as well as suitable terrestrial habitat. A licence from NIEA was granted to survey for newt presence and abundance (Licence Number: SNP/4/20).

Table 1: Weather conditions during the smooth newt surveys.

Date	Weather conditions
13/05/20 Daytime and night-time survey	Temperature: 8-10°C Wind speed: 11mph average Cloud cover: 10% Precipitation: None
15/06/20 Daytime and night-time survey	Temperature: 15-20°C Wind speed: 5mph average Cloud cover: 10% Precipitation: None

Whilst three survey dates are usually carried out for newt survey this was not possible during 2020 due to COVID-19 travel restrictions. In order to mitigate for one less survey date than usual a precautionary approach was taken to any review of newt data for the site.

¹ NIEA (2017) Newt Surveys NIEA Specific Requirements. Available at: <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/newt-survey-specifications.pdf>

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Any grid references provided within this report are approximate (obtained through handheld GPS devices) and are to be used as a guide only.

There were no other limitations associated with the newt survey.

3 Results

Results of the smooth newt surveys are detailed in Table 2.

Table 2: Results of the smooth newt surveys.

Date	Waterbody	Results
13/05/20 Daytime and night-time survey	WB1 to WB13	No records of smooth newts.
15/06/20 Daytime and night-time survey	WB1-WB13	No records of smooth newts.

No smooth newt were recorded during newt surveys in 2020 (Table 2), however two individuals were recorded incidentally during other surveys in ephemeral short perennial vegetation habitat at J291798 (TN3) and J294804 (TN4).

CEDaR records did not show any newt records within 2km of the site since 2012.

Previous surveys for smooth newt undertaken in 2016 (Ecology Solutions, 2016)² confirmed the presence of smooth newt within eight of the eleven waterbodies within the site as well as within terrestrial habitat adjacent to the waterbodies.

The identified impacts and proposed mitigation outlined in the Ecology ES Chapter (Ecology Solutions, 2016)² are still valid. This includes mitigation for terrestrial habitat throughout the site which is suitable for smooth newt.

² Ecology Solutions (2016) Ecology ES Chapter, Hightown Quarry.