



Appendix D.3: Report on Longhaven Otter Camera Study



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1 Introduction

NorthConnect is a commercial Joint Venture which aims to develop, build, and operate a 1400 megawatt High Voltage Direct Current (HVDC) Interconnector between Peterhead and Norway. This link will provide electricity transmission between Scotland and Norway.

As part of the Environmental Impact Assessment for the HVDC cable routing, it is necessary to identify any potential impacts the construction and operation may have on a variety of ecological receptors, including otters *Lutra lutra*.

Otters are a European Protected Species (EPS) and as such are protected by the Conservation (Natural Habitats &c.) Regulations 1994, which transpose into Scottish law the European Community's Habitats Directive (92/43/EEC). They are also listed in the Scottish Biodiversity List and the UK Biodiversity Action Plan (BAP). Therefore, it is imperative the assigned cable survey area is assessed for otter usage at the Scottish onshore side.

An extended Phase 1 Habitat survey undertaken in September 2013 recommended that protected mammal surveys were carried out as the habitat within the cable route was reported as being suitable habitat for, amongst others, otters [Atmos Consulting, 2014]. Two protected mammal surveys were then carried out by Tracks Ecology: one in September 2014, and a second in July 2016. Evidence of otter presence was recorded in both these surveys [Tracks Ecology, 2014; Track Ecology, 2017]. These included otter spraints, feeding evidence and holts. One of these holts fell within the proposed HVDC corridor route. As such, it was recommended that further work was undertaken to assess the usage of this holt, in order to assess the appropriate mitigation strategy to ensure the holt is not disturbed during the construction works.

Therefore, this study aimed to determine the holt's usage over a period during the summer in 2017.

2 Methodology

2.1 Camera deployment

Two camera traps (Bushnell trophy Cam HD with no glow, black infrared LEDS and fitted with 32GB High Speed memory cards) were deployed on the 12th June 2017 and recovered again on the 21st July 2017. One of the cameras was deployed again on the 4th October to the 25th October. The cameras were set to 'video-only' mode in full screen 4K format 1280 x 770. The capture was set to one video per activation and once complete a three-minute delay was in place before commencing recording again. The cameras were in 24-hour mode to allow for day and night recordings, and set to detect movement and temperature differences.

The cameras were placed within a quarry at Grid NK 12089 40147, by the otter holt which was found during the 2016 otter survey (Appendix A). Figure 1 shows the waterbody within the disused quarry with the location of the holt marked [photo from Tracks Ecology, 2017].



Figure 1: Waterbody within the quarry area, with approximate location of holt marked [image from Tracks Ecology, 2017].

One camera (“Holt camera”) was placed approximately 2m from a Holt entrance. The second camera (“Top camera”) was placed at the entrance to the quarry which was a narrow steep side entrance approximately 2m wide where previous evidence had been located of otter spraints and feeding remains.

2.2 Video analysis

On retrieval, the memory cards were downloaded, and each video assessed for any otter, or any other trigger cause of the footage. The video was analysed by a MCIEEM qualified otter surveyor, Innes Beaton. The holt camera was triggered a total of 1849 times over the period it was deployed and the top camera was triggered a total of 1914 times. Therefore, a total of 3763 videos were analysed.

3 Results

3.1 Camera Results

No evidence of otters was recorded on either the Holt or Top cameras. The majority of the camera triggers were due to grass movement in the wind. Examples of the footage recorded can be seen for the Holt Camera (Figure 2) and the Top Camera (Figure 3).



Figure 2: Example of the footage from Holt Camera, with the holt entrance in the middle of the image.

The area in the middle of the image in Figure 2 is where the otter holt had been previously noted. Across the time-period over which the cameras were deployed the holt became overgrown with fresh grass and weeds. The top camera site was also overgrown by the end of the deployment period and when checked for any new signs of spraints or feeding remains, none was found.



Figure 3: Example of the footage from Top Camera, with the grassy area to the right of the image being where previous otter evidence had been noted.

The cameras were initiated into recording by a number of other non-otter triggers, for example: field mice (Figure 4), birds (corvids), and humans.



Figure 4: Field mouse recorded on the Holt camera on 14th June 2017.

3.2 Additional *ad hoc* recordings

Whilst carrying out maintenance checks on these cameras and two additional cameras used for a separate bird study (Longhaven cliffs bird surveys, see NorthConnect, 2017 report), any evidence of otters was noted down on these visits. Fresh spraints and feeding remains were noted at the quarry location in February, March and April 2017. There appeared to be a path from the sea up to the feeding area, as footprints were also noted. When the cameras were deployed in June 2017 there was still evidence of otter spraint in the area but nothing fresh, and there was no further evidence of otter

spraint or feeding remains at a location 4m lower than the holt entrance, which had previously shown otter signs. No signs that an otter had gained entry to the holt was noted.

The area immediately surrounding the quarry was also surveyed when retrieving the cameras in July 2017 and no new or old evidence of otters were recorded.

4 Discussion and Conclusions

4.1 Summary

Neither the holt camera nor the top camera were triggered by otter presence at the site. The cameras and site visit revealed that over the deployment time period grass and weed grew up across the holt, suggesting no use of the holt from June-July 2017. Further to this, no fresh otter signs were noted in the surrounding area when the cameras were retrieved in July 2017. Nevertheless, in July 2016, and between February-April 2017, prolific otter signs were noted at the site. Previous studies have demonstrated that during the winter and spring months more otter spraints are recorded, as during the summer, 'smears' (secretions lacking solid food remains) are more common [Macdonald & Mason, 1987]. It is likely that these smears are more readily washed away in wet weather conditions.

It is known that otters may have several resting places (including holts) within their home range [Mason & Macdonald, 2006]. A home range is the area which an animal utilises regularly for their individual requirements, including foraging and breeding. Depending on whether the otter is predominantly using freshwater habitats for their foraging needs or the coastal habitat, can affect how large their foraging range is, with coastal populations tending to have smaller ranges [JNCC, 2007]. Sex differences in home ranges also exist with male otters normally recorded as having larger home ranges [Kruuk & Moorhouse, 1991]. The evidence from the *ad hoc* recordings whilst carrying out this study, suggests the otter using this area is likely to be a coastal otter. It is possible it has several sites along the coastline that it visits, and this site is one it transits through at particular times of the year. And, as otters home ranges can overlap [Kruuk & Moorhouse, 1991], it is possible that more than one otter will be using this coastline.

Even though no evidence was found of otter presence from June-July 2017 over the camera study period, it is still possible that this site is used more regularly at other times of the year. Therefore, it cannot be ruled out completely that this site is inactive during every season. Otters are known to mate throughout the year, and populations in Deeside have been noted to have a peak in breeding during the winter months [SNH, 2007]. Because of the unpredictability of their breeding months, in that they can breed at any time of year, it is too difficult to suggest a time of year which is more sensitive to disturbance than others. Therefore, a precautionary approach should be taken with this holt site for future development within the vicinity.

4.2 Recommendations

It is recommended that a pre-construction survey is carried out prior to any works being carried out around Longhaven bay, as otter signs have been noted along this coastline. It would be pertinent to ensure a buffer zone between any signs of otter noted during the pre-construction survey and the proposed HVDC cable route installation.

A carefully designed mitigation plan, involving the design of the cable route, will also need to be ensured.

5 References

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Appendix A – Location of Otter Holt recorded during July 2016

