



Morgan Sindall

Peak District (East) VIP

Bat Method Statement

2480167

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RSK GENERAL NOTES

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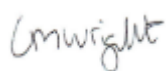
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1.0 INTRODUCTION

1.1 Project Background

1.1.1 The Project aims to reduce the visual impact of National Grid's overhead line (OHL) in and around the village of Dunford Bridge within the Peak District National Park, by removing a section of overhead line and replacing it with electric cables buried underground. *Figure 1* shows the proposed working areas.

1.1.2 The Proposed Project includes the following main components:

- removal of the existing Dunford Bridge service entrance cable to a depth of approximately 1.1m below ground level;
- removal of the existing section of OHL including eight pylons, one of which will be replaced, and 2km of OHL;
- underground cable approximately 1.8km in length along the Trans Pennine Trail from the entrance of the Woodhead Tunnel to a proposed new SEC;
- construction of a new SEC and replacement Tension Pylon (with the circuits terminating onto two full tension gantries within the SEC) to connect the cable corridor to the remaining existing OHL. A permanent access off the Trans Pennine Trail will be required to the proposed SEC. The proposed SEC is located within Wogden Foot LWS and the replacement tension pylon) is located approximately 40m north east of the SEC on the northern side of the River Don (outside Wogden Foot LWS);
- Temporary laydown areas, access tracks and site offices to facilitate construction activities;
- Construction and removal of a temporary Trans Pennine Trail diversion for use during the construction phase of the proposed project. The diversion will involve the use of two bridges, one being a permanent replacement of an existing bridge; the other a temporary bridge to cross over the River Don. The diversion is proposed in farmland immediately north of the River Don. Following construction, a stretch of approximately 410m of the diversion surface will be retained permanently to the east and west of the replacement permanent bridge.

1.2 Bat Survey Background

1.2.1 The site is located at the northern edge of the Peak District National Park and extends west to east from the hamlet of Dunford Bridge to the site of the proposed Sealing End Compound (SEC) in Wogden Foot Local Wildlife Site (LWS). The site runs alongside and overlaps with both the River Don which flows west to east, and the Trans Pennine Trail (TPT), a partly hard standing path for cyclists, pedestrians and horse riders. To the north of the River Don, there are large arable and pastoral fields. To the south is a mostly wooded bank up to Wogden Foot LWS and the TPT. Further to the south of the TPT, there are areas grassland and a large area of moorland which appears to be managed for grouse. To the east of the site, the traffic-free section of the TPT and the River Don continue, but both of these linear features end to the

west of the site in Dunford Bridge where the river connects to Winscar Reservoir. Figure 1 shows the site location.

- 1.2.2 Previous bat surveys completed by AECOM between 2016 to 2018 assessed the site to have moderate bat activity during bat transect and static detector surveys. Seven bat species including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Myotis sp., brown long-eared bat (*Plecotus auritus*), noctule (*Nyctalus noctule*) and Leisler's bat (*Nyctalus leisleri*) / serotine bats (*Eptesicus serotinus*) were recorded, although common pipistrelle and Myotis sp were the most dominant recorded calls. Relatively low activity was recorded from within Wogden Foot LWS, compared to higher commuting and foraging activity along the TPT and River Don corridor¹.
- 1.2.3 RSK Biocensus carried out updated bat transect surveys and static detector bat surveys during 2020, although transect surveys were not completed during May or June, and a static detector survey was not completed in June due to project constraints. The 2020 surveys identified similar species diversity to the 2016 to 2018 surveys, with eight bat species being identified and a greater amount of activity along the TPT than other areas of the site. Additional species identified during 2020 compared to 2016 and 2018 surveys include; whiskered (*Myotis mystacinus*), natterer's (*Myotis nattereri*), Brandt's (*Myotis brandti*). Nathusius' pipistrelle, Leisler's and serotine bats were not recorded during 2020.
- 1.2.4 Based on the 2016 to 2018 surveys and updated 2020 surveys, the key bat foraging and commuting areas include the TPT and River Don corridor. The linear habitat along the TPT included sheltered wooded embankments which provide an ideal area for foraging and commuting bats. The river corridor similarly to the TPT also provides an ideal linear habitat and most likely key bat foraging area to due to the abundance of insects above the water.
- 1.2.5 Bat roost surveys were completed in 2016 and 2018 by AECOM. The 2016 and 2018 bat roost assessment and results are provided within *Table 2*. In summary, no evidence of roosting bats was identified within the surveyed trees and one bat roost was identified within the six structures which were subject to further bat surveys. The identified bat roost was located within culvert B10 (S10) and was assessed as a Daubenton's bat (*Myotis daubentonii*) non-breeding, summer roost used by a small number (i.e. one to three) of bats.
- 1.2.6 An updated Preliminary Roost Assessment (PRA) and ground level tree assessment was undertaken by RSK Biocensus in 2020 which identified further structures close to the working area, which had not previously been recorded during the AECOM bat surveys. *Tables 1* and *2* provide a summary and survey results completed on the structures and trees assessed as suitable for roosting bats.
- 1.2.7 The 2020 bat roost surveys identified no evidence of roosting bats within trees close to the working area, but two additional roosts not identified during the 2016-2018 AECOM bat surveys. The identified bat roosts are located within culverts S17 (B13) and S19 (B14) and both have been assessed as Daubenton's bat (non-breeding) summer roosts used by a small number (i.e. one to three) of bats. No roosting behavior was identified within structure B10

¹ National grid visual Impact Provision – Peak District East Project – Appendix 7E Bat Survey Report rev 04, August 2018

(S10) during the updated 2020 surveys, however this structure still needs to be classified as a bat roost due to previous survey results collected by AECOM.

- 1.2.8 Numerous structures within and directly adjacent to the proposed working area have been assessed as suitable for hibernating bats, especially the numerous culverts which run underneath the TPT. Hibernation surveys completed by AECOM during 2016 to 2017 found no evidence of hibernating bats, however updated surveys were not completed during 2020/2021.
- 1.2.9 Due to the level of bat activity recorded across the site and the three separate bat roosts identified within structures within the proposed working area, the site's bat assemblage has been assessed to be of county importance using the (Wray *et al.*, 2010) guidance. The site was previously recorded to be of district importance within the AECOM report, however this has been subsequently reviewed and amended. Even though the calculation has been upgraded from district to country importance, this is simply due to the guidance calculations and does not change the site value assessed within the previous ecology reports.

1.3 Purpose of this plan

- 1.3.1 This document provides mitigation and avoidance measures to ensure that any risk of affecting bats and their roosts is avoided across the entire Peak District (East) Visual Impact Provision (VIP) project. An indicative working area (Figure 1) has been used to assess possible impacts on roosting bats alongside bat survey results provided within the RSK Peak District (East) Ecological Constraints Report ².
- 1.3.2 This document shall be updated during the 2021 bat survey season; once the May and June walked transect survey and June bat static detector survey have been completed. These surveys could not be undertaken in the 2020 active period due to access constraints. The majority of the precautionary measures provided within this report are not anticipated to change following the completion of the 2021 bat survey results, however this method statement should be used as a draft until the final surveys have been completed, and assessment of any further measures has been finalised.
- 1.3.3 This document is based on ensuring mitigation and avoidance measures are implemented to ensure that any risk of affecting bats and their roosts is avoided. However, many of the suggested mitigation and avoidance measures suggested within this bat method statement will benefit many other wildlife species.
- 1.3.4 This document should not be used as an alternative to a Natural England EPS licence. If it is deemed works will breach legislation which protects bats, a licence will be required.

1.4 Vegetation Removal

- 1.4.1 Vegetation clearance will be undertaken in a phased approach. Clearance of a small area in Wogden Foot LWS for the Northern Access road commenced in January 2021. Clearance for the Northern Access road, TPT diversion route and Dunford Bridge car park is due to commence in February 2021 and be completed in March 2021. Vegetation clearance along

² RSK Biocensus - Peak District (East) VIP – Ecological Constraints Report, February 2021

the existing TPT and further clearance within Wogden Foot LWS will be undertaken in the latter part of 2021.

- 1.4.2 The loss of trees and woodland have been avoided wherever possible as part of the design of the project and trees to be retained are to be protected in accordance with Morgan Sindall arboricultural method statement (reference: 16866-RSK-1406-XX-MS-X-000001) and tree protection plans (Reference: 16866-RSK-1406-XX-PL-X-000002).

2.0 LEGISLATION

2.1.1 All species of British bat are protected by The Wildlife and Countryside Act 1981 (as amended) extended by the Countryside and Rights of Way Act 2000. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and;
- intentionally or recklessly disturb a bat whilst it occupies a bat roost

2.1.2 Bats are also European protected species listed on The Conservation of Habitats and Species Regulations 2017. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong;
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

3.0 SURVEY DATA

- 3.1.1 Full bat survey results are provided within the *Peak East VIP Ecological Constraints Report*. Tables 1 and 2 provide summaries of the survey data and classification for trees and structures located within and adjacent to the working area. *Figure 9* shows the results gathered during the 2020 bat activity surveys.
- 3.1.2 No roosting bats were confirmed to be present in any of the trees surveyed. Bats were confirmed to be roosting within structures B10/S10; B13/S17 and B14/S19.

Table 1: Summary of bat surveys undertaken on trees close to the proposed working areas.

RSK Biocensus tree no	OS Grid Reference	Species	Roosting potential	2020 Survey dates	Survey results
1	SE 17214 02693	Sycamore (<i>Acer pseudoplatanus</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
2	SE 17206 02690	Sycamore (<i>Acer pseudoplatanus</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
3	SE 17261 02698	Alder (<i>Alnus glutinosa</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
4	SE 17325 02730	Pedunculate Oak (<i>Quercus robur</i>)	High	10.08.2020 Dusk survey 24.08.2020 Dawn survey 15.09.2020	10.08.2020 - All features inspected during climbing surveys. No evidence of bats. 24.08.2020 – Dusk no emergence. 15.09.2020 – Dawn no re-entry.
5	SE 17332 02736	Ash (<i>Fraxinus excelsior</i>)	Low	10.08.2020	All features inspected during climbing surveys. No evidence of bats.
6	SE 17350 02731	Ash (<i>Fraxinus excelsior</i>)	Negligible	N/A	No further surveys required.
7	SE 17346 02739	Ash (<i>Fraxinus excelsior</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
22	SE 17580 02669	Alder (<i>Alnus glutinosa</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
36	SE 16812 03019	Sycamore (<i>Acer pseudoplatanus</i>)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.
40	SE 16739 02792	Sycamore (<i>Acer pseudoplatanus</i>)	Moderate	11.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
41	SE 16909 02703	Sycamore (<i>Acer pseudoplatanus</i>)	Moderate	11.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
42	SE 16921 02703	Sycamore (<i>Acer pseudoplatanus</i>)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.

43	SE 16945 02689	Silver Birch (<i>Betula pendula</i>)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.
44	SE 17201 02690	Sycamore (<i>Acer pseudoplatanus</i>)	Negligible	N/A	No further surveys required.
45	SE 17236 02686	Alder (<i>Alnus glutinosa</i>)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.
46	SE 17275 02690	Willow (<i>Salix</i> sp.)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.
47	SE 17338 02744	Ash (<i>Fraxinus excelsior</i>)	Low	11.08.2020	All features inspected during climbing surveys. No evidence of bats.
48	SE 17338 02744	Ash (<i>Fraxinus excelsior</i>)	Negligible	N/A	N/A No further surveys required.
49	SE 17338 02739	Pedunculate Oak (<i>Quercus robur</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
50	SE 17351 02741	Sycamore (<i>Acer pseudoplatanus</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
51	SE 17348 02750	Ash (<i>Fraxinus excelsior</i>)	Low	10.08.2020	All features inspected during climbing surveys. No evidence of bats.
52	SE 17356 02740	Ash (<i>Fraxinus excelsior</i>)	Low	10.08.2020	All features inspected during climbing surveys. No evidence of bats.
53	SE 17334 02767	Collapsed Sycamore (<i>Acer pseudoplatanus</i>)	Low	10.08.2020	All features inspected during endoscope surveys. No evidence of bats.
54	SE 17348 02718	Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope surveys. No evidence of bats.
55	SE 17357 02724	Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope surveys. No evidence of bats.
56	SE 17362 02723	Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.
57	SE 17370 02722	Silver Birch (<i>Betula pendula</i>)	Negligible	N/A	No further surveys required.

58	SE 17378 02715	A line of 12 Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
59	SE 17397 02710	Pedunculate Oak (<i>Quercus robur</i>)	Moderate	10.08.2020 03.09.2020	All features inspected during climbing surveys. No evidence of bats.
60	SE 17407 02698	Pedunculate Oak (<i>Quercus robur</i>)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.
61	SE 17404 02694	Alder (<i>Alnus glutinosa</i>)	Moderate	Dusk 13.08.2020 Dawn 27.08.2020	13.08.2020 – Dusk no emergence. 27.08.2020 – Dawn no re-entry.
62	SE 17409 02693	Multi-stemmed Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
63	SE 17421 02689	Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.
64	SE 17428 02677	Multi-stemmed Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
65	SE 17516 02658	A line of multi-stemmed Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
66	SE 17539 02664	Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
67	SE 17545 02661	Multi-stemmed Alder (<i>Alnus glutinosa</i>)	Negligible	N/A	No further surveys required.
68	SE 17572 02668	Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.
69 - 70	SE 16204 02404	Willow (<i>Salix</i> sp.)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.
71	SE 16470 02425	Multi-stemmed willow (<i>Salix</i> sp.)	Moderate	10.08.2020 & 03.09.2020	All features inspected during endoscope survey. No evidence of bats.
72/73	SE 16646 02437	Pedunculate Oak (<i>Quercus robur</i>) & Beech (<i>Fagus sylvatica</i>)	Moderate	N/A	No further surveys required as the trees are located outside the working area.
74	SE 16902 02548 to SE 16979 02560	A line of willows (<i>Salix</i> sp.) & Alder (<i>Alnus glutinosa</i>)	Low	10.08.2020	All features inspected during endoscope survey. No evidence of bats.

Table 2: Summary of bat surveys undertaken on structures close to the proposed working areas.

2016/17 AECOM ref	2020 RSK Biocensus ref	Structure type	OS Grid Reference	2016 Survey Classification & Survey Result	2020 Survey Classification & Survey Result	2020 Dusk/Dawn Surveys Results
B1	S8	Exposed rock cliff face	SE 15751 02237	Negligible - Not surveyed	Negligible - Not surveyed	The cliff face will be unaffected by the works. No further surveys were completed.
B2	S13	TPT southern exposed cliff face	SE 16283 02364	Negligible - Not surveyed	High suitability & potentially suitable for hibernation. Not surveyed	The cliff face running alongside the TPT will remain unaffected by the works. No further surveys were completed.
B3	S14	Brick embankment	SE 16492 02392	Negligible - Not surveyed	Negligible - Not surveyed	No further surveys required
B4	S22	Breezeblock and metal framed barn	SE 17614 03032	Negligible - Not surveyed	Negligible - Not surveyed	No further surveys required
B5	S21	Stone bridge abutments	SE 17768 02691	Low 07.06.2020 – no emergence No roost identified	Low Not surveyed	The bridge abutments are a significant distance from the working area and will remain unaffected. No further surveys were completed.
B6	S20	Brick pillbox	SE 17614 02660	Negligible - Not surveyed	Low - No roost identified	Dusk – 13.08.2020 – No emergence
B7	S16	Brick shaft outside of study area	SE 16873 02466	Low Not surveyed	Unknown – structure outside of study area. Not surveyed	The structure is located a significant distance from the working area and will remain unaffected. No further surveys were completed.
B8	S15	Single barrel brick culvert (long grain)	SE 16659 02447	High 2016 - No roost identified 2018 -- No roost identified	High - No roost identified	03.08.2020 – Dusk no emergence 19.08.2020 – Dusk no emergence 02.09.2020 – Dawn no re-entry

B9	S2	Exposed rock face along both tunnel cuttings	SE 15691 02315	Negligible - Not surveyed	High suitability & potentially suitable for hibernation No roost identified	10.08.2020 – Dusk no emergence 26.08.2020 – Dusk no emergence 10.09.2020 – Dawn no re-entry
B10	S10	Single brick barrel culvert	Inlet - SE 15965 02358 Outlet - SE 16126 02409	Confirmed roost 2016 – Daubenton's bat summer roost identified 2018 – No roost behaviour identified	Confirmed roost No roosting behaviour identified	28.07.2020 – Dusk no emergence 11.08.2020 – Dusk no emergence 09.09.2020 - Dawn no re-entry
N/A	S11	Single span bridge	SE 16186 02420	Not assessed or surveyed	Moderate - No roost identified	29.07.22 - Dawn no re-entry 12.08.2020 - Dusk no emergence
N/A	S12	Brick electricity substation	SE 16322 02416	Not assessed or surveyed	Low - No roost identified	29.07.2020 - Dawn no re-entry
B11	S3	Breeze block office	SE 15738 02332	Negligible - Not surveyed	Negligible - Not surveyed	No further surveys were completed.
B12	S1	Southern tunnel entrance	SE 15646 02282	Low – access restrictions 2016 – No roost identified	Moderate - No roost identified	10.08.2020 – Dawn no re-entry 26.08.2020 – Dusk no emergence
N/A	S4	Northern tunnel entrance	SE 15597 02295	Not assessed or surveyed	Negligible - Not surveyed	The northern tunnel entrance has been permanently blocked with a stone wall. No further surveys were completed.
N/A	S5	National Grid Office	SE 15624 02307	Not assessed or surveyed	Low - Not surveyed	The office will remain unaffected by the works. No further surveys were completed.
N/A	S6	Electricity building	SE 15703 02340	Not assessed or surveyed	Low - Not surveyed	26.08.2020 – Dusk no emergence
N/A	S7	Single span, stone arch road bridge	SE 15765 02363	Not assessed or surveyed	Moderate - No roost identified	30.07.2020 – Dusk no emergence 13.08.2020 – Dawn no re entry

B13	S17	Culvert Inlet – single stone barrel south of TPT Outlet – single corrugated metal barrel along southern riverbank, unknown at time of surveys	Inlet - SE 17320 02575 Outlet - SE 17329 02689	Moderate – roosting High – Hibernation 2016 – No roost identified 2018 – No roost identified	Confirmed roost	Inlet survey only 05.08.2020 – Dusk no emergence 20.08.2020 – Dusk One Daubenton's bat emerged from the inlet at 21:02 16.09.2020 – Dawn no re entry
B14	S19	Culvert Inlet – single stone barrel south of TPT Outlet – single corrugated metal barrel along southern riverbank	Inlet - SE 17610 02539	Moderate – roosting High – Hibernation 2018 – No roost identified	Confirmed roost	Inlet 05.08.2020 – Dusk One Daubenton's bat emerged from the inlet at 21:31 20.08.2020 – Dusk no emergence 16.09.2020 – Dawn no re entry
			Outlet - SE 17603 02656			Outlet 13.08.2020 – Dusk no emergence 27.08.2020 – Dusk no emergence 15.09.2020 – Dawn no re entry
B15	S18	Deep stone culvert – Inlet on the south side of TPT. Outlet not found.	Inlet - SE 17375 02570 Outlet not found	Negligible - Not surveyed	High - No roost identified	05.08.2020 – Dusk no emergence Inlet 20.08.2020 – Dusk no emergence 16.09.2020 – Dawn no re entry
B16	S9	Double barrel brick culvert	SE 15957 02345	Low 2016 – No roost identified	Moderate - No roost identified	30.07.2020 – Dusk no emergence 12.08.2020 – Dawn no re entry

4.0 PRECAUTIONARY MEASURES

4.1 Planning and all works

- 4.1.1 A precautionary approach has not been discussed between Natural England and appropriate stakeholders as its believed work can be undertaken without breaching legislation protecting bats.
- 4.1.2 The measures outlined within this document must be implemented to ensure legislation is not breached. Any change to scope works will potentially breach legislation protecting bats and will potentially require a Natural England EPS licence.
- 4.1.3 All personnel on site should be briefed by a Natural England bat licenced ecologist regarding the potential and known presence of bats and where they may be found at the site.
- 4.1.4 The ecology team should be included within work proposal discussions and task scheduling to ensure specific work tasks can be undertaken at the most appropriate time of year to reduce ecological impact.
- 4.1.5 An accurate weekly work schedule must be provided to the ecologist at least 48hrs in advance of work, to ensure the appropriate level of ecological support can be provided. In the event the work schedule changes, the ecologist should be informed immediately.
- 4.1.6 All work (where possible), should be undertaken during daylight hours. In the event any night-time work is required, all lighting should be hooded and directed away from trees and any other habitats which could be used by bats.
- 4.1.7 All lighting should be turned off when not in use, any lighting which is required for security purposes should be hooded and directed away from structures and trees and away from areas assessed as key bat foraging and commuting routes. The ecologist should be informed of any lighting proposals in advance of onsite installation to ensure ecological impact is minimised.
- 4.1.8 All machinery and generators should be turned off after each shift, particularly at night, and all machinery should be switched off when not in use to reduce background noise disturbance and pollution.
- 4.1.9 Machinery and generators should not be left idling for extensive periods of time and no machinery should be parked up close to a structure or tree with bat roosting suitability without prior consent from the bat licenced ecologist. The proximity to trees and structures with bat roosting suitability should be assessed by the on-site ecologist.
- 4.1.10 All material deliveries and machinery should not be left or stored adjacent to trees/structures with roosting features.
- 4.1.11 All machinery should (where possible) have rubber tracks to reduce noise and vibration as much as possible.
- 4.1.12 Tree protection zones should be installed around all retained trees. Protection zones should also be installed around structures assessed as suitable for roosting bats and the

known bat roosts. Protection zones maybe achieved by installing temporary post and rope fencing.

4.2 Vegetation Clearance

- 4.2.1 The proposed cable route will involve the removal of numerous lines of trees and shrubs, including up to a 5-meter-wide clearance zone along the northern side of the TPT. The scheme design should ensure vegetation is not removed unless there are no other viable options and that all stakeholders, statutory bodies and appointed ecologist have given their approval.
- 4.2.2 Bats often use trees as temporary or transitional roost sites during their active period which is typically between April to October inclusive. To reduce the risk of work disturbing a bat when using a tree as a temporary or transitional roost it is recommended all vegetation clearance is undertaken between October and March when bats are least active or in hibernation. Undertaking the work during this period will also reduce the potential impact on nesting birds and other wildlife.
- 4.2.3 Bats use a variety of habitats for numerous purposes, including lines of trees and vegetation for navigation. The removal of entire areas of vegetation causes bats to lose foraging areas as well as commuting routes. The sudden removal or significant impact to these areas can be hugely detrimental to bats and other species, therefore it is vitally important lines of trees and other commuting/foraging routes are retained as much as feasibly possible.
- 4.2.4 The working width along the TPT should ensure a strip of trees and vegetation are retained on both sides of the trail with no significant gaps, unless within areas already containing significant gaps. No extensive vegetation removal should be undertaken on the southern side of the trail and a strip of trees and vegetation should be retained along the crest of the northern embankment. Vegetation removal should be in line with the Peak District East Tree Protection Zones provided within the updated arboriculture report.
- 4.2.5 Vegetation clearance should not remove the connectivity to a recorded roost or hibernation site, unless discussed and approved by Natural England. If connectivity to roost or hibernation site is to be removed, a Natural England licence maybe appropriate.
- 4.2.6 An ecologist with a Natural England level-two (or above) bat licence should be present during all vegetation clearance within 15 meters of tree with bat roosting potential or confirmed roost site within a structure. The location of the trees with bat roost suitability and recorded bat roosts are shown in Figure 7.
- 4.2.7 An ecologist should be on site throughout all vegetation clearance works even when outside the nesting bird season (March to September) to prevent any trees or structures with potential bat roosting potential becoming impacted, as well as ensuring other ecological constraints are mitigated.
- 4.2.8 All trees assessed as suitable for roosting bats even those which have had the appropriate surveys completed during 2020, should be thoroughly inspected by a Natural England level 2 (or above) bat licensed ecologist immediately before felling or pruning works. Where the tree cannot be thoroughly inspected from ground level, a tree climbing survey should be undertaken by two climbing trained, bat licensed ecologists. The majority of the trees with

bat roosting potential will remain unaffected by the works, however the trees shown in *Table 3* are close to the working area and may be impacted.

Table 3: Trees with bat roosting potential within and directly adjacent to the working area, as shown in Figure 7.

Tree Reference	Location	Proposed works likely to impact the trees	Potential impact
T2	Northern bank along the river Don. SE 17206 02690	Temporary bridge installation and footpath diversion works.	Lower limb removal and minor pruning.
T3	Northern bank along the river Don. SE 17261 02698	Temporary bridge installation and footpath diversion works	Lower limb removal and minor pruning.
T45 TO T47	Northern bank along the river Don SE 17236 02686 to SE 17338 02744	Temporary bridge installation and footpath diversion works.	No impact. Trees are to protected and retained.
T71	Northern TPT embankment, between trail and embankment crest. SE 16470 02425	Cable installation route along the TPT.	The tree is likely to be outside the 5 m clearance zone, however overhanging branches may need to be cut back.
Group - T74	Northern TPT embankment, between trail and embankment crest. SE 16902 02548 to SE 16979 02560	Cable installation route along the TPT.	The majority of the trees are outside the 5 m clearance zone; however, some may need to be felled or cut back.

- 4.2.9 In the event a bat is found during a pre-fell survey the tree must remain undisturbed until a Natural England license is granted, and appropriate mitigation is installed. The tree containing the bat roost as well as the vegetation or habitat connecting the bat roost must remain clearly marked and undisturbed by installing an appropriate protection zone.
- 4.2.10 All vegetation clearance must be done using hand tools only, unless agreed with the ecologist and all equipment must be switched off when not in use. Chainsaws, brushcutters or strimmers should not be used directly outside known bat roost culvert inlets or outlets or structures suitable for hibernating bats. Non powered vegetation clearance tools should be used in these areas.
- 4.2.11 Chipping of logs should be minimised and where possible used to create log piles and refugia in areas immediately adjacent to the working area, such as Wogden Foot LWS. This will benefit a range of species and increase foraging opportunities for bats due to the potential increased number of invertebrates.
- 4.2.12 Cleared vegetation should be stacked into dead hedges or linear windrows in agreement with the landscape plans for the project. This will provide alternative habitat for a range of wildlife species and encourage wildlife to use the impacted area once work has been completed.
- 4.2.13 Any surplus vegetative material which cannot be used beneficially for ecological enhancement or habitat improvement will be removed from site.
- 4.2.14 In the event any vegetation is chipped, the chipper should be rubber tracked and kept away from known bat roosts/hibernation sites, as well as trees assessed as suitable for roosting bats.

4.3 Working close to known bat roosts and potential bat hibernation sites

- 4.3.1 The above measures should be implemented throughout the site, including close to known bat roosts and potential bat hibernation sites. The measures stated below provide specific measures for the individual roost/hibernation sites recorded within, and close to the proposed working area.
- 4.3.2 Structures S10, S17 and S19 have been assessed as non-breeding summer roosts for low numbers of Daubenton's bats. Structure S10 is a culvert which runs underneath the proposed cable installation route and Structures S17 and S19 are culverts which run underneath Wogden Foot LWS and the proposed compound area. However, as stated within the Landscape and Environmental Management Plan (LEMP), the roosts will remain undisturbed if the measures stated below are undertaken and maintained.
- 4.3.3 The ground above S17 and S19 within Wogden Foot LWS is believed to have been previously built up to approximately 11 m above the surrounding ground level. It is not expected the culverts will be impacted by the works within Wogden Foot because of the significant depth the culverts are located. Unless there is any work involving deep excavation or pilling, the culverts underneath Wogden Foot will remain unaffected and a Natural England licence is not required. If deep excavations or pilling is required, further assessment will be needed to determine whether a Natural England licence is appropriate.
- 4.3.4 Culvert S10 is not as deep as those underneath Wogden Foot, although the mitigation measures explained below will reduce the risk of work impacting the culvert and the need for a Natural England EPS licence. The proposed measures will be monitored and if required, alterations will be undertaken if the measures are not deemed to be suitable
- 4.3.5 Measures to minimise the risk of disturbance within culvert S10 include significantly raising the ground above and approximately 10 m either side of the culvert to increase the soil depth between the culvert and the working corridor. This will reduce noise and vibration inside the culvert barrel. The use of machinery when undertaking these works should be limited to rubber tracked mini-diggers and where possible hand tools should be used instead of machinery.
- 4.3.6 In addition to the increased soil depth above culvert S10, all machinery passing over the culvert must be rubber tracked and anti-vibration track matting such as that often used on railway crossings, should be installed above and 10 meters either side of the culvert. Soil should be compacted along the edge of the track matting to reduce noise and vibration when tracking on and off the matting, as well as reducing the risk of animals entering underneath and being squashed.
- 4.3.7 No work should be undertaken inside or directly outside the culvert entrances known to be inhabited by roosting bats or structures suitable for hibernating bats.
- 4.3.8 A bat licenced ecologist should be on site during all works within 30 meters of a known bat roost or structure assessed as potentially suitable for bat hibernation to ensure the precautionary measures are implemented and works do not cause disturbance to the roost sites.
- 4.3.9 A vegetation buffer zone surrounding the culvert inlet and outlets should be maintained through the construction period. This includes ensuring a line of trees is retained along the

northern side of the TPT and along the River Don to ensure bats can continue to use the linear habitat for foraging and commuting.

- 4.3.10 No activities which result in a restriction / obstruction of access by bats to the roosts should be undertaken, such as felling vegetation over the culvert inlets/outlets.
- 4.3.11 Netting or similar material should not be erected outside the culvert inlets or outlets or draped over structures such as bridges due to the risk of entrapment. Signs identifying the known bat roost should not be erected due to the risk of disturbance caused by the general public.
- 4.3.12 Significantly noisy and vibrating activities (e.g. piling or similar) should be avoided directly above the culverts or within close enough proximity to cause disturbance. The proximity to the roost sites and potential hibernation sites in which works should be carried out should be decided on site by the ecologist to ensure the roost and potential hibernation sites remain unaffected.
- 4.3.13 All lighting, including machinery lights must be directed away from the known roost and potential hibernation sites.
- 4.3.14 Anti-dust prevention methods should be implemented on site to reduce the risk of dust blowing into the known roost and potential hibernation sites.

5.0 PROPOSED ENHANCEMENTS

5.1 Creating roost sites

- 5.1.1 An area of Wogden Foot LWS is due to be enhanced for Willow Tits (*Poecile montanus*), as required by Condition 7 of the planning conditions associated with Planning reference 2019/1013.
- 5.1.2 The proposed willow tit enhancements include the creation of potential nest sites, including veteranizing existing standard trees and tying cut logs containing holes and voids to existing trees. As well as providing potential willow tit nest sites, these features are potentially suitable for roosting bats.
- 5.1.3 Unless a Natural England EPS licence is needed for the works, there is no requirement for the creation of appropriate bat roosting habitat. However, to compensate for the potential loss of trees with bat roosting suitability and increase the bat roosting opportunities on site, it is recommended bat boxes are installed within the following locations.
- 5.1.4 One bat box should be installed on the headwall above the inlet barrel of structures S15 (Long Grain Culvert), S9 and S18. Boxes should be installed on the inlet side of the culverts as these are south facing and provide better conditions for roosting bats than the culvert outlets. The bat boxes installed to the culvert inlets should be suitable for low numbers of crevice dwellings bats.
- 5.1.5 Five bat boxes should be installed on suitable trees within Wogden Foot LWS. The boxes should be attached to the south eastern side of the trunks and between 4 to 6 meters above ground, within sheltered areas exposed to a good amount of sunlight, such as the woodland glades. The bat boxes installed within Wogden Foot LWS trees should include boxes suitable for a range of bat species recorded in this area.
- 5.1.6 Five bat boxes or boxes of similar design should be installed on suitable trees along the TPT. The boxes should be installed at least 4 metres above ground and on the south eastern side the trees along the northern embankment, to ensure they are not shaded by the southern TPT embankment.
- 5.1.7 Numerous bat box designs should be used to ensure the boxes are suitable for the range bat species using the area. Boxes may include but not be limited to *1FF Schwegler* bat box, *2F Schwegler Bat Box* and *1FS Schwegler Large Colony Bat Box*.

5.2 Increasing bat foraging opportunities

- 5.2.1 The ecological enhancement proposals in the LEMP and Willow Tit Enhancement Plan will benefit a range of wildlife species, including bats. The willow tit habitat enhancements include the creation of deadwood, increased scrub, creation of wet areas and potential increase in wildflower diversity due to reduced grazing. All these measures will provide additional foraging opportunities for bats due to the likely increase in invertebrates.
- 5.2.2 To compensate for the potential loss in bat foraging opportunities along the TPT, native wildflower mixes and native shrub mixes suitable for the area, should be sown along the cable route in line with the LEMP and Landscape Drawings. Appropriate management of

these areas, as outlined within the Landscape Management and Maintenance Plan (LMMP) will be required to ensure the area doesn't become dominated by early successional flora.

- 5.2.3 Cleared vegetation along the TPT should be used to create linear dead hedges/windrows along the northern embankment between the cable route and retained trees along the crest of the embankment. The dead hedges/windrows will provide suitable habitat for a range of species, as well potentially increase bat foraging opportunities by increasing the abundance of invertebrates.
- 5.2.4 Additional woodland and scrub planting will be provided to compensate for areas of woodland and scrub that will be permanently lost to the project. Details of the on-site planting are detailed in the LEMP, Landscape Masterplans and Landscape Specification

5.3 Increasing environmental awareness

- 5.3.1 The section of TPT between Dunford Bridge and the adjacent town of Penistone is a popular walking and cycling destination for local families and tourists visiting the local area. The proposed Peak East VIP scheme has the opportunity to provide numerous environmental information areas along the TPT.
- 5.3.2 Monitoring of the installed bat boxes could be potentially run by appropriate stakeholders and local bat group.
- 5.3.3 If agreed by stakeholders, the recommended bat boxes are installed in advance of works to provide bat roosting opportunities prior to potential loss of suitable roosting features and to make the public aware of the ecological enhancements when using the temporary diverted footpath. There is no specific time for when bat boxes should be installed, however bats need time to find and explore new roost sites, and it may be several months or even years before boxes are used by bats. Therefore, ideally boxes should be installed prior to the peak bat active season (April to October) to increase the probability of bats finding the boxes during the first active season.

6.0 MANAGEMENT AND MONITORING

6.1 Monitoring

- 6.1.1 Bat monitoring of roost sites along the TPT will be required if a Natural England licence is deemed to be needed. The methodology for this would be agreed by Natural England if required as part of the licence application procedure and detailed within the bat licence method statement. Monitoring surveys (if required) would need to be conducted on the roost site(s) and seek to determine status and usage by bats following the completion of construction works. The exact period of monitoring would depend on the status of roost affected and the level of impact, but typically monitoring may require annual surveys for period up to 5 years post-construction within the main roosting season May – August. This may be completed by use of either manual and/ or remote recording of activity. Surveys would be managed and led by the named licensed bat ecologist.
- 6.1.2 Post construction monitoring of bat activity within the impacted area is not due to be undertaken, however appropriate habitat management as stated within the LEMP is required to ensure the re-instated and created habitats successfully develop and provide suitable habitat for a range of wildlife, including bats.
- 6.1.3 If agreed with the appropriate stakeholders and local conservation groups, the installed bat boxes could be monitored as part local ecological monitoring surveys, such as those completed by the local bat group. Unless stated within a Natural England EPS licence monitoring of bat boxes will not be the responsibility of National Grid or appointed contractor.

7.0 REFERENCES

AECOM (2018), *Visual Impact Provision (VIP) Peak District (East) Project, Appendix 7E Bat Survey Report Rev04*.

National Grid (2021), *Visual Impact Provision (VIP) Peak District (East) Project, Landscape and Ecological Management Plan*. Not published.

RSK Biocensus (2021), *Visual Impact Provision (VIP) Peak District (East) Project, Ecological Constraints Report*. Not published.

FIGURES

The figures are provided within the *Peak District (East) VIP ecological constraints report*.