A66 Northern Trans-Pennine Project
TR010062

3.4 Environmental Statement Appendix 6.12 Other Terrestrial Mammals

APFP Regulations 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 3

June 2022

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

A66 Northern Trans-Pennine Project Development Consent Order 202x

3.4 ENVIRONMENTAL STATEMENT APPENDIX 6.12 OTHER TERRESTRIAL MAMMALS

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010062
Application Document Reference	3.4
Author:	A66 Northern Trans-Pennine Project Team, National Highways

Version	Date	Status of Version
Rev 1	13/06/22	DCO Application

CONTENTS

6.12 Other Terrestrial Mammals

6.12.1 Introduction

Project background

6.12.1.1 The A66 Northern Trans-Pennine project is a programme of works to improve the A66 between the M6 at Penrith and A1 at Scotch Corner.

6.12.1.2 Between the M6 and the A1(M) the existing A66 is approximately 80km in length. Along this length it is intermittently dualled, with approximately 30km of single carriageway, in six separate sections, making the route accident prone and unreliable.

6.12.1.3 The route carries high levels of freight traffic and is an important route for tourism and connectivity to local communities. The variable road standards, together with the lack of available diversionary routes when incidents occur, affects road safety, reliability, resilience and attractiveness of the route. For a full Project description see Chapter 2: The Project (Application Document 3.2).

Scope of the document

6.12.1.4 This report presents baseline desk study data and survey results for the following terrestrial mammals:

- pine marten *Martes martes*
- polecat *Mustela putorius*
- brown hare *Lepus europaeus*
- hedgehog *Erinaceus europaeus*

6.12.1.5 Baseline surveys were conducted throughout 2020 and 2021.

6.12.1.6 It is intended that the information in this report will be used in conjunction with data from other surveys to identify and assess potential implications of the Project in relation pine marten, polecat, brown hare, and hedgehog, and inform any mitigation and compensation required. This baseline report can be used to accompany any future planning application and associated Environmental Impact Assessment (EIA) for the project.

6.12.2 Legislation and Policy Framework

Legislation

Natural Environment and Rural Communities Act 2006

6.12.2.1 The *UK Biodiversity Action Plan (UKBAP)* covering 2011-2020 has been superseded by the UK Post-2010 Biodiversity Framework (Joint Nature Conservation Committee and Department for Environment, Food and Rural Affairs, 2012)[1]. The framework identifies 65 Priority Habitats and 1,150 Priority Species that are in need of protection. This list has been

[1] Joint Nature Conservation Committee and Department for Environment, Food and Rural Affairs (2012) UK Post-2010 Biodiversity Framework. July 2012

used to define habitats and species of 'Principal Importance' in England (the Section 41 list) as required by the Natural Environment and Rural Communities (NERC) Act 2006.

6.12.2.2 All planning decisions must be made with regard for the conservation of Section 41 (S41) species and any priority actions[2] associated with them.

6.12.2.3 The following mammal species referenced in this report have S41 status and as such have priority actions associated with them:

- pine marten
- polecat
- brown hare
- hedgehog.

National level policy

National planning statement for national networks

6.12.2.4 The primary policy basis for deciding whether or not to grant a Development Consent Order (DCO) is the *National Policy Statement for National Networks (NPSNN)* (Department for Transport, 2014)[3], which sets out policies to guide how DCO applications will be decided and how the effects of national networks infrastructure should be considered by the relevant decision maker. The policies for biodiversity and ecological conservation include statements that:

"Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals and the complex ecosystems of which they are a part. Government policy for the natural environment is set out in the Natural Environment White Paper (NEWP). The NEWP sets out a vision of moving progressively from net biodiversity loss to net gain, by supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks that are more resilient to current and future pressures…" (NPSNN paragraph 5.20)

6.12.2.5 The *NPSNN* also advises:

"In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species, habitats and other species of principal importance for the conservation of biodiversity, and to biodiversity and geological interests within the wider environment." (NPSNN paragraph 5.26)

6.12.2.6 Table 1: NPSNN policies of relevance to other mammals identifies the *NPSNN* policies relevant to this document.

[2] Priority Actions for S41 Species available here http://publications.naturalengland.org.uk/file/6518755878240256
[3] Department for Transport (2014) National Policy Statement for National Networks f

Table 1: NPSNN policies of relevance to other mammals

Relevant *NPSNN* paragraph reference	Requirement of the *NPSNN* (paraphrase)
5.22	Outline any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems.
5.23	Demonstrate how the project has taken advantage of opportunities to conserve and enhance biodiversity conservation interests.
5.29	Ensure proposals mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity are acceptable.
5.33	Development proposals potentially provide many opportunities for building in beneficial biodiversity features. Opportunities to maximise beneficial biodiversity features should be considered. Planning obligations can be used where appropriate in order to ensure that such beneficial features are delivered.
5.34 and 5.35	Individual wildlife species receive statutory protection under a range of legislative provisions. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales. Undertake measures to ensure these species and habitats are protected from adverse effects. Where appropriate, requirements or planning obligations may be used in order to deliver this protection.
5.36	Include appropriate mitigation measures as an integral part of their proposed development, including identifying where and how these will be secured
5.37	Consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into in order to ensure that mitigation measures are delivered.
5.38	Take account of what mitigation measures may have been agreed between the applicant and Natural England and/or the MMO, and whether Natural England and/or or the MMO has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

National planning policy framework

6.12.2.7 The *National planning policy framework (NPPF)* (Ministry of Housing, Communities & Local Government, 2021)[4] originally published in March 2012 and most recently updated in July 2021, sets out the government's planning policies for England and provides a framework within which locally prepared plans can be produced. The *NPPF* is *"an important and relevant matter to be considered in decision making for NSIP"*[5].

[4] Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework
[5] Nationally Significant Infrastructure Projects (NSIP)

Regional and local level policy

6.12.2.8 Although the UK Biodiversity Action Plan (BAP) has been superseded, BAPs are still widely used at county level to support Biodiversity 2020 (Department for Environment, Food and Rural Affairs, 2011)[6].

6.12.2.9 Brown hare, hedgehog, polecat and pine marten are listed as a priority species on the Durham County Council BAP (2012/13), now listed on the North East England Nature Partnership (North East England Nature Partnership, 2013)[7], the Cumbria BAP (Cumbria Biodiversity Partnership, 2001)[8], and the Richmondshire District Councils BAP (Richmond County Council, 2014)[9].

6.12.2.10 The following local planning policies are relevant to this report:

- *Eden Local Plan (2014-2032)* (Eden District Council, 2014)[10] Policy ENV1 and Policy ENV4
- *County Durham Plan (Adopted 2020)* (Durham County Council, 2020)[11] Policy 26, Policy 40, Policy 41, Policy 42 and Policy 43
- *Richmondshire Local Plan (2012-2028)* adopted 2014 (Richmondshire District Council, 2014)[12] Core Policy CP12

Other relevant policy and guidance

6.12.2.11 In addition to compliance with the *NPSNN* and *NPPF*, this report has been written in accordance with professional standards and guidance. The standards and guidance which relate to the assessment are:

- *Guidance for Ecological Impact Assessment in the United Kingdom Third Edition* (Chartered Institute of Ecology and Environmental Management, 2018)[13]
- *Design Manual for Roads and Bridges (DMRB) LA 108 Biodiversity (DMRB LA 108)*, Revision 1, March 2020
- *DMRB LD 118 Biodiversity Design (DMRB LD 118)*, Revision 1, March 2020 (Highways England, 2020c)[14]

6.12.3 Methodology

Desk study

6.12.3.1 Records of pine marten, polecat, brown hare and hedgehog within 2km of the Order Limits of the Project were requested from Cumbria

[6] Department for Environment Food and Rural Affairs (2011) Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services.
[7] North East England Nature Partnership (2013) Biodiversity Priorities]
[8] Cumbria Biodiversity Partnership (2001) The Cumbria Biodiversity Action Plan
[9] Richmond County Council (2014) Richmondshire Biodiversity Action Plan
[10] Eden District Council (2014) Eden Local Plan 2014 to 2032
[11] Durham Council (2020) County Durham Plan – Adopted 2020
[12] Richmond County Council (2014) Richmondshire Local Plan 2012 - 2028 Core Strategy (Adopted 9 December 2014)
[13] Chartered Institute of Ecology and Environmental Management (2018) Guidance for Ecological Impact Assessment in the United Kingdom Third Edition
[14] Highways England (2020c) Design Manual for Roads and Bridges LD 118 Biodiversity Design, Revision 1, March 2020

Biodiversity Data Centre (CBDC), the Environmental Records Information Centre (ERIC) North East, and North and North East Yorkshire Ecological Data Centre (NEYDC) in October 2021. This was supplemented by road traffic accident (RTA) data supplied by National Highways.

Field survey

6.12.3.2 Scoping surveys were undertaken throughout every scheme, which recorded the potential for habitats to support pine marten, polecat, brown hare and hedgehog. Although dedicated surveys to identify the presence of these species were not carried out, any evidence of field signs (such as direct observation of individuals or their field signs such as footprints) were recorded during other ecological surveys.

Camera trapping

6.12.3.3 Camera traps were placed on identified mammal features, such as mammal paths within woodlands and on field boundaries. Camera trapping followed the methodology outlined in Van Berkel (2014)[15].

6.12.3.4 Camera traps triggered by Passive Infrared (PIR) Sensors were attached to a static feature (a post, tree or similar) ensuring the field of view covered the area of interest. They were left in situ between November 2020 and January 2021 with images and video recorded on removable SD cards.

6.12.3.5 Images and videos recorded during the camera trapping survey were analysed by ecologists reviewing the images and identifying potential S41 species. Any image or video files containing people were deleted upon review. The remaining data was classified to species level where image quality allowed. For each independent activity event, the number of individuals, age and activity observed was recorded. An event was considered independent when (i) consecutive images were of distinct members of the same or different species, (ii) consecutive images of the same species were taken more than 30 minutes apart, (iii) images of the same species were taken non-consecutively.

6.12.4 Assumptions and Limitations

6.12.4.1 During the analysis of camera trap footage it was not possible to differentiate with certainty several small mustelid species such as ferret, polecat and stoat. On a precautionary basis, as small mustelids that were potentially polecat were identified throughout the Project, it is assumed that polecat are present throughout all schemes.

6.12.4.2 A single, potential pine marten scat was found during surveys, however a camera trap placed at this location did not record any pine marten activity and no further potential scat were identified. Due to the nature of the singular scat not being confirmed as pine marten, no camera trap

[15] Van Berkel, T. (2014) Expedition Field Techniques Camera Trapping for Wildlife Conservation. Royal Geographical Society

footage indicating pine marten presence, and an absence of desk study records, it is assumed that pine marten are absent from all schemes.

6.12.5 Results

Routewide

6.12.5.1 S41 Species of Principal Importance (Joint Nature Conservation Committee, 2007)[16] confirmed or assumed to be present as a result of surveys are brown hare, hedgehog and polecat.

M6 Junction 40 to Kemplay Bank

6.12.5.2 It is likely that polecat are present throughout the Order Limits of this scheme. Small mustelids that, following the precautionary principle, are assumed to be polecat were detected at camera locations 50, 51, 52 and 53 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). This confirms that polecat are definitely present towards the western end of this scheme, in proximity to the M6.

6.12.5.3 No pine marten, brown hare or hedgehog were recorded, either through observation of individuals, on camera traps or field signs. However, there are records of hedgehog and brown hare within 2km in the last ten years and suitable habitat is present therefore following precautionary principle it is assumed that hedgehog and brown hare are present. There were no records of pine marten within the last ten years within 2km of the site and lack of suitable habitat means that pine marten are considered to be absent.

Penrith to Temple Sowerby

6.12.5.4 Brown hare were observed on six separate occasions. On each occasion, a single individual was observed three times during terrestrial mammal surveys and another three times incidentally during surveys for other species. In addition, brown hare were also detected at camera locations 33, 40, 44, 45 and 58 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). The majority of sightings and field signs were within the eastern area of the scheme, however suitable habitat is present throughout the Order Limits of the scheme, and it is likely that brown hare are present throughout all suitable habitat.

6.12.5.5 Small mustelids assumed to be polecat on a precautionary basis were detected at camera locations 34, 38, 42, 43, 44, 45, 47, 56, 58 and 59 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). It is therefore possible that polecat are present throughout the scheme.

6.12.5.6 No pine marten or hedgehog were recorded, either through desk study data, observation of individuals, or field signs and are considered absent.

[16] Joint Nature Conservation Committee (2007) UK Biodiversity Action Plan - List of UK BAP Priority Terrestrial Mammal Species. List of UK BAP priority terrestrial mammal species (2007) (jncc.gov.uk)

Temple Sowerby to Appleby

6.12.5.7 Brown hare were observed on seven occasions during terrestrial mammal field surveys and incidentally during surveys for other species within this scheme. In total, 21 individuals were observed. In addition, brown hare were detected at camera location 35 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). Data gathered suggests that brown hare are present in the central and western areas of this scheme. No records were identified from desk study data or field surveys in the eastern area of this scheme despite suitable habitat being present, it is likely that brown hare are present throughout all suitable habitat.

6.12.5.8 Small mustelids, assumed on a precautionary basis to be polecat, were detected at camera locations 29, 31 and 35 within this scheme (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). It is therefore possible that polecat are present in the eastern and central areas of this scheme.

6.12.5.9 No pine marten or hedgehog were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

Appleby to Brough

6.12.5.10 Small mustelids, assumed to be polecat on a precautionary basis, were detected at camera locations 11,18, 25 and 26 (ES Figure 6.12: Terrestrial Mammal Survey Map (ES Volume 2, Application Document Number 3.3)). The distribution of these locations indicates that polecat are potentially present throughout the scheme, but restricted to the north of the existing A66.

6.12.5.11 No hedgehogs were recorded, through direct observation of individuals, camera footage, or field signs, however there are desk study records in close proximity to the scheme within the last ten years, therefore as suitable habitat is present throughout the Order Limits of the scheme, and it is possible that hedgehogs are present throughout all suitable habitat.

6.12.5.12 No pine marten or brown hare were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

Bowes Bypass

6.12.5.13 Hedgehog were detected at camera location 19 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). This indicates that hedgehog are present in the western area of the scheme, however suitable habitat is present throughout the scheme and they are likely to be present throughout the scheme.

6.12.5.14 No pine marten, polecat or brown hare were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

Cross Lanes to Rokeby

6.12.5.15 A single hedgehog was observed incidentally within Rokeby Park and another hedgehog was detected at camera trap location 106 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). These two records indicate that hedgehog are present to the north and south of the existing A66, within the central and eastern areas of this scheme.

6.12.5.16 Small mustelids, assumed on a precautionary basis to be polecat, were detected at camera locations 7, 9, 12, 13 and 14 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). The distribution of the five camera locations suggests polecat they are potentially to be present throughout this scheme, both to the north and to the south of the existing A66.

6.12.5.17 No pine marten or brown hare were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

Stephen Bank to Carkin Moor

6.12.5.18 Brown hare were observed on four separate occasions and during these a total of six individuals were observed. In addition, brown hare were also detected at camera locations 5 and 54, two of the 14 camera locations within this section (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document 3.3)). This indicates that brown hare are present within the Order Limits of this scheme, in agricultural land between West Layton and East Layton, to the north of the existing A66.

6.12.5.19 No pine marten, polecat or hedgehog were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

A1(M) Junction 53 to Scotch Corner

6.12.5.20 Small mustelids, presumed on a precautionary basis to be polecat, were detected at camera trap location 2 (ES Figure 6.12: Terrestrial Mammal Survey Map (Application Document r 3.3)). This indicates the potential presence of polecat in the north of the scheme, to the west of the A1(M).

6.12.5.21 No pine marten, brown hare or hedgehog were recorded, either through desk study data, observation of individuals, camera footage, or field signs and are considered absent.

6.12.5.22

Future baseline

6.12.5.23 The ecological baseline conditions described above represent those which currently exist in the absence of the Project and at the time of survey. As stated in Section 3 of Chartered Institute of Ecological and Environmental Management's *Guidelines for Ecological Impact Assessment in the UK and Ireland* (Chartered Institute of Ecology and

Environmental Management, 2019)[17], potential changes in baseline conditions also need to be identified in order to assess impacts.

6.12.5.24 Based on the above information and current land use, the future baseline in the absence of the Project is unlikely to change significantly by 2040. Subtle changes are expected due to climate change, such as some movements of certain species and local population changes, however, the overall habitats and species composition in the study area are expected to be broadly similar to that of the existing baseline. There may be a decline in hedgehog populations in line with national trends[18]. Polecat are widely established in Cumbria but polecat populations in north east Yorkshire and Durham appear to be significantly lower. It is possible that the expansion of polecats into Durham and Yorkshire from Cumbria is being hampered by the Pennines, where high gamekeeping activity means that polecats are likely to be vulnerable to unintentional mortality in traps[19]. As such polecat population within the Project area is likely to remain stable. Brown hare population trends appear to be stable for the last 25 to 10 years[20] and are anticipated to remain stable within the Project area. Pine martens in England are still scarce and have a very restricted range. Pine martens are currently expanding into Cumbria from Scotland[21] so there is potential for pine martens to become present but this will depend on a number of factors such as suitability of habitat and anthropogenic factors such as road mortality. Therefore, the future baseline would remain the same as set out in the existing baseline in relation to polecat and brown hare, potentially decrease for hedgehog and increase for pine marten.

6.12.6 Discussion

6.12.6.1 Brown hare, hedgehog and assumed polecat were recorded in multiple locations throughout the Order Limits of the Project confirming their presence.

6.12.6.2 Due to lack of detection on camera traps and absence of desk study data pine marten are considered to be absent from the Order Limits of the Project.

6.12.7 References

Chartered Institute of Ecology and Environmental Management (2018) Guidance for Ecological Impact Assessment in the United Kingdom Third Edition

Cumbria Biodiversity Partnership (2001) The Cumbria Biodiversity Action Plan,

[17] Chartered Institute of Ecology and Environmental Management (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater Coastal and Marine
[18] People's Trust for Endangered Species (2018) The State of Britain's Hedgehogs 2018. London.
[19] The Vincent Wildlife Trust (2016) The distribution and status of the Polecat (Mustela putorius) in Britain 2014-2015. Ledbury, Herefordshire
[20] People's trust for Endangered Species (2022) Brown Hare Factsheet
[21] Vincent Wildlife Trust (2022) Pine Marten

DEFRA (2011) Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services.

Department for Transport (2014) National Policy Statement for National Networks,

Durham Council (2020) County Durham Plan – Adopted 2020

Eden District Council (2014) Eden Local Plan 2014 to 2032

Highways England (2020c) Design Manual for Roads and Bridges LD 118 Biodiversity Design, Revision 1, March 2020

JNCC (2007) UK Biodiversity Action Plan - List of UK BAP Priority Terrestrial Mammal Species. List of UK BAP priority terrestrial mammal species (2007) (jncc.gov.uk)

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012.

Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework

Nationally Significant Infrastructure Projects (NSIP)

Natural Environment and Rural Communities Act 2006 https://www.legislation.gov.uk/ukpga/2006/16/contents

North East England Nature Partnership (2013) Biodiversity Priorities

People's trust for Endangered Species (2022) Brown Hare Factsheet.

People's Trust for Endangered Species (2018) The State of Britain's Hedgehogs 2018. London.

Priority Actions for S41 Species

Richmond County Council (2014) Richmondshire Biodiversity Action Plan,

Richmond County Council (2014) Richmondshire Local Plan 2012 - 2028 Core Strategy (Adopted 9 December 2014),

Van Berkel, T. (2014) Expedition Field Techniques Camera Trapping for Wildlife Conservation. Royal Geographical Society

The Vincent Wildlife Trust (2016) The distribution and status of the Polecat (Mustela putorius) in Britain 2014-2015. Ledbury, Herefordshire

Vincent Wildlife Trust (2022) Pine Marten