

A303 Amesbury to Berwick Down

TR010025

6.3 Environmental Statement Appendices

Appendix 8.3B Update surveys technical note

APFP Regulation 5(2)(a)

Planning Act 2008

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

October 2018



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Introduction

- 1.1 The A303 Amesbury to Berwick Down scheme (the proposed scheme) is part of a wider package of proposals designed to improve connectivity to the South West through creating a dual-carriageway along the corridor.
- 1.2 Phase 1 habitat surveys and protected species surveys were undertaken in 2017 for the previous 2017 proposed route options. The survey area for this survey included a buffer of the 125m of the centreline for each route option. The route final route has been refined and selected since these surveys and hence the proposed scheme boundary has altered. Due to this change in survey area the Phase 1 habitat survey required updating.
- 1.3 The purpose of the survey was to identify and categorise all habitats present within the extended survey area. This included the proposed scheme boundaries and a 200m buffer. These habitats were also assessed for their potential to support protected or notable species of fauna and flora. In addition the surveys undertaken in 2017 were ground-truthed to identify any changes since the 2017 survey.
- 1.4 This Technical Note outlines the survey undertaken.

Methods

- 2.1 All areas within the survey area (the proposed scheme boundary and a 200m buffer), which had not previously been surveyed in 2017, were surveyed by two competent surveyors between February and April 2018. Certain areas were also selected from the 2017 surveys for ground-truthing.
- 2.2 The update survey included a Phase 1 Habitat survey and an appraisal of the potential suitability of the habitats present to support protected and notable species of plants or animals. Field signs, habitat features with potential to support protected species and any sightings were recorded when encountered.
- 2.3 The Phase 1 Habitat survey was undertaken in accordance with the standard survey methodology outlined by the Joint Nature Conservation Committee (Ref 1).
- 2.4 Species rich hedgerows were surveyed further to determine the potential presence of any ecologically 'important hedgerows', following criteria in the Hedgerow Regulations 1997.
- 2.5 Prior to undertaking the Phase 1 Habitat survey, aerial photography and 1:2,500 OS mapping were examined to identify the presence of ponds within 500m of the proposed scheme boundary. All ponds with potential routes of dispersal to the proposed scheme were assessed for their suitability to support great crested newts following current guidance (Ref 2). Some ponds were scoped out from further survey due to their isolation from the proposed scheme.
- 2.6 All badgers setts were identified within the study area (Ref 3) (see Appendix 8.16B for results) and all structures and trees were assessed for their potential to support roosting bats (Ref 4). Furthermore habitats were specifically assessed for their potential to support barn owl and reptile species.
- 2.7 The survey dates and weather conditions for each survey date are displayed in Table 1 below.

Table 1: Survey dates and weather conditions

Date	Weather
5th February 2018	3°C, frosty morning
19th March 2018	3°C, snow on ground
21st March 2018	10°C, sunny, some snow still remaining on ground
5th April 2018	11°C, sunny with cloud
9th April 2018	9°C, drizzle and cloud
16th April 2018	14°C, sunny with intermittent cloud
17th April 2018	18°C, sunny with some cloud

Date	Weather
18th April 2018	24°C, sunny with small amount of cloud
19th April 2018	28°C, hot and sunny

Results

Phase 1 Habitat

- 3.1 A survey of all habitats within the proposed scheme boundary, not previously surveyed in 2017, and ground-truthing of approximately 50% of the habitats surveyed in 2017 was undertaken. The results from these surveys were used to produce the current Phase 1 habitat survey map within the ES (Figure 8.5). Target notes recorded during the survey can be seen in Appendix B of this note.

Bats

- 3.2 Five trees with bat roost potential were identified within 200m of the proposed scheme boundary, all of which were within or adjacent to the proposed scheme boundary. These include four trees with High bat roost potential and one with moderate bat roost potential. A description of the trees including their bat roost features are described in Table 2 below.

Table 2: Extra trees with bat roost potential located within 200m of the proposed scheme boundary

Species	Description	Bat roost features	Location	Bat Roost Potential
Oak	Mature, 16m high, 1.5m diameter at breast height (dbh)	Multiple tear out wounds, broken and dead branches with lifted bark plate	SU 15565 42141	High
Oak	Mature, 16m high, 1.5m dbh	Multiple tear out wounds, broken and dead branches with lifted bark plate	SU 15550 42141	High
Willow	Large stump, 1.5m dbh	Multiple cracks and crevices within the bark	SU 15610 42133	Moderate
Ash	Mature, 15m high, 1.2m dbh	Cavity in tear out wound 6m up south-east facing	SU 15608 42154	High
Oak	Mature, 15m high, 1.25m dbh	Dead branches with cavities and splits on all aspects Cavities on tear out wounds	SU 15547 42440	High
Oak	Mature, 16m high, 1.5m diameter at breast height (dbh)	Multiple tear out wounds, broken and dead branches with lifted bark plate	SU 15565 42141	High

Great crested newt

- 3.3 The following waterbodies were identified within 500m of the proposed scheme boundary. All of these waterbodies were assessed for their suitability to support great crested newt. Eight of the waterbodies were ditches. These were found to be dry and were subsequently scoped out from further survey, being unsuitable as breeding sites for great crested

newt. The remaining two waterbodies were large ponds which were scoped out from further survey due to their isolation from the proposed works by the River Avon. Table 3 below outlines each of the waterbodies identified.

Table 3: Extra waterbodies located within 500m of the proposed scheme boundary and reasons for scoping out from further survey

Waterbody	Location	Reasons for scoping out form further survey
Large pond	SU 15631 42851	Isolated from the works by the River Avon
Large pond	SU 15513 42975	Isolated from the works by the River Avon
Ditch	SU 16241 42236	Dry
Ditch	SU 16290 42201	Dry
Ditch	SU 16318 42216	Dry
Ditch	SU 16654 42145	Dry
Ditch	SU 16654 42131	Dry
Ditch	SU 16627 42100	Dry
Ditch	SU 16894 42159	Dry
Ditch	SU 16967 42160	Dry

Reptiles

- 3.4 Areas of reptile suitability were noted where present. These assessments were used to produce the reptile habitat suitability map for the ES chapter (Figure 8.9).

Barn owls

- 3.5 Areas of barn owl suitability were noted where present. These assessments were used to produce the barn owl habitat suitability map for the ES chapter (Figure 8.10).

Important Hedgerows

- 3.6 Of the additional hedgerows surveyed, one hedgerow was classed as 'Important' under the Hedgerow Regulations. This hedgerow is located outside the proposed scheme boundary, centred at NGR SU15427 42498. The hedgerow met the criteria for an 'Important' hedgerow as it had on average greater than 5 woody species and four associated feature criteria (Gaps < 10%, parallel hedge within 15m, on average at least one standard tree per 50m section and at least three woodland ground flora species).

Appendix A: References

- Ref 1: Joint Nature Conservation Committee (2010) *Handbook for phase 1 habitat survey – a technique for environmental audit*. Joint Nature Conservation Committee, Peterborough
- Ref 2: Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000) *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. *Herpetological Journal* 10 (4), 143-155.
- Ref 3: Harris, S., Cresswell, P. and Jefferies, D. (1989) *Surveying badgers*. Mammal Society Occasional Publication No 9
- Ref 4: Collins, J. (Ed) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd Edn) The Bat Conservation Trust, London

Appendix B: Target Notes

Target Note Ref.	Description	Location
1	Improved grassland, currently used as a pony paddock, species present included: perennial rye-grass (<i>Lolium perenne</i>), common bent (<i>Agrostis capillaris</i>), cock's foot (<i>Dactylis glomerata</i>), tufted hair-grass (<i>Deschampsia cespitosa</i>), ribwort plantain (<i>Plantago lanceolata</i>), common nettle (<i>Urtica dioica</i>), broad leaved dock (<i>Rumex obtusifolius</i>), creeping thistle (<i>Cirsium arvense</i>), cleavers (<i>Galium aparine</i>), common mouse-ear (<i>Cerastium fontanum</i>), common sorrel (<i>Rumex acetosa</i>), primrose (<i>Primula vulgaris</i>), ragwort (<i>Senecio jacobaea</i>), ground ivy (<i>Glechoma hederacea</i>) and common daisy (<i>Bellis perennis</i>).	SU1542042470
2	Semi-improved wet grassland with areas of surface water. Species present included: perennial rye-grass, cock's foot, creeping bent (<i>Agrostis stolonifera</i>), common nettle, lesser celandine (<i>Ranunculus ficaria</i>), cleavers, reed canary- grass (<i>Phalaris arundinacea</i>), marsh marigold (<i>Caltha palustris</i>), hemlock water-dropwort (<i>Oenanthe crocata</i>), hemlock (<i>Conium maculatum</i>), meadowsweet (<i>Filipendula ulmaria</i>), creeping buttercup (<i>Ranunculus repens</i>), cowslip (<i>Primula veris</i>), spear thistle (<i>Cirsium vulgare</i>) and wild angelica (<i>Angelica sylvestris</i>).	SU1575642562
3	Luxenborough banks County Wildlife Site (CWS), semi-improved neutral grassland. Banks contained a thinner soil layer and supported a greater diversity of species. The bottom of the bank contained and more nutrient rich grassland. Bank supported the following species: cock's foot, red fescue (<i>Festuca rubra</i>), creeping thistle (<i>Cirsium arvense</i>), knapweed (<i>Centaurea nigra</i>), cowslip, common bird's foot trefoil (<i>Lotus corniculatus</i>), dandelion (<i>Taraxacum</i> agg.), ribwort plantain, sedge species (<i>Carex</i> sp.) and moss species. The bottom of the slope contained a greater abundance of Yorkshire fog (<i>Holcus lanatus</i>), false oat-grass (<i>Arrhenatherum elatius</i>), cow parsley (<i>Anthriscus sylvestris</i>) and common nettle.	SU1281041587
4	Small circular copse of planted trees with semi-mature beech (<i>Fagus sylvatica</i>) trees dbh c. 20cm, with semi-mature hawthorn (<i>Crataegus monogyna</i>) around the edge of the copse. Snow on ground made assessment of ground flora limited.	SU1425042330
5	Small circular copse of planted trees with semi-mature beech trees dbh c. 15cm, with semi-mature hawthorn around the edge of the copse. Snow on ground made assessment of ground flora limited.	SU1467142507
6	Mature broadleaved woodland with mature ash (<i>Fraxinus excelsior</i>) and oak (<i>Quercus robur</i>), semi-mature yew (<i>Taxus baccata</i>) and hazel (<i>Corylus avellana</i>) with a ground flora of dominated by ivy (<i>Hedera helix</i>) and some patches of gooseberry (<i>Rubus uva-crispa</i>). Snow on ground made assessment of	SU1488242585

	ground flora limited.	
7	Small area of broadleaved woodland supporting large mature poplar species (<i>Populus</i> sp.) as well as elder (<i>Sambucus nigra</i>), hawthorn, willow (<i>Salix</i> sp.) and ash. Snow on ground made assessment of ground flora limited	SU1518242082
8	Row of mature beech trees	SU1499742085
9	Mature willow tree	SU1509242088
10	Large waterbody with amenity grassland, viewed from afar as no access to land confirmed	SU1602742380
11	Young semi-mature broadleaved plantation woodland dominated by ash. No bat roost potential.	SU1620642301
12	Broadleaved woodland planted dominated by semi-mature ash. One mature ash to the north of this woodland with low bat roost potential	SU1623142384
13	Semi-natural, semi-mature broadleaved woodland containing ash, hawthorn, dogwood (<i>Cornus</i> sp.), cherry (<i>Prunus</i> sp.), willow, beech, with an understorey of spindle (<i>Euonymus europaea</i>), privet (<i>Ligustrum</i> sp.) and lord's and ladies (<i>Arum maculatum</i>).	SU1624442258
14	Large grass verge adjacent to either side of the road supporting the following species: cock's foot, perennial rye-grass, creeping buttercup, yarrow (<i>Achillea millefolium</i>), ground ivy, dandelion, common nettle, ribwort plantain, herb robert, (<i>Geranium robertianum</i>), white clover (<i>Trifolium repens</i>), creeping cinquefoil (<i>Potentilla reptans</i>), white dead-nettle (<i>Lamium album</i>), daisy and moss sp.	SU1642242177
15	Juniper (<i>Juniperus communis</i>) and young yew (<i>Taxus baccata</i>) scrub and calcareous rough grassland (good barn-owl and reptile habitat). No access to land, viewed from road.	SU1886742371
16	Dense bramble scrub, low-lying	SU1852742351, SU1800342271 and SU1842142091
17	Defunct species poor planted young hedgerow both sides of track made up of the following species: hawthorn, cherry, blackthorn (<i>Prunus spinosa</i>), elder (<i>Sambucus nigra</i>) and buddleia (<i>Buddleja davidii</i>).	SU1809741988
18	Fly-tipping	SU1780841931
19	Dense scrub including the following species elder, bramble, blackthorn, whitebeam (<i>Sorbus</i> sp.), hawthorn, honeysuckle (<i>Lonicera periclymenum</i>), salad burnet (<i>Sanguisorba minor</i>), tufted hair-grass (<i>Deschampsia cespitosa</i>), perennial rye grass, moss sp. (abundant), ribwort plantain, primula sp. and yarrow	SU1862342422
20	Species-poor hedgerow with trees dominated by hawthorn and blackthorn with an ivy (<i>Hedera helix</i>) and common nettle understorey.	SU0932844670
21	Line of mature / semi-mature trees including beech, oak (<i>Quercus robur</i>), ash and one horse chestnut (<i>Aesculus hippocastanum</i>) with low suitability for roosting bats.	SU0950244641
22	Plantation woodland containing ash, blackthorn, elder,	SU0928344687

	hazel and field maple (<i>Acer campestre</i>) with an understorey of ivy, holly and dogwood.	
23	Scattered scrub of blackthorn and hawthorn with a rough calcareous grassland understorey	SU0973644655
24	Unmanaged grassland adjacent to road, (to access to MOD land) supporting the following species: perennial rye-grass, red fescue (<i>Festuca rubra</i>), ivy-leaved speedwell (<i>Veronica hederifolia</i>), white clover, hogweed (<i>Heracleum mantegazzianum</i>), broad-leaved dock (<i>Rumex obtusifolius</i>), tufted vetch (<i>Vicia cracca</i>), red-dead nettle (<i>Lamium purpureum</i>), cleaver (<i>Galium aparine</i>), hard rush (<i>Juncus inflexus</i>) common nettle, common fleabane (<i>Pulicaria dysenterica</i>), groundsel (<i>Senecio vulgaris</i>), bitter-cress (<i>Cardamine</i> sp.), white dead-nettle, crane's bill (<i>Geranium</i> sp.), ground elder (<i>Aegopodium podagraria</i>), tufted-hair grass, field speedwell (<i>Veronica persica</i>).	SU0965744811
25	Semi-improved grassland road verges supporting the following species: yarrow, silverweed (<i>Argentina anserine</i>), ivy, hemlock, dandelion, common mouse-ear and cleavers	SU0965544615
26	Mixed woodland with a canopy of Leyland cypress (<i>Cupressus x leylandii</i>), sycamore (<i>Acer pseudoplatanus</i>) and elder and a ground flora of common nettle, bramble, lesser celandine (<i>Ficaria verna</i>), yellow archangel (<i>Lamium galeobdolon</i>), lords and ladies, ground ivy, hogweed, cut leaved crane's bill (<i>Geranium dissectum</i>), meadow sweet (<i>Filipendula ulmaria</i>). Lots of fly-tipping	SU1808242758 and SU1814642653
27	Scattered scrub blackthorn and hawthorn	SU1791342288
28	Unmanaged poor semi-improved grassland supporting false-oat grass (<i>Arrhenatherum elatius</i>), Yorkshire fog, cock's foot, broad-leaved dock, white clover and red dead nettle.	SU1795242317
29	Defunct hedgerow with blackthorn and hawthorn	SU1793642400
30	Species poor hedgerow containing dogwood, hawthorn, blackthorn and bramble.	SU1800642302
31	Semi-improved grassland and scattered scrub with the following species: hawthorn, blackthorn, elder with a ground flora of lesser celandine, perennial rye grass, cock's foot, ivy, white dead-nettle and garlic mustard (<i>Alliaria petiolata</i>).	SU1782042124
32	Defunct hedgerow scrub with hawthorn, blackthorn, elder, buddleia	SU1785242194
33	Plantation woodland with birch (<i>Betula</i> sp.), cherry, ash, beech, horse chestnut and holly.	SU1778842184
34	Species poor hedgerow with hawthorn, blackthorn, ash, oak and sycamore with a ground flora of garlic mustard, ivy, common nettle, white dead-nettle, cleavers, lesser celandine and rosebay willowherb (<i>Epilobium angustifolium</i>).	SU1771441852

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