



Contents

Foreword	3
the second secon	

- Introduction 4
- What has been achieved in 2018-2019? 5
- Case study: Brotherton Ings habitat
- Case study: A38 Ashburton to Ivybridge 11 species-rich grassland creation
- Case study: Stover Country Park 12
- Working to deliver our contribution 13to the government's Insect PollinatorStrategy

15

- Measuring biodiversity: developing our method for describing change on our network
- Appendix: commentary against the Biodiversity Plan actions



Foreword



The strategic road network is one of the country's largest national assets. It stretches for nearly 4,500 miles and connects people,

businesses and communities with the places they need to be. It has approximately 30,000 hectares of green verge, known as our soft estate, which contains a range of habitats and supports a rich variety of plants and animals.

At Highways England we are ambitious about protecting and enhancing the environment. The actions we have taken over the last few years represent a positive investment in biodiversity, and we are now seeing real change on our network.

As we invest and develop our network to provide improved facilities for road users, we are ensuring that our everyday decisions take account of the need to promote biodiversity, making biodiversity a mainstream consideration in how we deliver our work.

This report focuses on our progress in 2018-19 towards meeting the goals in our Biodiversity Plan and details a number of initiatives that will make a positive contribution to biodiversity. These are providing biodiversity benefits in the short-term, and more importantly will provide a legacy of healthier habitats and greater diversity alongside our roads.

We have learned a lot in the past four years. We have a better understanding of the types of activities that have the most impact. For example working with local partners, such as the Wildlife Trusts, to enable better targeted and more efficient projects. We have also learned a great deal about the approaches that have not been as successful. As we start developing our plans for the next five-year period (2020-2025), we will apply our learnings to continue our progress towards reversing biodiversity decline and creating a healthier environment for the future.

Ivan Le Fevre Head of Environment

Introduction

The government has set a number of core objectives for biodiversity, which direct our work in this area.

Our licence states that:

'We will minimise environmental impacts and enhance the quality of the surrounding environment.'

The government's Road Investment Strategy (RIS) states that, by 2020:

'The company must reduce the rate of loss of biodiversity, and that by 2040 it must deliver a net gain in biodiversity. The company should develop metrics covering broader environmental performance. These should include a new or improved biodiversity metric.'

At Highways England we have a key performance indicator:

'The company should publish its Biodiversity Action Plan by the 30 June 2015 and report annually on how it has delivered against the plan to reduce net biodiversity loss on an annual basis.'

Our Biodiversity Plan was published in June 2015, and we have reported on our progress towards this plan annually. The plan and the annual reports are available at: https://www.gov.uk/government/publications/biodiversity-plan

The government has asked us to:

'Support the objectives of Biodiversity 2020 (the Government's strategy for biodiversity and ecosystem services) and the National Pollinator Strategy.'

In addition, in January 2018, the Government published 'A Green Future: Our 25 Year Plan to Improve the Environment'. Highways England's Biodiversity Plan is well aligned with Biodiversity 2020 and to the government's new plan. We are currently developing our approach to biodiversity for Roads Period 2, and we will support the aspirations of the government and wider environmental bodies.

This report looks at the five key outcomes described in the Highways England Biodiversity Plan, and presents our actions and achievements, for the 2018-2019 financial year, under each outcome heading.

What has been achieved in 2018-19?

Our Biodiversity Plan contains five key outcomes, with a total of 29 actions. While some of these actions will be completed in their entirety during the lifetime of the plan, others are on-going and intended to influence the way the business works.

During 2018-2019, we have successfully completed and closed out certain actions; others are the subject of ongoing effort. We have experienced a number of challenges in working to address the actions, and we continue to learn lessons to help us improve our performance. Our overall progress is summarised at the end of this report in the Appendix, and the progress we have made in 2018-2019 is outlined below.

Outcome 1: Highways England and our suppliers are equipped to produce good biodiversity performance.

We have undertaken considerable work with colleagues on the new 'Asset Delivery Asset Maintenance Requirements' (ADAMr). This is a new approach to the maintenance of our soft estate that will ensure Highways England's assets, including those developed using Designated Funds, are managed and maintained appropriately.

There is an annual commitment to maintain employee knowledge of the plan, and monitor performance. This year we have developed a new process for reviewing biodiversity projects which are funded using Environmental Designated Funds. This process ensures that the funding decisions we make support effective schemes that deliver good biodiversity benefits.

Outcome 2: The strategic road network is managed to support biodiversity.

We have continued to work with Natural England to progress the list of the Sites of Special Scientific Interest (SSSIs) which are fully or partly within our ownership. We made a commitment in the Biodiversity Plan to produce strategic management plans for agreed SSSIs across our network. These plans will be used to support enhancement works leading to a recovery of condition of the sites by 2020.

We have produced new management plans for ten SSSIs in 2018-2019, taking the total number of plans produced since 2015 to 41 SSSIs and meeting the internal business target for 2018-2019. This is steering us in the right direction to ensure that we will meet the Department for Environment, Food and Rural Affairs (Defra) target of 50% of landholdings in 'favourable condition', and 95% in 'recovering condition'by the end of 2020.

In 2018-2019 we produced plans for the following sites:

- Cobham Woods SSSI
- Exe Estuary SSSI
- Shabbington Woods Complex SSSI
- Thetford Golf Course and Marsh SSSI

- Dark Peak SSSI
- Thursley, Hankley and Frensham Commons SSSI
- Staines Moor SSSI
- Humber Estuary SSSI
- Barmshott and Ludshott Commons SSSI
- South Pennines SSSI

We see Motorway Service Areas (MSAs) as an opportunity to improve biodiversity on significant areas of land next to our network. We are reviewing the advice we can provide to MSA operators (private companies that work independently of Highways England) to support them in creating more species-rich grassland and other habitats within their landholdings. We aim to complete this work by the end of 2019-20.

Outcome 3: We will have delivered biodiversity enhancements while implementing our capital programme of network improvement.

Our programme of major schemes represents the biggest investment in our network in a generation. This provides opportunities to enhance the biodiversity performance of our network, putting right some of the issues of the past. It remains critical that we mitigate as many of the adverse impacts of our schemes as we reasonably can, while at the same time looking for opportunities to deliver further enhancements.

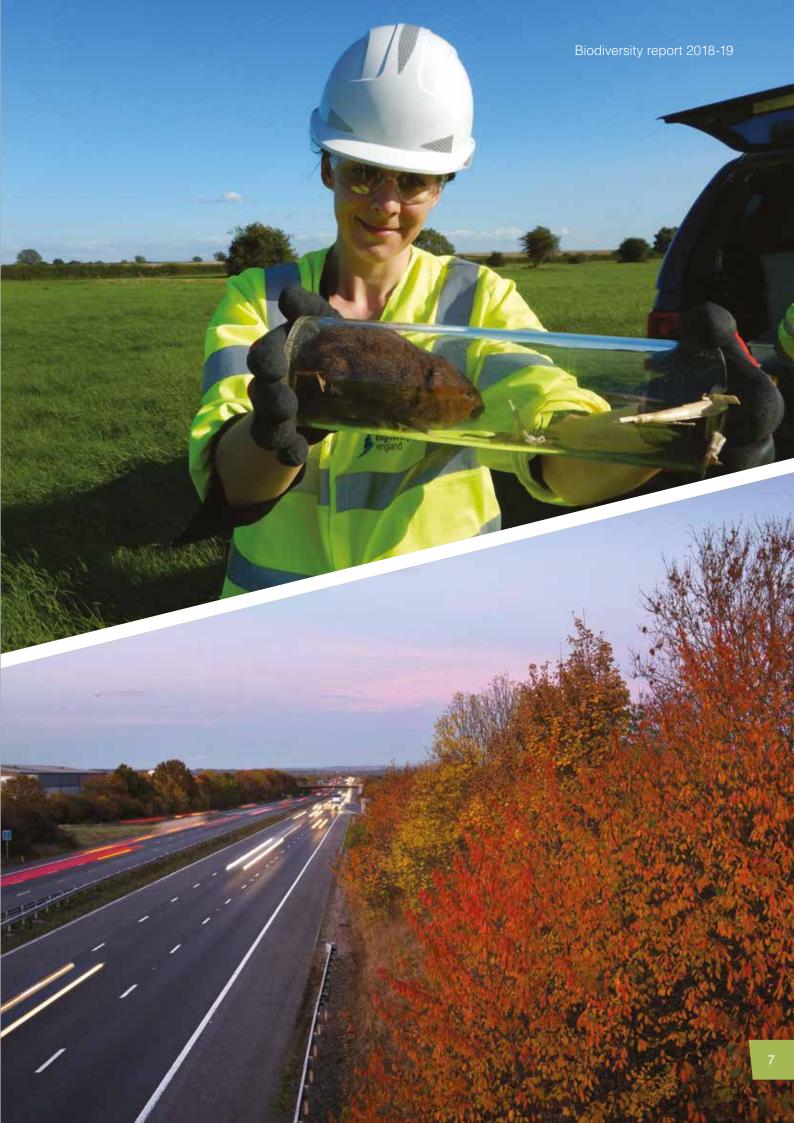
For example, the A14 Cambridge to Huntingdon scheme continued their work to protect and enhance the environment, including protecting species and creating new habitats. In 2018-19 the team worked with specialists to create a new water vole habitat area in challenging timescales, providing a suitable new habitat for this endangered species.

In 2018-19 we used the biodiversity metric to undertake forecasting work which will be used to embed the biodiversity metric into our major schemes in 2019-20. Further information is provided later in this report.

Outcome 4: We have addressed the legacy of biodiversity problems on our network through a targeted programme of investment.

This year we have improved our engagement with wildlife partners by holding additional meetings with the national leads of various wildlife organisations and further working with the environmental stakeholder groups for Designated Funds. This has resulted in an increase in the number of partnership projects that have been reviewed for funding, including a partnership project with the Cheshire Wildlife Trust at Gowy Meadows.

We reviewed 91 biodiversity project proposals in 2018-19. Fifteen schemes promoting habitat connectivity have been progressed using Designated Funds, and we have produced 10 SSSI management plans. We have also progressed four projects associated with three Nature Improvement Areas (NIAs); Morecambe Bay Limestones & Wetlands NIA, Malborough Downs NIA and Humberhead Levels NIA. We have provided funding for 15 habitat connectivity schemes through our Environment Designated Funds, for either feasibility studies, detailed design or construction. One of these schemes is on the A38 at Bodmin Parkway, where we funded a project with the Westcountry Rivers Trust. This included repairing and improving fish pass features under our bridge for fish including salmon and sea trout. The target within our Biodiversity Plan is to consider five connectivity



measures by the end of 2019-20. We have completed this action in 2018-19, one year early. Twenty-five schemes have been delivered in 2018-2019 that will support the National Pollinator Strategy1. These schemes have delivered an

additional 100 hectares of species and wildflower rich grasslands on our soft estate. Since the start of the Biodiversity Plan in 2015, we have created a total of 550 hectares of species-rich grassland.

Table 1.0 Number of biodiversity projects receiving Designated Funds in 2018-2019

	Projects recommended for progress	Contribution to species- rich grassland	Nature improvement areas	SSSI	Connectivity projects	Partnership projects
Recommended for feasibility funding	46	30	1	0	14	1
Recommended for detailed design/delivery funding	45	29	3	6	1	6

Outcome 5: We are fully transparent about our biodiversity performance

There are four actions within this outcome, which have all been completed and reported on in previous reports. The production of this annual biodiversity report is an additional commitment to the final action, which ensures we are transparent about our biodiversity performance.

¹ Department for Environment, Food & Rural Affairs (2014) The National Pollinator Strategy: for bees and other pollinators in England.

Case study: Brotherton Ings habitat creation

Brotherton Ings is an area of land that used to be a waste storage facility for Ferrybridge 'C' Power Station. We took over management of this land after the construction of the A1(M) motorway upgrade in 2003. The land is located close to the Fairburn Ings Local Nature Reserve, which is managed by the Royal Society for the Protection of Birds (RSPB).

In 2018 our Environment Designated Fund helped enhance the biodiversity of this area. The ongoing management of the site will create wildflower-rich grassland and improved habitat for birds, bats and other small mammals. Key species include warblers, woodland butterflies, grassland pollinators and the willow tit.

To achieve this, areas of woodland were thinned, cleared or planted with additional trees and scrubs to create a mix in tree age and diversity. Areas of species-rich grassland area were created, and old tree stumps were left standing to provide habitats for insects and birds.

As a result, we have enhanced 1.1 hectares of grassland and 6.5 hectares of woodland, and created more than 2.5 hectares of species-rich grassland and other habitats.

We were delighted to work with the RSPB, who provided advice and support to align the project with their long-term biodiversity objectives and vision for the wider landscape. Overall, delivery of this project and the coordinated approach between various environmental stakeholders, will help create a more resilient and better-connected area for wildlife.





Case study: A38 Ashburton to lyybridge species-rich grassland creation

In the south-west we have created 5.9 hectares of species-rich grassland on verges along the A38 in Devon, which previously had low botanical diversity. We used habitat connectivity modelling to help bring biodiversity benefits at a local and landscape scale, and aimed to increase connectivity by linking up existing species-rich grasslands.

One of the challenges of the project was to make it as simple as possible, so that it can be repeated elsewhere in the country using standard roadside grass cutting machinery. Firstly, the sites were closely cut, the arisings were collected, and any unwanted species were treated. A flail mower, set to low, was used to create at least 70% bare ground, leaving a tilth ready to be seeded by hand with bespoke wildflower seed mixes appropriate for each location. The sites were then lightly rolled to ensure good contact between seeds and soil to improve germination

success.

This method proved to be an efficient and effective way to restore and create new grasslands, and less than a year later the new sites have established well and are buzzing with pollinators.

Case study: Stover Country Park

We have worked in partnership with Stover Park and Devon County Council, supported by Natural England and the Environment Agency, to improve biodiversity and water quality at Stover Country Park, a Local Nature Reserve and SSSI in Devon. The site is designated as an official 'Dragonfly Hotspot' by the British Dragonfly Society.

The scheme has delivered 3,800 square metres of new reed beds at the park. These reeds act as a filter, capturing and filtering water run-off from the A38 before it enters the lake. Water can carry pollutants such as oil and metal residue into the lake, which has contributed to the poor water quality and reduced biodiversity of wildlife in the lake.

The new reeds have been planted upstream of the lake to act as a natural barrier and filter pollutants.

We have planted four varieties of reed native to the area, which also provide valuable habitat for a range of wildlife. Work on the site started in late November 2018 and planting was completed in April 2019.

We hope that by reducing the silt deposits and contamination white-water lilies, not seen at the lake since 2007, will once again start to cover the lake surface, providing suitable habitat for a variety of dragonflies and damselflies. The reedbeds themselves will also support a range of birds, insects, reptiles, amphibians and mammals such as water rail, hairy dragonfly, grass snake,



Working to deliver our contribution to the government's Insect Pollinator Strategy

In 2014 the government published their National Pollinator Strategy, for bees and other pollinators in England. This details how government can work with a range of partners to ensure that the UK's pollinating insects thrive, so that they carry out their essential service of pollinating our flowers and crops.

Our network, with its 30,000 hectares of green verge, can contribute to this strategy. In our Biodiversity Plan, we set an ambitious target of creating an additional 20 hectares of species-rich grassland per year in each of our ten managed network areas (which is 100 hectares per area by 2019-20, 1000 hectares in total). We are reviewing the challenges we have faced in working to meet this target, and will use the learning to inform delivery in future years. While the target is challenging, we are working hard to increase the level of delivery in 2019-20 iso we can meet the target.

During 2018-2019, we have delivered 25 grassland schemes creating a further 100 hectares, bringing the total amount of species-rich grassland created to 550 hectares since 2015.

North-west

North-west

South-west

South-east

Number of grassland schemes delivered in

each Highways England area in 2018-19.

Case study: A19 magnesian limestone influenced species-rich grassland project

We have funded a project in the north-east to convert 41 hectares of neutral and open grassland on the verges of the A19 into magnesian limestone influenced species-rich grassland. This is an important nationally scarce habitat that supports a number of species. The project has significantly increased the extent of this habitat, and has improved connectivity along the A19 and into the surrounding countryside.

In spring 2018 we started work on phase two of the project. In 2018-19 we carried out grassland management and ecological monitoring on 53 new plots with an area of more than 18 hectares, and continued to manage and maintain 13 hectares of grassland from phase one of this project.

This management work included cutting the existing grassland and removing encroaching scrub and small trees. The monitoring survey shows that the project is delivering positive results by increasing species diversity and an abundance of key indicator species in the majority of plots.

In 2018, the project was also exhibited by the Durham Wildlife Trust at the Botanical Society of Britain & Ireland's Annual Exhibition Meeting with very positive feedback.



Measuring biodiversity: developing our method for describing change on our network

We are committed to reducing the loss of biodiversity on our network during 2015-2020. Our previous Biodiversity Plan annual reports described our approach to developing and refining our biodiversity metric from 2015 to 2017. We used the metric to calculate our biodiversity baseline for the start of 2015.

We are using the metric to measure changes in biodiversity on our network (calculated as biodiversity units) as a result of our activities over time. We are using this information to support internal performance monitoring and to inform decision making.

This will ensure biodiversity mitigation and enhancement is incorporated and measured at all stages of our major project schemes, helping to deliver better biodiversity outcomes.



Appendix

Commentary against the Biodiversity Plan actions.

Outcome 1: Highways England and our suppliers are equipped to produce good biodiversity performance

Action No.	Action	Comment	Status
1.1	Establish a biodiversity technical working group and identify a highways biodiversity plan officer to act as the company's single point of contact. The technical working group will include representatives from across the business, including areas responsible for road improvement projects and road maintenance.	Group established in 2015- 2016 and continue to meet throughout the year.	Action complete
1.2	Develop a set of criteria to guide the allocation of Environment Designated Fund monies through our road improvement and road management works, to develop biodiversity projects based on local priorities.	Guidelines produced 2016- 2017	Action complete
1.3	Undertake an awareness raising exercise within the business on the biodiversity plan and the associated criteria. Undertake a consultation exercise on the forthcoming written guidance (see Action 1.4).	Training events held in 2016- 2017 to embed the plan within the business.	Action complete
1.4	Develop written technical guidance to embed the Biodiversity Plan, and provide a guide to its implementation for Highways England and its service providers.	Written guidance provided in support of the training events in 2016-2017.	Action complete
1.5	Review the operational requirements given to our service providers, to ensure that biodiversity work is fully reflected in their contracts, as such contracts are renewed.	Review of all supply chain contracts undertaken in 2016-2017	Action complete

Action No.	Action	Comment	Status
1.6	Explore how measures to improve biodiversity can be integrated with Highways England's litter strategy. The key themes of this are: to influence littering behaviour; to improve operational delivery and asset maintenance; to seek and respond to customer feedback; and to improve partnership working.	Consistently seeking ways to improve the link between the litter strategy and biodiversity with the new asset delivery maintenance requirements.	Action complete
1.7	Undertake an annual awareness exercise to maintain our staff and supplier knowledge of the plan. Collect and collate reporting evidence from our road improvement and road management works and report back to the company on the level of success against the Biodiversity KPI.	In 2018-2019 we developed a new method for reviewing and signing off Environmental Designated fund projects on completion.	Annual actions complete (on-going commitment)

Outcome 2: The SRN is managed to support biodiversity

Action No.	Action	Comment	Status
2.1	We will use the Regional Programme Boards to work with local wildlife partners for example by establishing local highways biodiversity steering groups.	Stakeholder meetings have been held at a national level. Biodiversity projects will be submitted through the standard partnership process.	Action complete
2.2	Our service providers to liaise with Natural England and local partners to identify actions required to achieve, maintain and/or enhance favourable conservation status of Sites of Special Scientific Interest and other statutory designated sites. Potentially, these actions might include buffering initiatives that contribute to site protection. These actions will meet the national objective of securing 50% of Sites of Special Scientific Interest in favourable condition and 95% of Sites of Special Scientific Interest in favourable or recovering condition by 2020 in line with Biodiversity 2020. Currently there approximately 70 Sites of Special Scientific Interest on or adjacent to the network, of which approximately 40 require intervention to achieve the above. For agreed sites, a management plan for 2017-2020 will be submitted to Highways England for review. Each management plan must include a statement on the current condition of the site, actions designed to improve the status of the site and reporting each year.	Work has continued on the SSSI management plans. HE has met its internal target of 10 SSSI management plans during the year April 2018 to March 2019.	41 SSSI management plans produced to date

Action No.	Action	Comment	Status
2.3	Commission, arrange and undertake targeted baseline studies to improve our understanding of the biodiversity status of the network, to monitor the effects of management on biodiversity and to identify opportunities for the enhancement projects required under Action 4.1.	Work continues using Designated Funds	Action complete
2.4	Using the Regional Programme Boards and local wildlife partner engagement (Action 2.1), service providers to identify and implement revised management activities* to improve biodiversity** and monitor progress against the baseline (Action 2.3), in line with the forthcoming written guidance. Report progress annually to the biodiversity technical working group.	Engagement is now undertaken through the designated fund stakeholder workshops.	Action complete
2.5	Negotiate with land owners and managers, including motorway service area operators, to identify significant areas of land that could be managed to achieve biodiversity gains. Each region to produce a report that identifies areas of land of potential interest and proposals for revised management arrangements for enhanced biodiversity outcomes.	A report is in draft which will provide guidance to Motorway Service Area operators on how they can improve biodiversity on their land holdings.	Position to be finalised in 2019-20

Outcome 3: We have delivered biodiversity enhancements whilst implementing a capital programme of network improvement

Action No.	Action	Comment	Status
3.1	We will ensure that the proposals within the Biodiversity Plan and supporting technical guidance are incorporated within network improvement projects. Project teams will undertake the co-ordination and delivery of all biodiversity reporting and monitoring of their projects, and report to the technical working group.	A guidance document was produced in 2016-2017.	Action complete
3.2	As part of normal delivery, network improvement projects will mitigate and compensate their biodiversity impacts to achieve no net loss of biodiversity, as far as the projects are reasonably able. In addition, projects will identify biodiversity opportunities and deliver actions that will achieve net biodiversity gain, wherever possible. The identification of such opportunities should be included within the Environmental Assessment Report. If no such opportunities are found then a clear statement explaining why should be provided instead.	Major schemes continue to put considerable effort into mitigating their impacts.	Action now standard for major schemes
3.3	Project teams to liaise with local wildlife partners as part of their project design and development to identify how the project could best contribute towards landscapescale biodiversity gains. Information on these opportunities to be provided to the relevant regional programme board and technical working group.	Six partnership projects submitted by Natural England and Wildlife Trusts.	Action now standard for major schemes
3.4	Where projects have passed through Action 3.3 and opportunities have arisen within projects for biodiversity enhancement which are over and above that which would normally be undertaken, potential biodiversity investment opportunities that meet the criteria of the Environment Designated Fund, will be submitted to the technical working group for approval and onward funding decision by the Capital Investment Group.	This work is ongoing	Action now standard for major schemes
3.5	We will monitor and ensure the delivery of the agreed enhancements (under Action 3.4) during the on-going detailed design and construction phase of the project.	In 2018-2019 we developed a new method for reviewing and signing off Environmental Designated fund projects on completion.	Action now standard for major schemes

Outcome 4: We have addressed the legacy of biodiversity problems on our network via a targeted programme of investment

Action No.	Action	Comment	Status
4.1	In locations outside of committed network improvement projects, and following on from Action 2.3, we will work with local wildlife partners and other stakeholders to identify a programme, for each of our regions, of potential biodiversity investment opportunities that meet the criteria of the Environment Designated Fund. These programmes will be submitted to the technical working group for approval and onward funding decision by the Capital Investment Group. Potential biodiversity projects could either be within or outside of the land associated with the strategic road network.	In June 2018 a BioSift Group was established. It concentrates its efforts on reviewing Designated Fund projects before they are forwarded to the senior management group. (Investment Decision Committee). During 2018-2019 the group reviewed 117 projects.	Action covered within the Environment Designated Fund Plan
4.1.2	Identify locations suitable for the enhancement and creation of invertebrate friendly habitats including wildflower rich grasslands of benefit to insects, in line with the National Pollinator Strategy. This will comprise at least 20 hectares of new or improved wildflower rich grassland per year of the programme in each of our network areas.	The number of schemes delivered for 2018-2019 is 25. This adds a further 100 hectares bringing the total amount of species-rich grassland created to 550 hectares.	Action 55% complete
4.1.3	Support the objectives of each of the ten Nature Improvement Areas which are adjacent to or form part of our network.	Four projects within three NIA's in 2018-2019 have funding allocated for feasibility studies, design or delivery.	Supporting activities being progressed for 3 of the 10 NIAs
4.1.4	Consider habitats in the wider ecological context, including the landscape character (e.g. using Natural England's National Character Area profiles) and look to improve links between protected sites or to buffer existing sites (in line with Action 2.2).	This action is closely linked with action 4.1.6.	Action complete but further work being progressed through the Designated Funds programme
4.1.5	Include projects specifically designed to improve urban environments with low biodiversity.	Projects are being developed within Area 9 (West Midlands).	Action identified for 2019-20
4.1.6.	Include at least five measures to maximise habitat connectivity, linking road verges and associated land with the wider landscape wherever possible. This will include consideration of measures to improve connectivity across roads, which might include green bridges and/or tunnels.	Habitat connectivity schemes confirmed to date in 2018-2019 is 15. These may be a combination of grassland, fish passes. hedgerows etc.	Action complete

Action No.	Action	Comment	Status
4.1.7.	Identify with other initiatives being undertaken to address landscape, cultural heritage, cycling and accessibility, noise, air and water quality.	Synergies between various topics are now identified within the Designated Fund Appraisal Tool Guidance, which was produced in 2016-2017.	Action complete
4.1.8	All projects to monitor their biodiversity performance (against the baseline established in Action 2.3), post-completion for an appropriate period. Monitoring details will be project specific and agreed with the technical working group and local wildlife partners.	In 2016-2017, the need to ensure appropriate post completion monitoring was included in project team guidance for the development of biodiversity projects.	Action now standard for Environment Designated Fund projects

Outcome 5: We are fully transparent about our biodiversity performance

Action No.	Action	Comment	Status
5.1	We will collate and interpret pre-existing (2015) and new (2016-2020) biodiversity data (see Action 2.3), as part of our road improvement and road management work, for integration with a biodiversity metric.	An internal technical note was issued to provide guidance on our biodiversity metric requirements.	Action complete
5.2	We will develop and/or adopt an appropriate biodiversity metric which uses the ecological baseline on the verges and associated land against which change can be measured and which potentially, captures the wider ecosystem services benefits.	An internal technical note was issued to provide guidance on our biodiversity metric requirements.	Action complete
5.3	We will report on the success of the biodiversity plan through the government's recognised biodiversity reporting tool known as the Biodiversity Action Reporting System (BARS).	Not Applicable – BARS is no longer operational.	Action complete
5.4	We will produce an annual non-technical public report on biodiversity and publish this on our website. We will look for opportunities to engage and enthuse the public in our biodiversity work.	This document is the report for 2018-2019	Action complete



If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.

