

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 3 and
Additional Provision 4 Environmental Statement

Volume 2 | Community forum area reports

CFA18 Stoneleigh, Kenilworth and Burton Green

October 2015

SES3 and AP4 ES 3.2.1.18



HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 3 and
Additional Provision 4 Environmental Statement

Volume 2 | Community forum area reports

CFA18 Stoneleigh, Kenilworth and Burton Green

October 2015

SES3 and AP4 ES 3.2.1.18



Department
for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

A report prepared for High Speed Two (HS2) Limited:

AECOM

ARUP

ATKINS

CAPITA



ineco



**PARSONS
BRINCKERHOFF**



High Speed Two (HS2) Limited,
One Canada Square,
London
E14 5AB

Details of how to obtain further copies are available from HS2 Ltd.

Telephone: 020 7944 4908

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

Copyright © High Speed Two (HS2) Limited, 2015, except where otherwise stated.

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full via the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact High Speed Two (HS2) Limited.



Printed in Great Britain on paper
containing at least 75% recycled fibre.

Contents

Structure of the HS2 Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement	1
Structure of this report	3
1 Introduction	5
Part 1: Supplementary Environmental Statement 3	8
2 Summary of changes	8
2.1 New environmental baseline information	8
2.2 Changes to the design or to construction assumptions not requiring a change to the Bill	8
2.3 Topics included in the SES ₃ assessment	13
3 Assessment of changes	14
3.1 Ecology	14
3.2 Sound, noise and vibration	17
3.3 Traffic and transport	20
Part 2: Additional Provision 4 Environmental Statement	25
4 Summary of amendments	25
5 Assessment of amendments	29
5.1 Additional land required for construction of a drainage outflow into a minor watercourse (AP ₄ -018-001)	29
5.2 Stoneleigh Park amendments (AP ₄ -018-002)	29
5.3 Revised accommodation access for Millburn Grange Farm (AP ₄ -018-003)	57
5.4 Revised woodland compensation proposals in the vicinity of Burton Green (AP ₄ -018-004)	62
5.5 Additional land required along Red Lane for the temporary Kenilworth Greenway diversion (AP ₄ -018-005)	79
5.6 Alternative access for overhead power line diversion south of Moat Farm (AP ₄ -018-006)	85
6 Combined effects of amendments in this CFA due to changes in traffic flows	92
List of figures	
Figure 1: Locations of design changes in CFA18	10
Figure 2: Locations of amendments in CFA18	28

List of tables

Table 1: Scheme definitions	5
Table 2: Summary of changes to the design or to construction assumptions not requiring a change to the Bill in CFA18	8
Table 3: Assessment of construction noise at residential receptors and non-residential receptors	19
Table 4: Summary of amendments in CFA18	25

Structure of the HS2 Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement

The Supplementary Environmental Statement 3 (SES3) and Additional Provision 4 Environmental Statement (AP4 ES) comprises:

- non-technical summary (NTS). This provides a summary in non-technical language of the SES3 (Part 1) and AP4 ES (Part 2) and of any likely significant environmental effects, both beneficial and adverse, which are new or different to those reported in the High Speed Two (HS2) Phase One Environmental Statement (ES) submitted to Parliament in November 2013 in support of the hybrid Bill ('the Bill') for Phase One of HS2 (hereafter referred to as 'the main ES') as updated by subsequent SES and AP ES documents;
- Volume 1: introduction to the SES3 and AP4 ES. This introduces the supplementary environmental information and design changes included within the SES3 and amendments, which have resulted in the need to amend the Bill, within the AP4 ES. It also explains any changes to the scope, methodology, assumptions and limitations required for the environmental assessment;
- Volume 2: community forum area (CFA) reports and map books. These describe the supplementary environmental information and design changes included within the SES3 (Part 1) and amendments within the AP4 ES (Part 2). Any new or different likely significant environmental effects arising from these changes and amendments in each CFA, compared to those reported in the main ES, as updated by SES and SES2 documents (and SES3 for the AP4 amendments) are reported. The AP1, AP2 and AP3 amendments are also taken into account where relevant. In addition, the main local alternatives that have been considered are described, where relevant;
- Volume 3: route-wide effects. This reports new or different likely significant route-wide effects arising from the supplementary environmental information and design changes included within the SES3 (Part 1) and amendments within the AP4 ES (Part 2) compared to those reported in the main ES as updated by SES and SES2 (and SES3 for the AP4 amendments). The AP1, AP2 and AP3 amendments are also taken into account where relevant;
- Volume 4: off-route effects. This reports new or different likely significant off-route effects arising from the supplementary environmental information and design changes included within the SES3 (Part 1) and amendments within the AP4 ES (Part 2) compared to those reported in the main ES as updated by SES

and SES₂ (and SES₃ for the AP₄ amendments). The AP₁, AP₂ and AP₃ amendments are also taken into account where relevant;

- Volume 5: appendices and map books. This contains environmental information and associated maps in support of the other volumes of the SES₃ and AP₄ ES; and
- glossary of terms and list of abbreviations. This contains any new or different terms and abbreviations used throughout the SES and AP ES reports, additional to those included in the main ES.

Structure of this report

This volume of the SES3 and AP4 ES is divided into CFA reports, which are in turn divided into two parts.

Part 1 provides supplementary environmental information relating to:

- new baseline information with respect to ecological surveys conducted during 2015; and
- changes to the design or to construction assumptions which do not require changes to the Bill.

Part 1 of each CFA report includes, where relevant:

- a description of the changes or updates within the CFA that have triggered the need for reassessment;
- an assessment of the environmental effects of the changes for relevant environmental topics considering the:
 - scope, assumptions and limitations of the SES3 assessment;
 - changes of relevance to the assessment;
 - environmental baseline;
 - effects arising during construction;
 - effects arising from operation; and
 - mitigation and residual effects; and
- a summary of any new or different likely residual significant effects as a result of the changes.

Part 2 provides environmental assessment information relating to proposed amendments to the design, which have resulted in the need to alter the powers conferred by the Bill. The following is included where relevant:

- a summary of the proposed amendments within each CFA that have triggered the need for reassessment;
- a description of each amendment;
- an assessment of the environmental effects of each amendment for relevant environmental topics considering the:
 - scope, assumptions and limitations of the AP4 ES assessment;
 - environmental baseline;
 - effects arising during construction;
 - effects arising from operation; and
 - mitigation and residual effects; and

- a summary of any new or different likely residual significant effects as a result of each proposed amendment.

1 Introduction

- 1.1.1 The Bill for high speed rail between London and the West Midlands was submitted to Parliament together with the main ES in November 2013. The AP1 ES, which was submitted in September 2014, contained generally minor amendments to the design of the original scheme (i.e. the scheme submitted in November 2013) in CFAs 7 – 26. The SES and AP2 ES, which were submitted in July 2015, updated the main ES and contained a number of further amendments to the design of the original scheme in CFAs 4 – 26. The SES2 and AP3 ES, which were submitted in September 2015, contained further updates to the main ES and reported the assessment of a number of amendments to the design of the original scheme in CFAs 1 – 5.
- 1.1.2 Since the submission of the main ES and subsequent SES and AP documents, updates to environmental baseline information and changes to scheme design or assumptions have occurred, which may lead to new or different significant effects. These effects, depending on the type of change, are reported in the SES3 (Part 1) or AP4 ES (Part 2) of this document.
- 1.1.3 The Bill and associated Additional Provisions (APs) to the Bill described above, if enacted by Parliament, will provide the powers to construct, operate and maintain Phase One of HS2.
- 1.1.4 In order to differentiate between the original scheme and the subsequent changes, the terms set out in Table 1 are used.

Table 1: Scheme definitions

Scheme name	Definition	Relevant CFAs
the original scheme	the Bill scheme submitted to Parliament in November 2013, which was assessed in the main ES	1 – 26
the AP1 revised scheme	the original scheme as amended by the AP submitted in September 2014	7 – 26
the SES scheme	the original scheme with the design changes described in the SES submitted in July 2015	4 – 26
the AP2 revised scheme	the SES scheme as amended by the AP2 submitted in July 2015	4 – 26
the SES2 scheme	the original scheme as updated by the SES scheme, with the design changes described in the SES2 submitted in September 2015	1 – 5 (i.e. this applies in the London area only)
the AP3 revised scheme	the SES2 scheme as amended by the AP3 submitted in September 2015	1 – 5 (i.e. this applies in the London area only)
the SES3 scheme	the SES2 scheme with the design changes described in the SES3 submitted in October 2015	4 – 26
the AP4 revised scheme	the SES3 scheme as amended by the AP4 submitted in October 2015	4 – 26

- 1.1.5 SES₃ (Part 1 of this report) contains updated environmental baseline information and describes changes to the scheme that have occurred within the current limits and powers of the Bill, and therefore do not require an AP to the Bill. This includes:
- new baseline information with respect to ecological surveys conducted during 2015; and
 - changes to the design or to construction assumptions which do not require changes to the Bill.
- 1.1.6 Design changes assessed within the SES₃ for this CFA include:
- revised construction arrangements to reduce traffic flows onto the A46 Kenilworth Bypass and on the wider highway network; and
 - extension of the south porous portal of Burton Green green tunnel by a further 40m south-eastwards (to optimise the aerodynamic performance and improve the noise and visual effects of the tunnel, during the operational phase).
- 1.1.7 The changes are described in Part 1 under a series of sub-headings and assessed on a topic-by-topic basis, using the same approach adopted in the main ES.
- 1.1.8 The purpose of SES₃ is to provide an assessment of any new or different likely significant environmental effects arising from the changes described.
- 1.1.9 There were no SES₂ changes in this CFA, so the SES₃ changes are compared to the SES scheme. There were AP₁ and AP₂ amendments, so these are taken into account as appropriate.
- 1.1.10 The AP₄ ES (Part 2 of this report) describes the likely significant effects of amendments to the design of the scheme, which require the use of land outside the original limits of the Bill, additional access rights, or other extensions to the powers conferred by the Bill, making it necessary to submit an AP to the Bill. The amendments assessed within the AP₄ ES for this CFA include:
- additional land required for construction of a drainage outflow into a minor watercourse;
 - a package of measures at Stoneleigh Business Park primarily to accommodate the 2012 masterplan proposals for Stoneleigh Business Park and ensure the continuity of access and connectivity between the two severed parts of Stoneleigh Business Park. These measures include provision of an additional accommodation overbridge, additional landscape earthworks, redesign of the entrance roundabout, provision of an agricultural underpass and redesign of access roads;
 - a revised accommodation access at Millburn Grange Farm;
 - revised woodland compensation proposals in the vicinity of Burton Green;

- additional land required and provision of an alternative alignment for the temporary diversion of the Kenilworth Greenway at Red Lane; and
- alternative temporary access for an overhead power line diversion south of Moat Farm.

1.1.11 The AP₄ ES assesses each amendment separately for all relevant topics. The purpose of the AP₄ ES is to provide an assessment of any new or different likely significant environmental effects arising from the amendments compared to the SES₃ scheme, taking into account AP₁ and AP₂ amendments where relevant.

1.1.12 The standard measures that will be used to mitigate likely significant adverse environmental effects during construction and operation of the scheme are described in the main ES, Volume 1, Section 9 and the draft Code of Construction Practice (CoCP) submitted in support of the Bill. Implementation of these measures has been assumed in this SES₃ and AP₄ ES.

Part 1: Supplementary Environmental Statement 3

2 Summary of changes

2.1 New environmental baseline information

Ecology

- 2.1.1 Surveys for amphibians have been undertaken in this area during 2015 and are relevant to the assessment.
- 2.1.2 Details of all amphibian surveys undertaken in this area during 2015 are provided in SES3 and AP4 ES, Volume 5: Appendix EC-001-003 and Volume 5 map series EC-04.
- 2.1.3 A summary of supplementary ecological information that is relevant to the SES3 assessment is included within Section 3 under 'Ecology'.

2.2 Changes to the design or to construction assumptions not requiring a change to the Bill

- 2.2.1 Table 2 provides a summary of the changes to the design or to construction assumptions not requiring a change to the Bill which will result in new or different significant effects in the Stoneleigh, Kenilworth and Burton Green area (CFA18). Figure 1 shows the locations of the changes.

Table 2: Summary of changes to the design or to construction assumptions not requiring a change to the Bill in CFA18

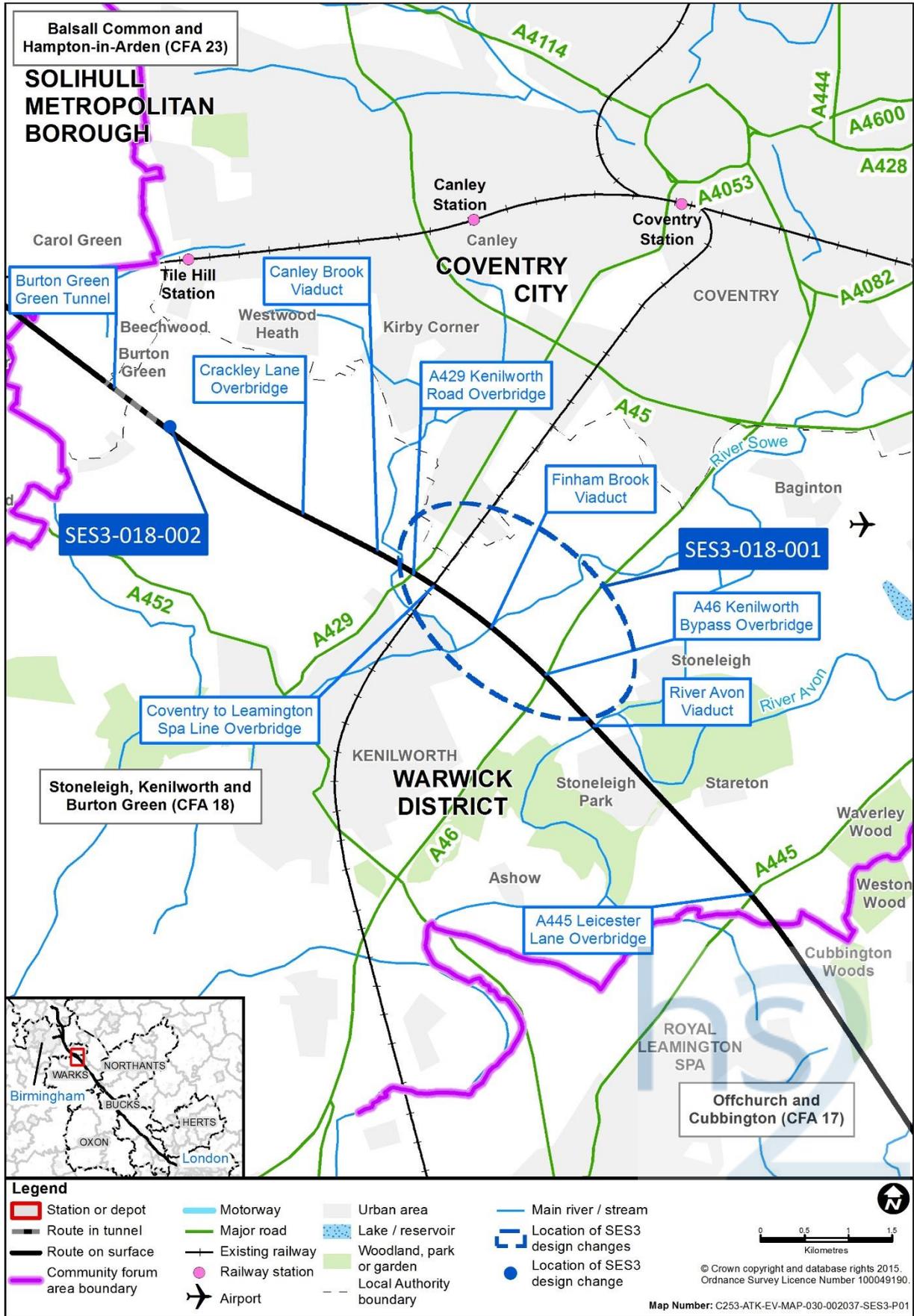
Name of design change or construction assumption	Description of the SES scheme	Description of the SES3 scheme
Revised construction assumptions for construction traffic movements in CFA18 and associated slip road onto the A46 SES3-018-001	Construction access routes were proposed in order to focus construction HGV traffic on the most suitable highway routes to minimise traffic impacts on the local road network.	The movements of excavated materials within this CFA have changed since submission of the Bill. As a result, there are changes to the volume of excavated material that needs to be transported from the roadhead near the A46 Kenilworth Bypass and the roadhead near Kenilworth Road. To minimise traffic effects associated with these changes, signalisation of the A46/Stoneleigh Road junction, construction of a temporary slip road from the Kenilworth Bypass roadhead to the southbound carriageway of the A46 and an additional construction traffic route are proposed.
Extension of Burton Green green tunnel south portal SES3-018-002	The original scheme provided for the scheme to enter into tunnel immediately to the south-east of Burton Green. The tunnel is a 620m-long green tunnel, known as the Burton	Since submission of the Bill, the engineering design for the Burton Green green tunnel has been further developed, resulting in the provision of changes to the porous portal. The southern porous portal will be extended by 40m

SES3 and AP4 ES Volume 2 – CFA18, Stoneleigh, Kenilworth and Burton Green

Name of design change or construction assumption	Description of the SES scheme	Description of the SES3 scheme
	<p>Green green tunnel incorporating a 100m long porous portal¹ at each end.</p> <p>The AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green green tunnel AP1-018-030) proposed to secure 0.9ha of additional land adjacent to the Burton Green green tunnel (south portal) satellite compound on a temporary basis to facilitate the diversion of a fuel pipeline and provision of a permanent easement for maintenance.</p> <p>The AP2 revised scheme (Burton Green area amendment AP2-018-004) required additional land for a number of changes in the vicinity of the Burton Green green tunnel, including extending the length of the tunnel by approximately 50m in each direction and adjusting the vertical alignment of the tunnel in order to reduce the environmental impacts of the original scheme, particularly during the operational phase.</p>	<p>in order to optimise the aerodynamic performance and improve the noise and visual effects of the tunnel, during the operational phase. The length of solid tunnel will remain unchanged. As a result of this change, the portal buildings will be located 40m further to the south and the fuel pipeline diversion will be relocated proportionately further south-eastwards. No additional land will be required in addition to the land required for the original scheme, AP1 and AP2 amendments.</p> <p>This SES3 design change is dependent on the progression of the AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green green tunnel AP1-018-030) and extension of the tunnel under the AP2 revised scheme (Burton Green area amendment AP2-018-004) and will only proceed in the event Parliament approves these amendments.</p>

¹ Porous portals are perforated structures at tunnel portals. These are usually formed of concrete and designed to allow the passage of air from the tunnel. Their function is to reduce the build-up of air pressure when a high-speed train enters a tunnel. The use of this porous portal will ensure that the pressure waves are controlled and kept at a level which does not significantly affect the surrounding area.

Figure 1: Locations of design changes in CFA18



Description of changes to the design or to construction assumptions

Revised construction assumptions for construction traffic movements in CFA18 and associated temporary slip road onto the A46 (SES3-018-001)

- 2.2.2 The Bill provides for movements of construction traffic between the construction compounds and the work sites on designated haul roads throughout the CFA18 area. These will often be located along the line of the route or running parallel to it. Within CFA18 specifically, the Bill also provides for three roadhead sites for the storage, loading and unloading of bulk earthworks material which is moved to and from the site on public highways. These roadhead sites are as follows:
- A46 Kenilworth Bypass southbound roadhead – located to the north-east of the route, south of A46 Kenilworth Bypass overbridge compound, in operation from 2019 for approximately three years (see map CT-05-095, grid references F4-F5, G4-G5 in the main ES Volume 2, CFA18 Map Book);
 - A429 Kenilworth Road northbound roadhead – located to the north-east of the route and north-west of the A429 Kenilworth Road, in operation from 2020 for approximately three years (see map CT-05-096, grid references B5-B6, C5-C6 and map CT-05-097, grid references H5-H6, I5-I6 in the main ES Volume 2, CFA18 Map Book); and
 - B4101 Waste Lane east and westbound roadhead – running parallel to the route, adjacent to the B4101 Waste Lane, in operation from 2021 for approximately one year (see map CT-05-100a, grid references B7-F7 in the main ES Volume 2, CFA18 Map Book).
- 2.2.3 Since submission of the Bill, further analysis of traffic data has been carried out, with the result that construction traffic movements from roadheads associated with the movement of excavated material in this area will be higher than reported in the main ES. The results of traffic surveys recently undertaken, including at the A46 Kenilworth Bypass/Stoneleigh Road junction, have also provided more up-to-date baseline traffic data.
- 2.2.4 The roadheads affected in CFA18 are as follows:
- A46 Kenilworth Bypass southbound roadhead; and
 - A429 Kenilworth Road northbound roadhead.
- 2.2.5 A number of changes to construction arrangements have been investigated and will be implemented to reduce HGV movements on public highways. All works included in this SES3 change will be undertaken within land included in the Bill and within the existing highway boundary.
- 2.2.6 To reduce pressure on the highway network in this area, the revised construction arrangements maximise the use of free capacity at other roadheads to reduce flows onto the A46 Kenilworth Bypass. Further changes proposed to mitigate the impacts of construction traffic in CFA18 are summarised below.

A46 Kenilworth Bypass southbound roadhead – temporary slip road to the A46

- 2.2.7 Whilst the A46 Kenilworth Bypass overbridge is being constructed, there will be a temporary diversion of the southbound A46 to the east of the main carriageway, which is towards the A46 Kenilworth Bypass southbound roadhead (see map CT-05-095, grid references F5-F8 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). Once the overbridge is complete in late 2019, this temporary carriageway can be used to create a new temporary slip road from the A46 Kenilworth Bypass southbound roadhead such that HGVs can directly join the A46 without using the local road network.

A46 Kenilworth Bypass southbound roadhead – temporary highway improvements at the A46 Kenilworth Bypass/Stoneleigh Road junction

- 2.2.8 The A46 Kenilworth Bypass Stoneleigh Road junction will be temporarily signalised, with local widening to provide right turning lanes from Stoneleigh Road onto the north and southbound A46 Kenilworth Bypass slip roads (see map CT-05-095-R1, grid references C8 – E8 in the SES3 and AP4 ES Volume 2, CFA18 Map Book).

A46 Kenilworth Bypass southbound roadhead – one way system for HGVs accessing this roadhead

- 2.2.9 In the original scheme, all construction traffic associated with the A46 Kenilworth Bypass southbound roadhead would use Stoneleigh Road from the A46, Kenilworth Bypass, both inbound and outbound. With the revised arrangements, most of the inbound construction traffic will use the A46 Kenilworth Bypass, A452 Kenilworth Road and B4115 Ashow Road to access the roadhead and main compound. Outbound construction traffic from the roadhead will use the temporary slip road to the A46 Kenilworth Bypass, once available. Prior to construction of this temporary slip road outbound traffic will use B4115 Ashow Road and Stoneleigh Road to access the A46 Kenilworth Bypass.

Mitigation for the A429 Kenilworth Road northbound roadhead

- 2.2.10 All movements of excavated material generated between the A46 Kenilworth Bypass and A429 Kenilworth Road northbound roadhead will be diverted along the HS2 route to the A46 Kenilworth Bypass southbound roadhead once the A46 Kenilworth Bypass overbridge is constructed, which avoids local roads. With this mitigation, traffic levels will be reduced to levels equivalent to those reported in the main ES.

Extension of Burton Green green tunnel south portal (SES-018-002)

- 2.2.11 The Bill provided for the construction of the Burton Green green tunnel immediately to the south-east of Burton Green, where the route gradually converges with the alignment of the Kenilworth Greenway. The Bill provided for a 620m long green tunnel, incorporating a 100m long porous portal at each end, with associated landscape mitigation earthworks and planting (refer to maps CT-05-099 and CT-06-099, grid references E6-H6 in the main ES Volume 2, CFA18 Map Book). The Bill also included provision for the diversion of a fuel pipeline at the Burton Green green tunnel south portal.

- 2.2.12 The AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green green tunnel AP1-018-030) proposed to secure 0.9ha of additional land adjacent to the Burton Green green tunnel (south portal) satellite compound on a temporary basis to facilitate the diversion of a fuel pipeline and provision of a permanent easement for maintenance.
- 2.2.13 The AP2 revised scheme (Burton Green area amendment AP2-018-004) proposed to extend the length of the Burton Green green tunnel by approximately 50m in each direction and adjust the vertical alignment of the tunnel in order to reduce the environmental impacts of the original scheme, particularly during the operational phase. This would result in a total tunnel length of 720m, incorporating the 100m porous portal at each end (refer to map CT-05-099, grid references E6 to H6, in the SES and AP2 ES Volume 2, CFA18 Map Book).
- 2.2.14 Since submission of the SES and AP2 ES, further aerodynamic modelling has shown that the south porous portal of Burton Green green tunnel needs to be extended by a further 40m south-eastwards to optimise the aerodynamic performance and improve the noise and visual effects of the tunnel during the operational phase. The length of the solid tunnel will be unchanged. As a result of this change, the south portal area, including the tunnel portal buildings, will need to be relocated further south-eastwards and the portal access road adjusted accordingly. The fuel pipeline diversion will also be relocated further south-eastwards. The landscape mitigation earthworks around the portal will be redesigned to accommodate these changes; screening levels arising from these revised landscape mitigation earthworks will be unchanged (refer to map CT-05-099 in the SES3 and AP4 ES Volume 2, CFA18 Map Book).
- 2.2.15 This SES3 design change will only proceed if the AP1 revised scheme is enacted, as it is dependent on the acquisition of additional land obtained as part of AP1-018-030 for the fuel pipeline diversion. The SES3 design change will also only proceed if the AP2 revised scheme is enacted, as it is dependent on the earlier Burton Green area amendment (AP2-018-004).
- 2.2.16 No additional land is required for the SES3 change on either a temporary or permanent basis.

Changes to the design or to construction assumptions in other CFAs affecting this CFA

- 2.2.17 As a result of design changes in other CFAs, in particular the change to the construction assumptions in relation to the movement of excavated material in CFA17, there are corresponding changes to the assumptions for construction traffic movements in CFA18. This has resulted in changes to construction traffic flows in both CFAs in comparison to the SES scheme. The SES3 assessment in relation to this is presented in Section 3 under 'Traffic and transport'.

2.3 Topics included in the SES3 assessment

- 2.3.1 The changes described above in Sections 2.1 and 2.2 result in new and different likely significant effects in respect of: ecology; sound, noise and vibration; and traffic and transport. These are described in Section 3.

3 Assessment of changes

3.1 Ecology

Introduction

- 3.1.1 This section of the report describes the environmental baseline in relation to ecology that is relevant to the SES3 assessment. It then identifies any new or different likely residual significant environmental effects as a result of the changes introduced in Section 2, compared to those of the SES scheme. Consideration is given to the potential for impacts on species, habitats and sites designated on the basis of their importance for nature conservation.

Scope, assumptions and limitations

- 3.1.2 Updates to the scope of the assessment for ecology are as set out in Volume 1 of SES3 and AP4 ES. The key assumptions and limitations, and the methodology for determining significance of effects are as set out in Volume 1, the SMR and the SMR Addendum (Volume 5: Appendix CT-001-000/1 and CT-001-000/2 of the main ES) and in Addendum 4 to the SMR (SES3 and AP4 ES, Volume 5: Appendix CT-001-000/5).
- 3.1.3 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported in the main ES, Volume 5: Appendix CT-001-000/2. This constitutes a 'reasonable worst-case' basis for the subsequent assessment. The precautionary approach to the assessment that has been adopted identifies the likely significant ecological effects of the SES3 scheme.

SES3 changes of relevance to this assessment

- 3.1.4 The only changes that are relevant to this assessment are in relation to new baseline surveys for great crested newt.

Environmental baseline

Existing baseline

- 3.1.5 The ecological baseline for the assessment takes into account baseline information collected in support of the main ES, which included field survey data, aerial photography and relevant existing information gathered from national organisations and from regional and local sources. A full list of data sources that informed the main ES assessment in this area is provided in CFA18, Volume 2, Section 7 of the main ES. The assessment also takes into account additional desk-study and survey information that is reported in Volume 5 of the SES and AP2 ES. For those receptors described in the main ES, further details are provided in Volume 2, CFA18, Section 7 and in Volume 5, including maps EC-01 to EC-12 of the main ES. For receptors described in the SES and AP2 ES further details are provided in Volume 2, CFA18, Section 3.4 and in Volume 5: Appendix EC-001-003 and maps EC-04, EC-05 and EC-12 of the SES and AP2 ES.
- 3.1.6 Supplementary information relevant to the SES3 assessment in this CFA is limited to additional survey work for great crested newts. Details of all amphibian surveys undertaken in this area during 2015 are provided in SES3 and AP4 ES, Volume 5: Appendix EC-001-003 and Volume 5 map series EC-04.

- 3.1.7 A summary of the baseline information relevant to the SES3 assessment is provided below.

Designated sites

- 3.1.8 There is no new baseline information or SES3 design changes relevant to designated sites.

Habitats

- 3.1.9 There is no new baseline information or SES3 design changes relevant to habitats.

Protected and/or notable species

- 3.1.10 In the main ES and part 1 of the SES and AP2 ES, water bodies which were not surveyed, or had received incomplete surveys within the land required for construction of the original scheme, were assumed as a precaution to support a medium population of great crested newt and, in each case, were valued at up to a county/metropolitan level.
- 3.1.11 Between April and June 2015, environmental DNA² (eDNA) surveys were undertaken at a number of water bodies within the land required for the original scheme. These water bodies were subject to detailed survey for great crested newt, as they had not previously been surveyed or had been subject to incomplete surveys due to land access restrictions.
- 3.1.12 Two water bodies surveyed in 2015 – within the land required for construction of the SES scheme, but outside of assumed metapopulations – have returned negative results for great crested newt eDNA and great crested newt are therefore assumed absent from:
- a field pond located approximately 110m to the north of the A445 Leicester Lane; and
 - a field pond located approximately 55m to the north of B4115 Ashow Road.

Future baseline

Construction (2017)

- 3.1.13 SES3 and AP4 ES, Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2017, additional to those reported in the main ES.
- 3.1.14 None of the identified developments affect the assessment of the SES3 scheme's likely construction impacts on ecology.

Operation (2026)

- 3.1.15 SES3 and AP2 ES, Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES.

² Environmental DNA is that which is released into the water by plants and animals in a host of ways: from their skin, faeces, mucus, hair, eggs and sperm, or when they die. It provides a means to undertake a diagnostic test to determine the presence or likely absence of a specific target species.

- 3.1.16 None of the identified developments affect the assessment of the SES₃ scheme's likely operational impacts on ecology.

Effects arising during construction

Avoidance and mitigation measures

- 3.1.17 The assessment assumes implementation of the measures set out within the draft CoCP (Volume 5: Appendix CT-003-000 of the main ES), which includes translocation of protected species where appropriate.

Assessment of impacts and effects

Designated sites

- 3.1.18 The SES₃ changes will not give rise to new or different significant effects on designated sites and will not change the level of significance of the effects reported in the main ES and Part 1 of the SES and AP₂ ES.

Habitats

- 3.1.19 The SES₃ changes will not give rise to new or different significant effects and will not change the level of significance of the effects reported in the main ES and Part 1 of the SES and AP₂ ES.

Protected and/or notable species

- 3.1.20 The main ES reported that 14 unsurveyed water bodies that were suitable for amphibians would be lost within the land required for the construction of the original scheme. Water bodies which were unsurveyed or were subject to incomplete surveys were assumed to support a medium population of great crested newt and were assigned a precautionary value of up to county/ metropolitan level. The main ES stated that loss of these water bodies could result in an adverse effect on the conservation status of great crested newt populations which would be significant, in each case, at up to a county/metropolitan level.
- 3.1.21 The new baseline data relevant to great crested newts removes two of the precautionary significant effects on great crested newt populations that were reported in the main ES.
- 3.1.22 The loss of any of the remaining unsurveyed water bodies may still have an adverse effect on the conservation status of great crested newt populations which will remain significant, in each case, at up to a county/metropolitan level.
- 3.1.23 Therefore, the new baseline data will give rise to a different significant effect. However, this will not change the level of significance of the effects reported in the main ES.
- 3.1.24 It is unlikely that the new baseline information will result in any other new or different effects on species receptors of relevance at more than the local/parish level. Local/parish level effects, which are in addition to those identified in the main ES and the Part 1 of the SES and AP₂ ES are listed in Volume 5: Appendix EC-003-003 of the SES₃ and AP₄ ES.

Cumulative effects

- 3.1.25 There are no new or different likely significant cumulative effects for ecology as a result of the SES3 changes interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Other mitigation measures

- 3.1.26 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required. The mitigation identified previously remains sufficient to address the different significant effects arising from the SES3 scheme.

Summary of likely residual significant effects

- 3.1.27 The new baseline information will not give rise to new or different likely residual significant effects on ecological receptors and will not change the level of significance of the effects reported in the main ES and Part 1 of the SES and AP2 ES.

Effects arising from operation

- 3.1.28 There are no new or different significant operational effects for ecology as a result of the new baseline information in comparison with the main ES, SES and AP2 ES.

3.2 Sound, noise and vibration

Introduction

- 3.2.1 This section of the report describes the environmental baseline of relevance to the sound, noise and vibration assessment. It then identifies any new or different likely significant environmental effects as a result of the changes introduced in Section 2 compared to the SES scheme, taking into account the amendments from previous AP ES reports that are relevant to the assessment.

Scope, assumptions and limitations

- 3.2.2 The assessment scope, key assumptions and limitations for the sound, noise and vibration assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 3.2.3 Local assumptions and limitations for sound, noise and vibration are set out in Volume 2, CFA18, Section 11.3 of the main ES.

SES3 changes of relevance to this assessment

- 3.2.4 The only SES3 change that is relevant to this assessment is the extension of the Burton Green green tunnel south portal (SES3-018-002).

Environmental baseline

Existing baseline

- 3.2.5 The existing baseline sound and vibration information for this area is described in the main ES (Volume 2, CFA18, Section 11.2). Baseline sound levels representative of the assessment locations affected by the SES3 scheme changes have been used in the construction and operational assessments.

Future baseline

- 3.2.6 Without the original scheme, existing sound levels in this area are likely to increase gradually over time. This is primarily due to road traffic growth on the existing road network. Changes in car technology may offset some of the expected sound-level increases due to traffic growth on low speed roads. On higher-speed roads, tyre sound dominates the overall levels and the expected growth in traffic is therefore likely to increase ambient sound levels over time.

Construction (2017)

- 3.2.7 Volume 5: Appendix CT-004-000 of the SES₃ and AP₄ ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP₂ ES.
- 3.2.8 None of the identified developments affect the assessment of the SES₃ scheme's likely construction noise and vibration impacts.

Operation (2026)

- 3.2.9 Volume 5: Appendix CT-004-000 of the SES₃ and AP₄ ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP₂ ES.
- 3.2.10 None of the identified developments affect the assessment of the SES's scheme's likely operational noise and vibration impacts.

Effects arising during construction

Avoidance and mitigation measures

- 3.2.11 The measures that have been incorporated into the draft CoCP to avoid or reduce sound, noise and vibration effects during construction remain as stated in the main ES, Volume 2, CFA18, Section 11.

Assessment of impacts and effects

- 3.2.12 In the vicinity of the revised location for the Burton Green south porous portal, the main ES identified a likely significant effect during construction for around 40 properties on Red Lane and Cromwell Lane, Burton Green. This was due to noise from ground engineering works associated with the Burton Green green tunnel (refer to main ES, Appendix SV-003-018, Table 3 – CSV18-Co2³).
- 3.2.13 No change to the likely significant effects was reported in the AP₁ ES compared to that reported in the main ES, due to increased land required to facilitate a fuel pipeline diversion (refer to AP₁ ES, Volume 2, CFA 18, AP1-018-030).
- 3.2.14 The AP₂ ES amendment (AP2-018-004) altered both the location of the Burton Green tunnel south portal and the earthworks surrounding the portal (refer to AP₂ ES, Volume 2, CFA 18 Section 5.6). The SES₃ change (SES₃-018-002) will only proceed in the event that Parliament approves the AP₂ ES amendment.

³ Construction noise significant (on a community basis) effects are identified with a unique identification number, CSVXX-CXX. Further detail on these effects can be found in Volume 5, Appendix SV-003-018 of the main ES.

- 3.2.15 The proposed changes brought about by the AP2 amendment altered the intervening distances between construction activities and receptors, and reduced construction noise levels for a number of receptors on Cromwell Lane and Red Lane, such that the effects – when considered on a community basis, taking into account local context – were no longer significant. In addition, a significant effect on a community basis for a group of ten properties on Cromwell Lane was removed.
- 3.2.16 The SES3 changes will alter the intervening distance between construction activities and receptors, which has the potential to change the reported effects on nearby receptors. An assessment has been undertaken to determine whether the SES3 change, together with the AP2 amendment, will result in any new or different significant effects in comparison to the SES scheme, in addition to those reported in the SES and AP2 ES, using the methodology and significance criteria detailed in the main ES (Volume 5: Appendix SV-001-000).
- 3.2.17 This assessment has determined that there is a reduction in construction noise levels at a further group of receptors on Cromwell Lane (receptor ID 204255). The AP2 revised scheme did not change the assessment outcome reported in the main ES for this particular group of receptors. Table 3 sets out the changes to the main ES, Volume 5: Appendix SV-003-018, construction assessment, sound, noise and vibration for both residential and non-residential receptors in this area.
- 3.2.18 An explanation of the information presented in this table is provided in the main ES, Volume 5: Appendix SV-003-018.

Table 3: Assessment of construction noise at residential receptors and non-residential receptors

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect ⁴	Number of impacts represented	Type of receptor ⁵	Receptor design ⁶	Existing environment	Unique feature	Combined impact	Impact duration [months]	
		Day 0700- 1900	Evening 1900- 2300	Night 2300- 0700										
204255	Cromwell Lane, Burton Green, Kenilworth	61/65 [A]	-	-	Earthworks	NA	6	R	T	-	-	-	-	-

- 3.2.19 The SES3 change, together with the AP2 amendment, reduces construction noise levels for receptors such that, when considered on a community basis, the significant effect at a group of six properties on Cromwell Lane (ID 204255) is removed.
- 3.2.20 For all other receptors, the SES3 scheme does not affect the predicted construction noise levels, and the likely significant effects identified in the main ES, and AP2 ES remain.

⁴ NA – generally no adverse effect. For further information refer to the main ES Volume 5: Appendix SV-003-018

⁵ R – residential

⁶ T – traditional building construction.

Other mitigation measures

- 3.2.21 The mitigation measures included in the draft CoCP (Volume 5: Appendix CT-003-000) in the main ES remain sufficient to address the new and different effects arising from the SES3 changes.

Cumulative effects

- 3.2.22 There are no new or different likely significant cumulative effects for sound, noise and vibration as a result of the SES3 changes interacting with one another, AP1 amendments, AP2 amendments or any relevant committed development.

Summary of likely residual significant effects

- 3.2.23 The proposed SES3 change to extend the Burton Green green tunnel south portal will give rise to reduced noise levels, compared to those reported in the main ES. This will result in a significant effect being removed from a group of six properties on Cromwell Lane.

Effects arising from operation

- 3.2.24 There are no new or different significant operational effects for sound, noise and vibration as a result of the proposed SES3 changes, in comparison with the main ES and SES.

3.3 Traffic and transport

Introduction

- 3.3.1 This section of the report describes the environmental baseline in relation to traffic and transport that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the SES3 scheme compared to the SES scheme.

Scope, assumptions and limitations

- 3.3.2 The assessment scope, key assumptions and limitations for traffic and transport are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001 -000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

SES3 changes of relevance to this assessment

- 3.3.3 The change that is relevant to this assessment is the revised construction assumptions for construction traffic movements in CFA18 and associated temporary slip road onto the A46. This includes:
- the level of construction traffic for the movement of excavated material;
 - revised construction access routes used by this traffic; and
 - revised junction arrangements at the A46 Kenilworth Bypass/Stoneleigh Road junction and a new temporary slip road to the A46 Kenilworth Bypass from the A46 Kenilworth Bypass southbound roadhead.

Environmental baseline

Existing baseline

- 3.3.4 The existing baseline for traffic and transport remains as set out within Volume 2, CFA18 (Section 12) of the main ES, updated for the following:
- further traffic surveys undertaken in 2014 and 2015; and
 - changes by the highway authority to the road layout at the A429 Kenilworth Road/Gibbet Hill Road/Stoneleigh Road junction where the existing traffic signal control was replaced by a roundabout in 2015.
- 3.3.5 The surveys are reported in the SES3 and AP4 ES, Volume 5: Appendix TR-001-000, Transport Assessment.

Future baseline

Construction

- 3.3.6 The future baseline for traffic and transport during construction remains as set out in Volume 2, CFA18 (Section 12) of the main ES, as updated by the additional traffic surveys and revised road layout.

Operation (2026 and 2041)

- 3.3.7 The future baseline for traffic and transport during operations remains as set out in Volume 2, CFA18 (Section 12) of the main ES, as updated by the additional traffic surveys and revised road layout.

Effects arising during construction

Avoidance and mitigation measures

- 3.3.8 Avoidance and mitigation measures are set out in Volume 2, CFA18 (Section 12) of the main ES. The revised junction arrangements which form part of these SES3 changes will serve to mitigate the impact of construction traffic on the network.

Assessment of impacts and effects

Temporary effects

- 3.3.9 The main ES reported significant increases in delay and congestion to vehicle users at the following locations:
- A429 Kenilworth Road / Gibbet Hill Road / Stoneleigh Road (major adverse effect);
 - A46 Kenilworth Bypass / A452 Leamington Road (minor adverse effect);
 - A46 / Stoneleigh Road (major adverse effect); and
 - A452 Leamington Road / B4115 Ashow Road (major adverse effect).

- 3.3.11 The SES3 scheme changes the routeing proposed in the main ES for the A46 Kenilworth Bypass southbound roadhead and the A429 Kenilworth Road roadhead construction traffic as follows:
- in the original scheme, excavated material movement from these roadheads was either routed southbound via the A46 Kenilworth Bypass to join the M40 or northbound via A45 to join the M42. It is no longer proposed to route this traffic via the A45;
 - in the SES3 scheme, HGVs from the A46 Kenilworth Bypass southbound roadhead will be routed via a one-way system with outbound traffic using the temporary slip road to the A46, once this is constructed and available for use in 2020. Prior to this the outbound traffic will be routed to the north along the B4115 Ashow Road and Stoneleigh Road to access the A46. Inbound traffic routes will be from the south via the A46, A46 / A452 junction and B4115 Ashow Road; and
 - Excavated material generated between the A46 Kenilworth Bypass and A429 Kenilworth Road northbound roadhead will be diverted along the HS2 route to the A46 Kenilworth Bypass southbound roadhead once the A46 Kenilworth Bypass overbridge is constructed, which avoids local roads. With this mitigation, traffic levels on A429 will be reduced to levels equivalent to those reported in the main ES.
- 3.3.12 Levels of traffic from the roadheads (A429 Kenilworth Road and A46 Kenilworth Bypass southbound) dealing with the transport of excavated materials as a result of the SES3 changes are as follows:
- A429 Kenilworth Road roadhead: with the original scheme, HGV two-way movements peaked at 350 per day. With the SES3 scheme, the peak HGV two-way movements peak slightly higher at 356 per day; and
 - A46 Kenilworth Bypass southbound roadhead: with the original scheme, HGV two-way movements peaked at 365 per day and were routed through the A46 Kenilworth Bypass / Stoneleigh Road junction. With the SES3 scheme, prior to the availability of the new A46 temporary slip road, HGV two-way movements peak at 272 per day, half of which (i.e. the outbound trips leaving the roadhead) will use the A46 Kenilworth Bypass / Stoneleigh Road junction. With the temporary A46 slip road available, HGV two-way movements peak at 822 per day, none of which route through the A46 Kenilworth Bypass / Stoneleigh Road junction.
- 3.3.13 The changes do not give rise to any new or different significant effects associated with delay and congestion at junctions compared to the main ES, except as follows:
- a minor adverse significant effect at the A429 Kenilworth Road / Gibbet Hill Road/ Stoneleigh Road junction (major adverse effect reported in the main ES). This is due to the changes by the highway authority at this junction from signalised control to a roundabout leading to operational improvements; and
 - a new minor adverse significant effect at the B4115 Ashow Road / Stoneleigh Road junction (not reported in the main ES).

- 3.3.14 In addition, the major adverse significant effect at the A46 / Stoneleigh Road junction in relation to congestion and delays reported in the main ES is removed.
- 3.3.15 The changes in HGV traffic flows reported in the main ES led to substantial increases in daily traffic, resulting in increases in traffic-related severance for non-motorised users. These effects remain the same with the SES3 changes, except at the following locations:
- A46 Kenilworth bypass between the A45 in the north-east and the A452 Leamington Road in the south-west: there was a minor adverse significant effect in the main ES due to increased HGV traffic. As construction traffic is no longer being routed via A45, this minor adverse effect is removed between Stoneleigh Road and the A45 and will be limited to the A46 south of Stoneleigh Road to the M40. However, pedestrians and cyclists are not expected to be crossing the grade-separated dual-carriageway road;
 - A429 Kenilworth Road between the A45 in the north-east and the Farm Access Road immediately to the east of Kenilworth: in the main ES there was a major adverse effect due to the increase in HGV traffic. Construction traffic is no longer being routed via A45 with the major adverse significant effect on the A429 between Stoneleigh Road and the A45 removed and the effect limited to the section between the farm access road and Stoneleigh Road;
 - Stoneleigh Road between A429 and A46 Kenilworth Bypass and to the B4115 Ashow Road: the minor adverse significant effect reported in the main ES changes to a major adverse significant effect due to the routing of traffic from the A429 Kenilworth Road roadhead and A46 Kenilworth Bypass southbound roadhead;
 - A452 Kenilworth Road between A46 and B4115: the minor significant adverse effect with the original scheme changes to a moderate significant adverse effect due to HGV traffic accessing the A46 Kenilworth Bypass southbound roadhead; and
 - B4115 Ashow Road from A452 Kenilworth Road to Stoneleigh Road: a new major adverse significant effect due to HGV traffic accessing the A46 Kenilworth Bypass southbound roadhead.
- 3.3.16 Although the SES3 scheme increases the level of HGV traffic in the local area, this is only a small proportion of total traffic. The increase in total traffic will be less than 5% on the above roads, with the exception of the B4115 Ashow Road south of the A46 Kenilworth Bypass roadhead (where the increase would be 20%) and on the A429 south of Stoneleigh Road (where the increase would be 10%). There are no new or different significant effects associated with changes in total traffic levels.

Permanent effects

- 3.3.17 The permanent effects of construction on traffic and transport are reported under 'Effects arising from operation'.

Other mitigation measures

- 3.3.18 No changes to the mitigation measures reported in Volume 2, CFA18 of the main ES are proposed, except as discussed above.

Cumulative effects

- 3.3.19 The above assessment has taken into account cumulative effects, including planned developments by taking account of background traffic growth, as well as traffic and transport impacts of works being undertaken in neighbouring areas.
- 3.3.20 There are no new or different likely significant cumulative effects for traffic and transport as a result of the SES3 changes interacting with AP2 amendments.

Summary of likely residual effects

- 3.3.21 In relation to congestion and delays, there is a new minor adverse significant residual effect at the B4115 Ashow Road / Stoneleigh Road junction, the major adverse effect at the A429 Kenilworth Road / Gibbet Hill Road/ Stoneleigh Road junction reported in the main ES is reduced to a minor adverse significant residual effect and the major adverse effect at the A46 / Stoneleigh Road junction reported in the main ES is removed.
- 3.3.22 Changes to traffic-related severance for non-motorised users are: the minor adverse significant effect in the main ES on the Stoneleigh Road between A429 and A46 Kenilworth Bypass and to the B4115 Ashow Road changes to a major adverse significant residual effect; there will be a new major adverse significant residual effect at the B4115 Ashow Road between A452 Leamington Road and Stoneleigh Road; and the minor adverse significant effect in the main ES on the A452 Kenilworth Road between A46 and B4115 changes to a moderate adverse significant residual effect.
- 3.3.23 In addition, the changes to construction routes remove the significant effects in relation to traffic-related severance on the A46 between the A45 and Stoneleigh Road (minor adverse significant effect) and on the A429 between the A45 and Stoneleigh Road (major adverse significant effect).
- 3.3.24 The revised significant effects from the SES3 changes are shown on map TR-03-106 (SES3 and AP4 ES Volume 5: Map Book Traffic and Transport).

Effects arising from operation

- 3.3.25 The amendment relates to the construction stage only and will therefore not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Part 2: Additional Provision 4 Environmental Statement

4 Summary of amendments

4.1.1 Table 4 provides a summary of the amendments in the Stoneleigh, Kenilworth and Burton Green area (CFA18) and Figure 2 shows the locations.

Table 4: Summary of amendments in CFA18

Name of amendment	Description of the SES3 scheme	Description of the AP4 revised scheme
Additional land required for construction of a drainage outflow into a minor watercourse AP4-018-001	The Bill provided for construction of a balancing pond immediately north of the A445 Leicester Lane and Furzen Hill Cottages. An outflow is to be provided from the balancing pond into the watercourse to the north. The construction requirements will include provision of an outfall pipe, headwall and localised erosion protection works.	A small area of additional land (approximately 0.02ha) is required on a permanent basis for construction and maintenance of the outflow into the watercourse.
Stoneleigh Park amendments AP4-018-002	<p>The Bill provided for the route to pass within partially retained cutting under the realigned B4113 Stoneleigh Road and continue through the eastern part of Stoneleigh Business Park, exiting the north-western boundary of the Business Park and then crossing the River Avon on a viaduct.</p> <p>The Bill includes a 1.8km-long retaining wall running along both sides of the route, a highway drainage balancing pond to the south-west of the route, and realignment of the B4113 Stoneleigh Road approximately 40m south-east of its current location to include a new roundabout.</p> <p>The Bill also includes a new green overbridge to carry the B4113 Stoneleigh Road, permanent diversions of Footpath W171 and Stareton Road, a new section of road and overbridge provided across the route to allow access within Stoneleigh Business Park and planting undertaken on both sides of the route and the realigned roads.</p>	<p>The following amendments are proposed:</p> <ul style="list-style-type: none"> - an additional accommodation overbridge over the route to provide improved connectivity across Stoneleigh Business Park; - provision of additional landscape mitigation earthworks to the east and west of the route adjacent to the southern approach to the River Avon viaduct; - provision of an accommodation access track adjacent to Stone House Farm; - relocation of the B4113 Stoneleigh Road roundabout to improve access to the Stoneleigh Business Park main entrance and Hares Parlour field, which is used for event car parking; - provision of an agricultural underpass under the B4115 Ashow Road to connect Stoneleigh Business Park to Crewe Farm Fields. The underpass will also be suitable for use by pedestrians on event days when Crewe Farm Fields are in use as a car park; and - redesign of the access track to the balancing pond south of the B4115 Ashow Road to avoid an area of newly designated ancient woodland. <p>The amendments will require approximately 2.7ha of additional land on a permanent basis outside the Bill limits. Approximately 0.5ha of land required permanently in the original scheme will no longer be required.</p>
Revised accommodation access for Millburn	Severance of agricultural land at Millburn Grange Farm required the provision of a new farm accommodation bridge (a new	Reduction of the extent of the western accommodation overbridge access track at Millburn Grange Farm in order to maintain access to a barn,

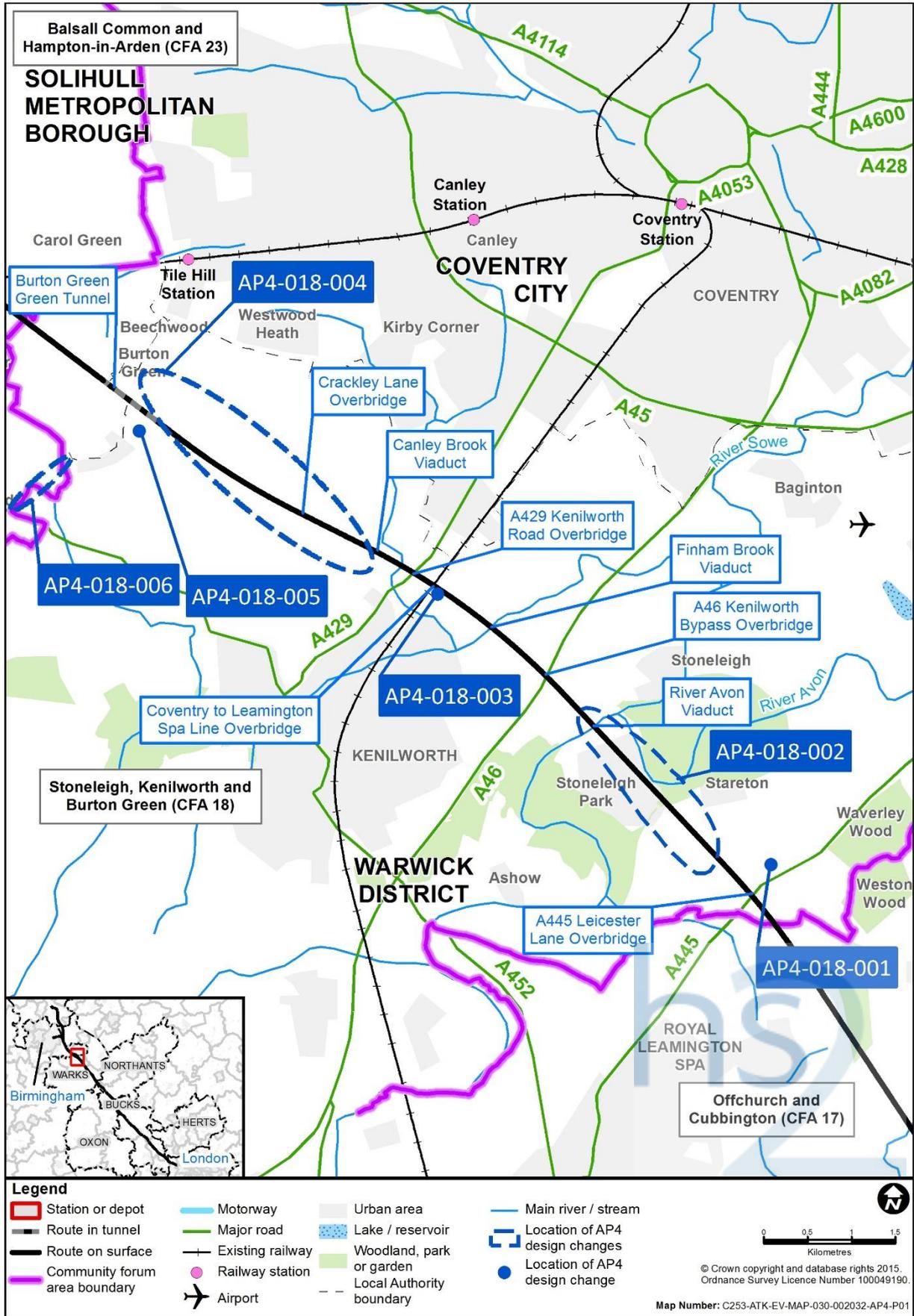
SES3 and AP4 ES Volume 2 – CFA18, Stoneleigh, Kenilworth and Burton Green

Name of amendment	Description of the SES3 scheme	Description of the AP4 revised scheme
Grange Farm AP4-018-003	overbridge crossing the route) for Millburn Grange Farm, located immediately to the south-east of the Coventry to Leamington Spa Line.	which would be blocked by the track proposed in the original scheme. The height of environmental landscape mitigation earthworks will be maintained, and noise fence barriers locally readjusted to provide an equivalent level of screening. No new temporary or permanent land is required for this amendment. The land required permanently will be reduced by approximately 0.06ha.
Revised woodland compensation proposals in the vicinity of Burton Green AP4-018-004	Woodland compensation planting was proposed for the 2.9km section of route from Canley Brook viaduct to Burton Green tunnel (south portal). This section of the route passes between Crackley Wood to the south-west and Roughknowles Wood to the north-east, resulting in losses of woodland habitat, including some areas of ancient woodland.	As a result of the recent identification of further areas of woodland as ancient woodland, three changes are proposed to the woodland compensation in the Burton Green area to compensate for losses of ancient woodland and reduce effects on agricultural land: - removal of a small area of landscape mitigation planting (0.2ha) between the realigned Crackley Lane and Roughknowles cutting; - removal of an area of proposed woodland habitat creation (3.7ha) adjacent to the south section of Broadwells Wood, to be replaced by alternative new woodland planting (2.4ha) near South Hurst Farm; and - permanent acquisition of an area of existing woodland at Black Waste Wood (8.7ha) for woodland management and enhancement to compensate for losses to newly designated ancient woodland and AP2 scheme changes at the Burton Green southern tunnel portal. (Burton Green area amendments – AP2-018-004).
Additional land required along Red Lane for the temporary Kenilworth Greenway diversion AP4-018-005	The Bill provided for local temporary realignment of the Kenilworth Greenway, which runs along the route of the dismantled Kenilworth to Balsall railway line. A temporary diversion route for the Kenilworth Greenway is provided at Burton Green. The AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green Tunnel AP1-018-030) proposed to secure 0.9ha of additional land adjacent to the Burton Green tunnel (south portal) satellite compound on a temporary basis to facilitate the diversion of a fuel pipeline and provision of a permanent easement for maintenance.	Provision of an alternative alignment for the temporary diversion of the Kenilworth Greenway along Red Lane. This will cross Red Lane and then pass through and continue behind the hedge, running along the southern verge of Red Lane, passing back through the hedge at the junction with Hob Lane, crossing the highway to rejoin the Kenilworth Greenway temporary diversion. This is due to insufficient width in the existing verge of Red Lane to include the temporary realignment of the Kenilworth Greenway permissive bridleway. A small area of additional land (approximately 0.1ha) is required temporarily outside the current Bill limits to ensure sufficient verge width for the diverted greenway adjacent to Red Lane. This AP4 amendment is dependent on the progression of the AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green Tunnel AP1-018-030), as the continuing diversion route utilises part of the additional land to be obtained under the AP1 revised scheme. This AP4 amendment will therefore only proceed in the event that Parliament approves the amendment AP1-018-030.

SES3 and AP4 ES Volume 2 – CFA18, Stoneleigh, Kenilworth and Burton Green

Name of amendment	Description of the SES3 scheme	Description of the AP4 revised scheme
<p>Alternative access for overhead power line diversion south of Moat Farm</p> <p>AP4-018-006</p>	<p>The Bill provided for diversion of the diversion of overhead electricity lines in the vicinity of Burton Green. A temporary access route leading from Hob Lane at Moat Farm was to be provided to the winching location to facilitate the diversion.</p>	<p>The provision of an alternative temporary access to the winching location, further south via agricultural land from the A452 Kenilworth Road east of Black Hales Farm, in order to avoid the need for bridge upgrades. The revised access will follow existing field boundaries, crossing one field boundary with established vegetation. Although additional land will be required for the alternative access, no construction works will be necessary. The alternative temporary access is partially located within CFA23 Balsall Common and Hampton-in-Arden. Approximately 0.67ha of additional land outside of the Bill limits is required temporarily for the alternative access. The majority of this lies within CFA18, Stoneleigh, Kenilworth and Burton Green, with 0.03ha within CFA23, Balsall Common and Hampton-in-Arden. There is also an approximate 0.17ha reduction in land required temporarily, with 0.05ha of this within CFA23. Overall there is a net increase of approximately 0.5ha of land required temporarily for the alternative access.</p>

Figure 2: Locations of amendments in CFA18



5 Assessment of amendments

5.1 Additional land required for construction of a drainage outflow into a minor watercourse (AP4-018-001)

- 5.1.1 The Bill provides for construction of a balancing pond immediately north of the A445 Leicester Lane and Furzen Hill Cottages. An outflow is to be provided from the balancing pond into the watercourse to the north (refer to maps CT-05-093b and CT-06-093b, grid reference E2 in the main ES Volume 2, CFA18 Map Book). The construction requirements will include provision of an outfall pipe, headwall and localised erosion protection works.
- 5.1.2 Since submission of the Bill, it has been identified that there is insufficient land to facilitate construction of the outflow. The amendment will require a small area of additional land (approximately 0.02ha) to be acquired on a permanent basis, beyond the original limits of the Bill, to facilitate construction of the outflow into the watercourse (refer to map CT-05-093b and CT-06-093b, grid reference E2 in the SES3 and AP4 ES Volume 2, CFA18 Map Book).
- 5.1.3 The permanent use of this additional land is not considered to make changes that require a reassessment of the environmental effects or proposed mitigation as set out in the main ES with respect to any topics.

5.2 Stoneleigh Park amendments (AP4-018-002)

- 5.2.1 The Bill provides for the route to pass within partially retained cutting under the realigned B4113 Stoneleigh Road and continue through the eastern part of Stoneleigh Business Park, exiting the north-western boundary of the Business Park and then crossing the River Avon on a viaduct.
- 5.2.2 Key features of this section of the route under the Bill are shown on maps CT-05-094, CT-06-094, CT-05-095 and CT-06-095 in the main ES Volume 2, CFA18 Map Book and include:
- Stoneleigh Business Park retaining wall: a 1.8km-long retaining wall running along both sides of the route within a cutting south-east of, and through most of, Stoneleigh Business Park to reduce the amount of land required, provide noise screening, and prevent groundwater flooding;
 - a highway drainage balancing pond to the south-west of the route, north of the realigned B4113 Stoneleigh Road;
 - the B4113 Stoneleigh Road realigned approximately 40m south-east of its current location on a slightly raised alignment with associated diversions to minor roads and tracks to retain access to Stoneleigh Business Park and properties; the realigned road will include a new roundabout to replace that identified in the current proposals for the redevelopment of Stoneleigh Business Park;
 - a new overbridge to carry the B4113 Stoneleigh Road; this will be a green bridge providing connectivity for wildlife across the route;

- a permanent 490m diversion of Footpath W171 to connect with the realigned B4113 Stoneleigh Road (map CT-06-094, Grid Reference F5 and F6 in the main ES);
- Stareton Road diverted to the north as it approaches its junction with the realigned B4113 Stoneleigh Road;
- a new section of road and new overbridge provided across the route to allow access within Stoneleigh Business Park; and
- planting undertaken on both sides of the route and the realigned roads to provide a combination of visual screening, landscape integration and habitat connectivity.

5.2.3 Planning permission was granted by Warwick District Council (in 2012) for the redevelopment and expansion of Stoneleigh Business Park guided by a masterplan. Since submission of the main ES, the scheme proposals have been adapted to accommodate the masterplan, and to ensure the continuity of access and connectivity across Stoneleigh Business Park.

5.2.4 In addition, since submission of the Bill, some of the woodland in the vicinity of Stoneleigh Business Park, near Ashow Road, has been identified as ancient woodland which is likely to be added to the ancient woodland inventory (refer to map CT-05-095, grid references I7-I8, H8 in the SES3 and AP4 ES Volume 2, CFA18 Map Book).

5.2.5 In order to accommodate the masterplan, maintain connectivity within Stoneleigh Business Park and reduce impacts on ancient woodland, the AP4 revised scheme includes the following design amendments.

Additional accommodation overbridge

5.2.6 The Bill provides for one highway overbridge crossing the scheme at Stoneleigh Business Park. An additional accommodation overbridge is proposed which offers improved capacity and connectivity and enables a more direct link with the River Avon footbridge and events parking area.

5.2.7 The additional accommodation overbridge (Stoneleigh Business Park South accommodation overbridge) will be located approximately 320m to the south-east of the single bridge crossing described in the main ES (refer to map CT-05-094 and CT-06-094, grid reference D6 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The design of the new overbridge will be similar to the single overbridge described in the main ES. The overbridge proposals will include associated link roads. Approximately 0.4ha of additional land will be required permanently for the new overbridge and associated link roads.

Provision of additional landscape earthworks adjacent to the River Avon viaduct

5.2.8 The Bill provided for an embankment increasing in height to the north and a 75m-long viaduct over the River Avon, with planting to be undertaken on both sides of the route.

5.2.9 New landscape mitigation earthworks and associated planting are proposed on the both sides on the southern approach to the River Avon viaduct (refer to map CT-05-

094 and CT-06-094, grid references A6 and B5-B6 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The additional landscape mitigation earthworks will provide more effective visual and noise screening for the equestrian events area in Stoneleigh Park. Approximately 1.4ha of additional land will be required permanently for the new landscape mitigation earthworks.

Provision of an accommodation access track adjacent to Stone House Farm

- 5.2.10 The Bill includes the removal of part of an existing field access route which runs parallel to the south-western edge of the route and landscape mitigation earthworks. The amendment addresses this loss through the re-provision of an access to the fields with an equivalent accommodation access track (refer to map CT-05-094, grid reference J7 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The accommodation access track will be approximately 180m long and will utilise land within existing limits identified for temporary construction purposes. Some minor reduction in landscape mitigation planting will be required.

Relocation of the B4113 Stoneleigh Road roundabout

- 5.2.11 The Bill provided for the realignment of the B4113 Stoneleigh Road with a roundabout offset from the main entrance of Stoneleigh Business Park. Since submission of the Bill, it has been recognised that relocation of the roundabout would improve access to the Stoneleigh Business Park main entrance and Hares Parlour field which accommodates event car parking.
- 5.2.12 The B4113 Stoneleigh Road roundabout junction will be relocated so that it is in line with the main southern entrance to Stoneleigh Business Park (refer to map CT-05-094, grid reference G7 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The adjacent Stoneleigh Park retaining wall satellite compound will be reshaped accordingly. These changes will utilise land within the existing limits of the Bill.

Provision of an agricultural underpass at Ashow Road

- 5.2.13 The Bill provided for the B4115 Ashow Road to be realigned to the north-west and cross the railway with an overbridge and approach embankments. Agricultural vehicles and pedestrians would be required to cross the B4115 Ashow Road to access Crewe Farm Fields. The proposed route via public roads is indirect in comparison to current arrangements.
- 5.2.14 Since submission of the Bill, to accommodate the movement of agricultural vehicles moving between Crewe Farm Fields and Stoneleigh Business Park, and for pedestrians on event days, it has been identified that a direct arrangement could be provided at this location.
- 5.2.15 An underpass (B4115 Ashow Road underpass) will therefore be provided from Stoneleigh Business Park Entrance Gate 3 (refer to map CT-05-095, grid reference I5 in the SES3 and AP4 ES Volume 2, CFA18 Map Book) under the B4115 Ashow Road north of B4115 Ashow Road overbridge to provide a direct access from Crewe Farm Fields into Stoneleigh Business Park (refer to map CT-05-095, grid reference H5 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The proposed location for this underpass will not require any additional land, either temporarily or permanently.

Revised access track to balancing pond at Ashow Road

- 5.2.16 The access track to the balancing pond to the south of the realigned B4115 Ashow Road will be redesigned to reduce the loss of an area of woodland which has been identified as likely to be added to the ancient woodland inventory (refer to map CT-05-095, grid references I7-I8, H8 in the SES and AP2 ES Volume 2, CFA18 Map Book). The junction with Ashow Road will be moved further to the west with the access track continuing on embankment around the woodland area. There will be no change to the alignment of Ashow Road and the balancing pond size and position will remain unchanged. The topsoil stockpile proposed at this location in the original scheme will also be relocated to avoid impacts to the potential ancient woodland. Approximately 0.9ha of additional land will be required on a temporary and permanent basis to allow for the footprint of the access road, embankment and for creation of an additional 0.4ha area of woodland habitat. Approximately 0.5ha of land required permanently for the original access track will no longer be required, retaining this part of the woodland.
- 5.2.17 The amendment is not considered to result in changes that will require a reassessment of the effects or proposed mitigation as set out in the main ES with respect to: land quality; and water resources and flood risk assessment. However, reassessment is considered to be required in respect of agriculture, forestry and soils; air quality; community; cultural heritage; ecology; landscape and visual assessment; socio-economics; sound, noise and vibration; and traffic and transport.

Agriculture, forestry and soils

Introduction

- 5.2.18 This section of the report describes the environmental baseline in relation to agriculture, forestry and soils that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.19 The assessment scope, key assumptions and limitations for agriculture, forestry and soils are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.2.20 The area of agricultural land affected by the amendment is relatively small (3.4ha) and therefore will not alter the significance of effect, or result in a different effect, on best and most versatile (BMV) agricultural land or forestry land within the CFA18 Stoneleigh, Kenilworth and Burton Green area. The route-wide effects on BMV land and forestry land are reported in Volume 3.

Existing baseline

- 5.2.21 This amendment will directly affect holding CFA18/3, Stoneleigh Business Park. The holding is a mixed enterprise of arable, livestock and woodland covering an area of 223.4ha, with a high sensitivity to change. The enterprise includes diversified activities of agricultural demonstration, livestock and equestrian shows and a livestock market.

Future baseline

Construction (2017)

- 5.2.22 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.23 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on agriculture, forestry and soils.
- 5.2.24 Most existing Environmental Stewardship agreements will expire in 2015 and will be replaced by a new environmental land management scheme (countryside stewardship) which, together with the new greening measures introduced by Common Agricultural Policy reform, will affect the detailed management of individual farm holdings, but are not expected to change fundamentally the baseline circumstances described.

Operation (2026)

- 5.2.25 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES, and the SES and AP2 ES.
- 5.2.26 None of the identified developments affect the assessment of the AP4 amendment's likely operational impacts on agriculture, forestry and soils.

Effects arising during construction

- 5.2.27 The main ES reported a temporary major adverse significant effect on Stoneleigh Park, associated with the requirement for 54.2ha (24% of the holding) of land temporarily. This amendment will require an additional 3.4ha (1.5% of the holding), which will increase the amount of land required temporarily to 57.6ha (26%) but this will not cause a new or different significant effect or change the level of significance of the effects reported in the main ES.
- 5.2.28 This amendment will also increase the amount of land required permanently from Stoneleigh Park by 3.4ha from 35.6ha (16%) to 39.0ha (17%), but this will not change the level of significance of the effects reported in the main ES, which remains a major adverse significant effect (due mainly to the permanent effect on farm infrastructure, including the demolition of a silage clamp).
- 5.2.29 The proposed Stoneleigh Park area amendments will not give rise to any new or different significant effects and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.2.30 The proposed Stoneleigh Park area amendments will not give rise to a new or different significant operational effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.2.31 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.2.32 The proposed amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects on agriculture, forestry and soils reported in the main ES.

Cumulative effects

- 5.2.33 There are no new or different likely significant cumulative effects for agriculture, forestry and soils as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Air quality

Introduction

- 5.2.34 This section of the report describes the environmental baseline in relation to air quality that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the proposed amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.35 The assessment scope, key assumptions and limitations and the methodology for determining significance of effects for air quality are as set out in the SMR Addendum 3 (Volume 5: Appendix CT-001-000/4) of the SES2 and AP3 ES.
- 5.2.36 The assessment of the AP4 revised scheme has assumed that the general measures detailed in Section 7 of the draft CoCP (Volume 5: Appendix CT-003-000) in the main ES will be implemented.

Existing baseline

- 5.2.37 The baseline air quality conditions with regard to air quality have not changed from those reported in the main ES.
- 5.2.38 Receptors relevant to the proposed amendment that could potentially be affected by changes in air quality include residential properties along B4113 Stoneleigh Road and Stoneleigh Business Park.
- 5.2.39 There are no statutory or non-statutory designated sites that could potentially be affected by changes in air quality as a result of the proposed amendment.

Future baseline

Construction (2017)

- 5.2.40 The future baseline air quality for construction in 2017 remains unchanged from that reported in the main ES (Volume 2, CFA18, Section 4).
- 5.2.41 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those reported in the main ES and the SES and AP2 ES.

- 5.2.42 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on air quality.

Operation (2026)

- 5.2.43 The future baseline air quality for construction in 2026 remains unchanged from that reported in the main ES (Volume 2, CFA18, Section 4).

- 5.2.44 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those reported in the main ES and the SES and AP2 ES.

- 5.2.45 None of the identified developments affect the assessment of the AP4 amendment's likely operational impacts on air quality.

Effects arising during construction

- 5.2.46 An assessment has been undertaken for receptors sensitive to dust soiling and human health effects, located close to dust-generating activities from construction of the proposed amendment.

- 5.2.47 The construction dust assessment has taken into consideration changes to the magnitude of dust emissions for the dust-generating activities associated with the proposed amendment and the sensitivity of the surrounding area, in terms of the receptors present and the distance of the receptors from the construction activities.

- 5.2.48 The proposed amendment does not change the magnitude of the activities during the construction phase in terms of dust-generating potential from that reported in the main ES (Volume 5, Appendix AQ-001-018).

- 5.2.49 The proposed amendment comprises a change to the footprint of the landscape earthworks and construction activities and subsequently, a change to the distance of these activities to sensitive receptors. The proposed amendment will result in a low risk of construction dust impacts.

- 5.2.50 With the implementation of the measures contained within the draft CoCP (Volume 5: Appendix CT-003-000 of the main ES), no significant effects are anticipated from dust-generating activities. The main ES did not report any significant effects from construction dust at this location and the significance level remains unchanged for the proposed amendment.

- 5.2.51 The amendment is not considered to make changes to traffic flows that require reassessment of air quality impacts from construction traffic.

- 5.2.52 The proposed amendment will not give rise to a new or different significant effect during construction and will not change the level of significance of the effects reported in the main ES (Volume 2, CFA18, Section 4).

Effects arising from operation

- 5.2.53 An assessment of operational traffic changes was required due to the change to the alignments of the B4113 Stoneleigh Road and Stareton Road from the amendment.

- 5.2.54 The main ES reported a negligible impact at residential properties around the B4113 Stoneleigh Road and no significant air quality effects.

- 5.2.55 The amendment results in a negligible impact for NO₂ and PM₁₀ concentrations and therefore no significant air quality effects are expected.
- 5.2.56 The proposed Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES and the SES and AP2 ES.

Mitigation and residual effects

- 5.2.57 Emissions to the atmosphere will be controlled and managed during construction through the route-wide implementation of the draft CoCP.
- 5.2.58 No other mitigation measures during construction are required in relation to air quality.
- 5.2.59 As reported in the main ES, no mitigation measures are required during operation in relation to air quality.
- 5.2.60 The proposed amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects on air quality reported in the main ES.

Cumulative effects

- 5.2.61 There are no new or different likely significant cumulative effects for air quality as a result of the AP₄ amendments interacting with one another, the AP₁ amendments, AP₂ amendments or any relevant committed development.

Community

Introduction

- 5.2.62 This section of the report describes the environmental baseline that is relevant to the community assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES₃ scheme.

Scope, assumptions and limitations

- 5.2.63 The assessment scope, key assumptions and limitations for the community assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Existing baseline

- 5.2.64 As described in the main ES (Volume 2, CFA Report 18, Section 5), Stoneleigh Park, formerly known as the National Agricultural Centre, is situated about 1km south-west of Stoneleigh Village. Stoneleigh Park showground is used for exhibitions, conferences and trade fairs. It has a strong tradition of agricultural and equestrian events, but hosts a variety of events including car and bike shows, which are held most weekends throughout the year; some have national or international audiences.

Future baseline

Construction (2017)

- 5.2.65 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES. The main ES includes the outline planning permission (Planning Ref: W/12/0766) for the redevelopment of the Stoneleigh Park site to provide new facilities, including a visitor centre café, office buildings and a national equine centre.
- 5.2.66 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on community.

Operation (2026)

- 5.2.67 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.68 None of the identified developments affect the assessment of the amendment's likely operational impacts on community.

Effects arising during construction

- 5.2.69 The main ES reported that the scheme will require the permanent loss of land from the eastern side of the Stoneleigh Park showground, which resulted in a moderate adverse significant effect on users of the showground, for both current and consented uses. A major adverse significant effect in respect of the temporary loss of land from the Stoneleigh Park showground was also reported in the main ES. A minor adverse non-significant effect was also reported in relation to permanent loss of land used for the Kenilworth Show located immediately to the south-east of the Stoneleigh Park showground.
- 5.2.70 There is no change in the temporary loss of land at Stoneleigh Park as a result of the amendment. However, the AP4 amendment will result in an additional permanent loss of land in the north of Stoneleigh Park to allow for landscape mitigation earthworks. This permanent loss will be to the north of Stoneleigh Park, in an area identified for equestrian and agricultural use. However, the additional permanent loss of land will not result in the loss of any additional or proposed buildings at Stoneleigh Park and represents a small percentage increase in the total permanent land loss. Therefore, the amendment will not result in a change in magnitude of the effect, which will remain at medium as in the main ES.
- 5.2.71 The amendment would require a permanent change of use of a small area of land used for the Kenilworth Show to provide an accommodation access track to Stone House Farm. However, this will not change the significance of the assessment in the main ES.
- 5.2.72 The Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.2.73 The Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.2.74 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.2.75 The Stoneleigh Park area amendments will result in no change in the likely residual significant effects reported in the main ES.

Cumulative effects

- 5.2.76 There are no new or different likely significant cumulative effects for community as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Cultural heritage

Introduction

- 5.2.77 This section of the report describes the environmental baseline in relation to cultural heritage that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.78 The assessment scope, key assumptions and limitations for cultural heritage are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000) and the SMR Addendum (Volume 5: Appendix CT-001-000) of the main ES.

Existing baseline

- 5.2.79 The cultural heritage baseline for the assessment takes into account information collected in support of the main ES, which includes walk-over survey, geophysical survey, remote-sensing data, and data from national and local registers. A full list of heritage assets is provided in Volume 2, Section 6.3 of the main ES. In addition, the baseline was updated with the results of additional survey work in the SES and AP2 ES.
- 5.2.80 Details of survey and desk-based work undertaken in this CFA since the main ES is provided in Volume 5 SES and AP2 Appendix CH-004-018 and Volume 5 map series CH-07; CH-09 and CH-10, where this is relevant to the assessment of a new or different significant effect.

- 5.2.81 The amendment is located in the vicinity of the following heritage assets:
- Stoneleigh Abbey (asset reference STN012⁷), a Grade II* Registered Park & Garden – an asset of high value; and
 - a possible castle at Glasshouse Wood (asset reference STN030), a non-designated heritage asset of moderate value.

Future baseline

Construction (2017)

- 5.2.82 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.83 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on cultural heritage.

Operation (2026)

- 5.2.84 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those reported in the main ES and the SES and AP2 ES.
- 5.2.85 None of the identified developments affects the assessment of the AP4 scheme's likely operational impacts on cultural heritage.

Effects arising during construction

- 5.2.86 The main ES reported a permanent medium adverse impact on Stoneleigh Abbey (asset reference STN012), a high-value asset, resulting in a significant major adverse effect. A high adverse impact was assessed for the possible castle site in Glasshouse Wood (asset reference STN030), an asset of moderate value, resulting in a significant major adverse effect.
- 5.2.87 The amendment would result in similar changes to the setting of Stoneleigh Abbey (asset reference STN012). The permanent medium adverse impact and significant major adverse effect therefore remain unchanged.
- 5.2.88 The amendment would still require removal of the possible castle site at Glasshouse Wood (asset reference STN030), resulting in a high adverse impact and significant major adverse effect.
- 5.2.89 The Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.2.90 The amendment will not alter the visual and noise intrusions on the setting and experience of Stoneleigh Abbey (asset reference STN012) in comparison with the

⁷ Cultural heritage assets are identified with a unique reference code, STNXXX; further detail on these assets can be found in the gazetteer in Volume 5 of the main ES: Appendix CH-002-018.

operation of the original scheme. The operation of the original scheme was assessed as having a low adverse impact on Stoneleigh Abbey (asset reference STN012), an asset of high value. The combined presence and operation of the original scheme will adversely alter some characteristics of the setting of this asset, resulting in a medium adverse impact and major adverse effect. This remains unchanged.

5.2.91 There was no change to the possible castle site in Glasshouse Wood (asset reference STN030) arising from the operation of the original scheme due to the asset being removed during construction. The amendment does not alter this situation and the neutral effect reported in the main ES remains unchanged.

5.2.92 The Stoneleigh Park area amendments will not give rise to any new or different significant effects and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

5.2.93 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required. Impacts on cultural heritage assets will be addressed in accordance with the provisions set out in the draft CoCP (see Volume 5: Appendix CT-003-000 of the main ES).

5.2.94 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

5.2.95 There are no new or different likely significant cumulative effects for cultural heritage as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Ecology

Introduction

5.2.96 This section of the report describes the environmental baseline in relation to ecology that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

5.2.97 Updates to the scope of the assessment for ecology are set out in Volume 1 of SES3 and AP4 ES. The key assumptions and limitations, and the methodology for determining significance of effects are as set out in Volume 1, the SMR and the SMR Addendum (Volume 5: Appendix CT001-000/1 and CT-001-000/2 of the main ES) and in Addendum 4 to the SMR (SES 3 and AP4 ES Volume 5: Appendix CT-001-000/5).

5.2.98 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported in the main ES, Volume 5: Appendix CT-001-000/2. This constitutes a 'reasonable worst-case' basis for the subsequent assessment. The precautionary approach to the assessment that has been adopted identifies the likely significant ecological effects of the AP4 revised scheme.

Existing baseline

- 5.2.99 The ecological baseline of the land required for the amendment has been based on field data collated for the main ES and SES and AP2 ES, additional survey work for great crested newt undertaken from April 2015 to June 2015, aerial photography and relevant existing information gathered from national organisations and from regional and local sources including Warwickshire County Council (Warwickshire Biological Records Centre) and Warwickshire Wildlife Trust.
- 5.2.100 A summary of the baseline information relevant to the assessment of the amendment is provided below. This takes account of any relevant 2015 survey information provided in Volume 5: Appendix-001-003. For those receptors described in the main ES, further details are provided in Volume 2, CFA18, Section 7 and in Volume 5, including maps EC-01 to EC-12. For those receptors described in the SES and AP2ES, further details are provided in Volume 2, CFA18, Section 2 and in Volume 5, including maps EC-01 to EC-12.

Designated sites

- 5.2.101 There are no statutory designated nature conservation sites relevant to the assessment.
- 5.2.102 There is one non-statutory designated site, the River Avon Local Wildlife Site (LWS), relevant to the assessment of the amendment. The River Avon LWS has been designated, as the river retains many natural features and abundant bankside vegetation. This LWS was reported in the main ES as having county/metropolitan value.
- 5.2.103 In addition, the SES concluded that an unnamed area of woodland south of the B4115 Ashow Road in Stoneleigh is likely to be ancient and is currently being considered for inclusion on the ancient woodland inventory; this is discussed further under Habitats. Ancient woodland is an irreplaceable resource.

Habitats

- 5.2.104 The habitats occurring within the land required for the additional accommodation overbridge include broadleaved parkland/scattered trees, poor semi-improved grassland, improved grassland, amenity grassland, species-poor hedgerows, hardstanding and buildings. The poor semi-improved grassland, improved grassland and amenity grassland within the Stoneleigh, Kenilworth and Burton Green area was reported as having negligible value in the main ES. Building complexes within Stoneleigh Park were valued at local/ parish value within the main ES. The hedgerow network within the area was reported in the main ES as having district/borough value. Remnant parkland (including veteran trees) associated with Stareton and Stoneleigh between B445 Leicester Lane and B4115 Ashow Road was reported in the main ES as having county/metropolitan value.
- 5.2.105 The land required for the revised access track to the balancing pond at Ashow Road consists of broadleaved plantation woodland located along the south of B4115 Ashow Road, and a pond. This broadleaved plantation woodland is recently established and has no more than local/ parish value. In the main ES the pond habitat was valued at local/ parish level.

- 5.2.106 As reported in Part 1 of the SES and AP2 ES, woodland south of the B4115 Ashow Road is assumed to be ancient and is of up to district/borough value.

Protected and/or notable species

- 5.2.107 Water bodies located within 250m of the land required for the amendment, which are considered suitable to support breeding populations of great crested newt, have been surveyed and found not to support great crested newt.
- 5.2.108 The broadleaved plantation woodland adjacent to the B4115 Ashow Road has been identified in the main ES as part of an assumed key commuting route and foraging area for bats. The land required for the revised access track to the balancing pond at Ashow Road includes part of this broadleaved plantation woodland. The roosting, commuting route and foraging area forms part of the assemblage of bats (comprising common pipistrelle, soprano pipistrelle, Daubenton's, noctule, brown long-eared bat and *Myotis* species) defined in the main ES as "using roosting, foraging and commuting habitats at Stoneleigh Park, including the River Avon" which has county/metropolitan value.
- 5.2.109 Stoneleigh Park was reported in the main ES as supporting an assemblage of terrestrial invertebrates identified as of up to county/metropolitan value. The additional land required for the additional accommodation overbridge and revised access track to the balancing pond at Ashow Road includes areas of habitat, such as plantation broadleaved woodland and parkland, utilised by this invertebrate assemblage.
- 5.2.110 A potential otter holt was recorded in the main ES within bankside vegetation along the River Avon, approximately 90m south-east of land required for the revised access track to the balancing pond at Ashow Road. In the main ES, terrestrial habitat which has potential as breeding habitat for otter was identified adjacent to the River Avon, including areas of woodland within land required for the revised access track to the balancing pond at Ashow Road. This potential holt and terrestrial site form part of the evidence base which identified a population of otter on the River Avon catchment in the main ES that has district/borough value.
- 5.2.111 The main ES reported an assemblage of breeding and wintering birds at Stoneleigh Park of local/parish value. The scattered trees, plantation woodland, hedgerows and areas of grassland within land required for the amendment have the potential to support breeding and wintering birds from these assemblages.

Future baseline

Construction (2017)

- 5.2.112 SES3 and AP4 ES Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.113 None of the identified developments affect the assessment of the amendment's likely construction impacts on ecology.

Operation (2026)

- 5.2.114 SES3 and AP4 ES Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.115 None of the identified developments affect the assessment of the amendment's likely operational impacts on ecology.

Effects arising during construction

Avoidance and mitigation measures

- 5.2.116 The assessment assumes implementation of the measures set out within the draft CoCP (Volume 5: Appendix CT-003-000 of the main ES), which includes translocation of protected species where appropriate.
- 5.2.117 The redesign of the access track to the balancing pond at Ashow Road as part of the AP4 revised scheme avoids the need to remove approximately 0.4ha of ancient woodland south of the B4115 Ashow Road.

Designated sites

- 5.2.118 The proposed Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES and SES and AP2 ES.

Habitats

- 5.2.119 The main ES reported that the loss of parkland and six veteran trees in the Stoneleigh Park area would cause an adverse effect on the conservation status of parkland habitat that will be significant at up to a county/metropolitan level. The proposed additional bridge crossing will result in the loss of an additional 0.03ha area of parkland habitat. No further veteran trees will be lost. Given the small scale of the change, this is not considered to represent a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.2.120 The main ES reported that the combined loss and severance of hedgerows within the original scheme would cause an adverse effect on the conservation status of the hedgerow network, which will be significant at a district/borough level. The Stoneleigh Park amendments will result in the loss of approximately 100m of additional hedgerow and will therefore result in a different significant effect on the conservation status of hedgerows. However, this will not change the level of significance of the effects reported in the main ES.
- 5.2.121 An unnamed area of ancient woodland south of the B4115 Ashow Road in Stoneleigh, approximately 0.6ha in area, would be lost under the SES scheme. This amendment will reduce the area lost to approximately 0.2ha. This element of the Stoneleigh Park area amendments will therefore give rise to a different significant effect on ancient woodland. However, this will not change the level of significance of the effects reported in Part 1 of the SES and AP2 ES.
- 5.2.122 The amendment will result in the loss of an additional 0.2ha of poor semi-improved grassland, 0.4ha of improved grassland, 0.5ha of amenity grassland and 0.8ha of

broadleaved plantation woodland. However, these changes will not result in any new or different significant effects, or change the level of significance of the effects reported in the main ES.

- 5.2.123 It is unlikely that the amendment will result in any other new or different effects on habitats of relevance at more than the local/parish level. Local/parish effects which are additional to those identified in the main ES and the SES and AP2 ES are listed in Volume 5: Appendix EC-003-003 of the SES3 and AP4 ES.

Protected and/or notable species

- 5.2.124 A significant adverse effect at a county/metropolitan level was reported in the main ES on the bat assemblage using habitats within Stoneleigh Park, including the loss and severance of foraging and commuting habitat and the loss of roosts (including a potential tree roost supporting rare bat species). The assemblage of bats within Stoneleigh Park includes: common pipistrelle, soprano pipistrelle, Daubenton's bat, noctule, brown long-eared bat and *Myotis* species. The amendment will result in the loss of approximately 0.8ha of broadleaved plantation woodland in the area of the revised access track to the balancing pond at Ashow Road, which is likely to be utilised by foraging and commuting bats. Habitat severance and fragmentation will occur in this area as a result of the amendment, as the proposed access track will bisect an existing area of plantation woodland. Connectivity of foraging and commuting habitat is retained along the River Avon and suitable foraging and commuting habitat will be retained in the wider environment. The revised access track to the balancing pond at Ashow Road will give rise to a different significant effect due to the additional loss of broadleaved plantation woodland. However, this will not change the level of significance of the effects on the bat assemblage using habitats within Stoneleigh Park reported in the main ES.
- 5.2.125 The main ES reported a significant adverse effect at the district/ borough level on the assemblage of terrestrial invertebrates due to the loss of habitat within Stoneleigh Park, particularly parkland habitat and veteran trees. The loss of approximately 0.8ha of broadleaved plantation woodland and 0.03ha of parkland habitat suitable for the terrestrial invertebrate assemblage at Stoneleigh Park as a result of the amendment will give rise to a different significant effect to that reported in the main ES. However, it will not change the level of significance of the effects reported in the main ES.
- 5.2.126 It is unlikely that the amendment will result in any other new or different effects of relevance at more than the local/parish level. Local/parish level effects which are in addition to those identified in the main ES and the SES and AP2 ES are listed in Volume 5: Appendix EC-003-003 of the SES3 and AP4 ES.

Cumulative effects

- 5.2.127 There are no new or different likely significant cumulative effects for ecology as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments or any relevant committed development.

Mitigation and residual effects

Other mitigation measures

- 5.2.128 Part 1 of the SES and AP2 ES reported a residual significant impact on the conservation status of ancient woodland at the district/ borough level due to the loss of ancient woodland at the unnamed area of woodland south of the B4115 road in Stoneleigh. The amendment reduces the loss of ancient woodland in this area from 0.6ha as a result of the SES scheme to 0.2ha as a result of the AP4 revised scheme.
- 5.2.129 In addition, a 0.4ha woodland habitat creation area is proposed in the area of the revised access track to the balancing pond at the B4115 Ashow Road as part of the AP4 revised scheme. The woodland habitat creation area will provide compensation to address the loss of part of the unnamed area of ancient woodland south of the B4115 Ashow Road identified in the SES and AP2 ES, and reduced to 0.2ha as a result of the AP4 revised scheme. This area could be used for translocation of suitable ancient woodland soils and woodland planting.
- 5.2.130 The measures brought forward in this amendment provide compensation to address the loss of additional ancient woodland in this area identified the SES and AP2 ES. However, the amendment does not change the level of significance of the effects on ancient woodland south of the B4115 road in Stoneleigh reported in the SES and there remains a significant residual effect due to the loss of 0.2ha of ancient woodland south of the B4115 road in Stoneleigh.
- 5.2.131 The 0.4ha area of woodland habitat creation will also minimise the severance and fragmentation of foraging and commuting habitat used by the bat assemblage associated with habitats within Stoneleigh Park. This addresses the different effect of bats arising from the amendment.
- 5.2.132 The mitigation identified in the main ES remains sufficient to address the different significant effects in relation to loss of hedgerows and the assemblage of terrestrial invertebrates arising from this amendment.

Summary of likely residual effects

- 5.2.133 The Stoneleigh Park amendment will reduce the area of ancient woodland loss from the unnamed area of woodland south of the B4115 Ashow Road, in comparison to the SES scheme, from approximately 0.6ha to approximately 0.2ha. However, the residual adverse effect remains significant at up to district/borough level.

Effects arising from operation

- 5.2.134 The Stoneleigh Park area amendment will not give rise to any new or different significant effects during operation and will not change the level of significance of the effects reported in the main ES.

Landscape and visual assessment

Introduction

- 5.2.135 This section of the report describes the environmental baseline in relation to landscape and visual that is relevant to the assessment. It then identifies any new or

different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.136 The assessment scope, key assumptions and limitations for landscape and visual assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES. Updates to the methodology for the landscape and visual assessment are also described in Volume 1 of the AP1 ES and Volume 1 of the SES and AP2 ES.

Existing baseline

- 5.2.137 The area of land required for the amendment is located within the Stoneleigh Parklands Landscape Character Area (LCA), as described in the main ES (Volume 2, CFA18, Section 9.3).
- 5.2.138 The following viewpoints are located in close proximity to the amendment and are described in the main ES (Volume 5: Appendix LV-001-018 Part 2):
- viewpoint 266.3.001: south-west from PRoW (Footpath W171);
 - viewpoint 266.3.003: south-west from PRoW (bridleway W157);
 - viewpoint 266.6.007: south-west from Stoneleigh Park;
 - viewpoint 267.2.006: north-east from East Lodge and residences on Eastgate within Stoneleigh Business Park;
 - viewpoint 267.6.007: north-east from Stoneleigh Park (future baseline); and
 - viewpoint 268.3.005: south-west from PRoW (Footpath W158).

Future baseline

Construction (2017)

- 5.2.139 Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES. The future redevelopment of Stoneleigh Business Park is assumed to have been implemented by 2017.
- 5.2.140 None of the identified developments affect the assessment of the amendment's likely construction impacts on landscape character and views.

Operation (2026)

- 5.2.141 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.142 None of the identified developments affect the assessment of the SES3 scheme's likely operational impacts on landscape character and views.

Effects arising during construction

Landscape assessment

- 5.2.143 The Stoneleigh Parklands LCA was assessed in the main ES as being affected by the original scheme and will also be affected by this amendment. The condition of the LCA is assessed as fair, having a medium level of tranquillity and as being of regional value; therefore, it is considered to be of medium sensitivity to change. The main ES reported a moderate adverse significant effect during construction due to the wide visibility of construction works and a loss of tranquillity.
- 5.2.144 The nature of the construction activities associated with the peak construction phase of the relocation of the B4113 Stoneleigh Road roundabout, the provision of additional landscape mitigation earthworks, and the construction of an additional accommodation overbridge will be similar to those reported in the main ES. Given the scale of the changes required by the amendment, within the overall geographical extent of the Stoneleigh Parklands LCA, the amendment will not give rise to a new or different significant landscape effect and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.2.145 Viewpoint 266.3.001: south-west from PRoW (Footpath) W171 was assessed as being affected by the original scheme and will also be affected by the redesign of the B4113 Stoneleigh Road roundabout. The main ES reported that the construction of Stoneleigh Park retaining wall, demolition of buildings within Stoneleigh Business Park, construction of landscape earthworks and the realignment of the B4113 Stoneleigh Road would be visible in the middle ground of this view, resulting in a moderate adverse significant effect.
- 5.2.146 The construction of the relocated B4113 Stoneleigh Road roundabout will be visible in the background, but will not result in a substantial change within the view. Therefore, this will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.2.147 Viewpoint 266.3.003: south-west from PRoW (bridleway) W157 was assessed as being affected by the original scheme and will also be affected by the provision of an additional accommodation overbridge and an extended access road east of the railway. The main ES reported that the construction of the Stoneleigh Park retaining wall, demolition of residences, the upper elements of cranes used in the construction of the B4113 Stoneleigh Road green overbridge and the single Stoneleigh Park accommodation overbridge would be visible, resulting in a moderate adverse significant effect.
- 5.2.148 The amendment for an extended access road east of the railway and the construction of an additional accommodation overbridge will give rise to a different significant effect, with the construction works seen through and beyond intervening mature woodland along the western bank of the River Avon. However, this will not change the level of significance of the effects reported in the main ES.
- 5.2.149 Viewpoints 266.6.007: south-west from Stoneleigh Park and 267.6.007: north-east from Stoneleigh Park (future baseline) were assessed as being affected by the original scheme and will also be affected by the provision of additional landscape mitigation

earthworks to the west of the scheme and the provision of an additional accommodation overbridge. The main ES reported that the construction of the Stoneleigh Park retaining wall, landscape earthworks and the cranes constructing the single Stoneleigh Park accommodation overbridge would result in a moderate adverse significant effect.

- 5.2.150 The amendment for the construction of an additional accommodation overbridge, with an extended access road east of the route and additional landscape mitigation earthworks to the west of the route will be discernible in the foreground of these views, giving rise to a different significant effect. However, this will not change the level of significance of the effects reported in the main ES.
- 5.2.151 Viewpoint 267.2.006: north-east from East Lodge and residences on Eastgate within Stoneleigh Business Park was assessed as being affected by the original scheme and will also be affected by the redesign of the B4113 Stoneleigh Road roundabout to improve access at the Park's main entrance. The main ES reported that the demolition of residences close to the receptor would be visible, with mature vegetation along Stoneleigh Park's Avenue M in the foreground partially screening temporary 2.4m high construction fencing in the middle ground. Views over and beyond the temporary fencing would include the construction of Stoneleigh Park retaining wall, resulting in a moderate adverse significant effect.
- 5.2.152 The amendment for the redesign of the B4113 Stoneleigh Road roundabout will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.2.153 Viewpoint 268.3.005: south-west from PRoW (Footpath) W158 was assessed as being affected by the original scheme and will also be affected by the provision of additional landscape mitigation earthworks to the east of the scheme within Stoneleigh Park. The main ES reported that the upper sections of cranes and plant constructing the River Avon viaduct and approach embankments will be visible in the middle ground, resulting in a moderate adverse significant effect.
- 5.2.154 The provision of additional landscape mitigation earthworks to both sides of the approach embankment to the River Avon viaduct will be partially screened by intervening woodland on the northern bank of the River Avon. However, the amendment will not give rise to a new or different significant effect and will not change the level of significance of the effect reported in the main ES. The view of the AP4 revised scheme from viewpoint 268.3.005, in the winter of the peak construction phase is illustrated on the photomontage in Figure LV-01-199 (Volume 2: CFA18 Map Book).

Effects arising during operation

Landscape assessment

- 5.2.155 The Stoneleigh Parklands LCA was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect during year 1 of operation, due to the introduction of engineering infrastructure into a predominantly rural area and a reduction in tranquillity due to the presence of trains. Although mitigation planting would mature

over time, the moderate adverse significant effects on landscape character would continue to year 15 and beyond to year 60.

- 5.2.156 The relocated B4113 Stoneleigh Road roundabout, the provision of additional landscape mitigation earthworks east and west of the railway and along the new road within Stoneleigh Park, and the additional accommodation overbridge will affect only a small part of the wider geographical extent of this LCA and therefore will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.2.157 Viewpoints 266.6.007: south-west from Stoneleigh Business Park and 267.6.007: north-east from Stoneleigh Park (future baseline) were assessed as being affected by the original scheme and will also be affected by the provision of additional landscape mitigation earthworks west of the scheme, an extended access road east of the route and the provision of an additional accommodation overbridge. The main ES reported a moderate adverse significant effect in the winter and summer of year 1, due to the visibility of upper elements of the overhead line equipment, landscape mitigation earthworks and the single highway overbridge. This effect would reduce to be minor adverse non-significant by year 15 and negligible by year 60, due to the maturing of mitigation planting.
- 5.2.158 The amendment for the provision of landscape mitigation earthworks west of the route, an extended access road west of the route and the presence of an additional accommodation overbridge generates a different significant effect in year 1. Traffic movements on the additional accommodation overbridge will be visible above the scheme in cutting, although for viewpoint 267.6.007 the provision of landscape mitigation earthworks west of the route will provide greater screening of the upper elements of train movements and overhead line equipment than in the original scheme. However, this will not change the level of significance of the effects reported in the main ES.
- 5.2.159 Viewpoint 267.2.006: north-east from East Lodge and residences on Eastgate within Stoneleigh Park was assessed as being affected by the original scheme and will also be affected by the redesign of the B4113 Stoneleigh Road roundabout to improve access at the Park's main entrance. The main ES reported a moderate adverse significant effect in the winter of year 1 of operation, reducing to minor adverse non-significant in the summer of year 1 due to the mature vegetation in the foreground of the view being in leaf, largely screening the visibility of the route in the middle ground. As vegetation planted as part of the scheme matures, these effects would reduce to negligible by year 15 and beyond to year 60, which is not significant.
- 5.2.160 The amendment for the redesign of the B4113 roundabout will be visible on the far right hand of the middle ground of the viewpoint, and will not result in a new or different significant effect and will not change the level of significance of effects reported in the main ES.
- 5.2.161 Viewpoint 268.3.005: south-west from PRoW (Footpath) W158, was assessed as being affected by the original scheme and will also be affected by the provision of additional landscape mitigation earthworks to the east of the scheme within Stoneleigh Park. The main ES reported a moderate adverse significant effect in the winter and summer

of year 1 of operation, continuing to year 15, as mitigation planting would not have grown to sufficient height to filter the visibility of the River Avon viaduct, the southern approach embankment and trains and overhead line equipment. However, by year 60, planting growth would have matured sufficiently to reduce the visual effect on this view to be minor adverse, which is non-significant.

- 5.2.162 The amendment for the provision of landscape mitigation earthworks east of the HS2 route screening the visibility of lower elements of train movements and overhead line equipment on the approach to the River Avon viaduct will give rise to a different significant effect in year 1. However, this will not change the level of significance of the effects reported in the main ES. The view of the AP4 revised scheme from viewpoint 268.3.005, in the winter of year 1 of operation is illustrated on the photomontage in Figure LV-01-118 (Volume 2: CFA18 Map Book).

Mitigation and residual effects

- 5.2.163 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.

- 5.2.164 The proposed extended access road east of the railway and the construction of an additional accommodation overbridge will give rise to a different residual significant effect during construction from viewpoints

- 266.3.003: south-west from PRoW (bridleway) W157;
- 266.6.007: south-west from Stoneleigh Park; and
- 267.6.007: north-east from Stoneleigh Park.

The construction works will be seen through and beyond intervening mature woodland along the western bank of the River Avon. However, this will not change the level of significance of the effects reported in the main ES.

- 5.2.165 The Stoneleigh Park area amendment will not give rise to any new or different residual significant effects during operation and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.2.166 There are no new or different likely significant cumulative effects for landscape and visual as a result of the AP4 amendments interacting with one another, AP1 amendments, AP2 amendments; or any relevant committed development.

Socio-economics

Introduction

- 5.2.167 This section of the report describes the environmental baseline in relation to socio-economics that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.168 The assessment scope, key assumptions and limitations for socio-economics are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Existing baseline

- 5.2.169 The baseline socio-economics information for CFA 18 Stoneleigh, Kenilworth and Burton Green is described in the main ES (Volume 2, CFA 18, Section 10).

Future baseline

Construction (2017)

- 5.2.170 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the committed developments which are assumed to have been implemented by 2017, additional to those identified in the main ES.
- 5.2.171 None of the identified developments affect the assessment of the amendment's likely construction impacts on socio-economics.

Operation (2026)

- 5.2.172 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES.
- 5.2.173 None of the identified developments affect the assessment of the amendment's likely operational impacts on socio-economics.

Effects arising during construction

- 5.2.174 The main ES reported that Stoneleigh Business Park was subject to significant noise and visual effects as a result of ongoing construction works over more than a two-year period related to the Stoneleigh Business Park retaining wall. The sensitivity of this establishment was considered to be high as, Stoneleigh Business Park includes a hotel and a number of outdoor uses including shows, such as the Kenilworth Show. These uses were considered to be sensitive to changes in amenity from construction works that are potentially likely to discourage use. Given the combination of other environmental effects and the high sensitivity, the scheme was assessed as having a significant amenity effect on Stoneleigh Business Park.
- 5.2.175 The Stoneleigh Park area amendments will not result in changes to the noise effects of the scheme reported in the main ES. Whilst there is a different visual effect as a result of the amendments, this does not give rise to a new or different socio-economic effect and does not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.2.176 The Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.2.177 No additional mitigation measures (i.e. in addition to those identified in the main ES and SES) are required.
- 5.2.178 This amendment will not give rise to a new or different likely residual significant effect and will not change the level of significance of the residual effects reported in the main ES.

Cumulative effects

- 5.2.179 There are no new or different likely significant cumulative effects for socio-economics as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed developments.

Sound, noise and vibration

Introduction

- 5.2.180 This section of the report describes the environmental baseline in relation to sound, noise and vibration that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.2.181 The assessment scope, key assumptions and limitations for sound, noise and vibration are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.2.182 Local assumptions and limitations for sound, noise and vibration are set out in main ES Volume 2, CFA18, Section 11.

Existing baseline

- 5.2.183 The baseline sound, noise and vibration information for CFA18 is described in the main ES (Volume 2, CFA18, Section 11.2). Baseline sound levels representative of the assessment locations affected by this amendment have been used in the construction and operational sound, noise and vibration assessments.

Future baseline

- 5.2.184 Without the scheme, existing sound levels in this area are likely to increase gradually over time. This is primarily due to road traffic growth on the existing road network. Changes in car technology may offset some of the expected sound-level increases due to traffic growth on low-speed roads. On higher-speed roads, tyre sound dominates overall levels and hence the expected growth in traffic is likely to continue to increase ambient sound levels.

Construction (2017)

- 5.2.185 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.

- 5.2.186 None of the identified developments affect the assessment of the amendment's likely construction impacts on sound, noise and vibration.

Operation (2026)

- 5.2.187 Volume 5: Appendix CT-004-000 SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.2.188 None of the identified developments affect the assessment of the amendment's likely operational impacts on sound, noise and vibration.

Effects arising during construction

- 5.2.189 An assessment has been undertaken to determine whether construction noise and vibration associated with the amendment would result in a likely significant effect, using the significance criteria detailed in the main ES (Volume 5: Appendix SV-001-000).
- 5.2.190 The closest noise-sensitive receptors to the amendment are the residential properties and non-residential buildings, located approximately 150m from the realignment of the B4113 Stoneleigh Road and approximately 100m from the Stoneleigh Business Park South accommodation overbridge and associated landscape mitigation earthworks.
- 5.2.191 In the main ES, construction noise at one dwelling, located at the eastern boundary of Stoneleigh Business Park adjacent to Stoneleigh Road, ID 219016, shown on map series SV-03 (main ES Volume 5, CFA18 Map Book) was forecast to be higher than the noise insulation trigger levels as defined in the draft CoCP. The mitigation measures described in the main ES, including noise insulation, would reduce noise inside this dwelling such that it does not reach a level where it would significantly affect residents.
- 5.2.192 On a reasonable worst-case basis, a temporary significant construction noise effect was also identified in the main ES at office space, commercial properties and an ambulance station located on the north-eastern boundary of Stoneleigh Business Park (CSV18-No1⁸, CSV18-No2 and CSV18-No3) and in close proximity to the construction works.
- 5.2.193 The proposed changes brought about by the AP4 revised scheme will alter the intervening distances between construction activities and receptors, which has the potential to alter the reported effects in Stoneleigh Business Park and the surrounding area.
- 5.2.194 An assessment has been undertaken to determine whether construction noise levels from the amendment would result in a new or different likely significant effect, using the significance criteria detailed in the main ES (Volume 5: Appendix SV-001-000).
- 5.2.195 The activities associated with the amendment, their duration and the intervening distance to receptors, do not represent a significant intensification of the works when

⁸ Significant construction noise effects on non-residential receptors are identified with a unique identification number, CSVXX-NXX. Further detail on these effects can be found in Volume 5, Appendix SV-003-018 of the main ES.

compared to the original scheme. The amendment, when considered in the context of the magnitude of change brought about by the scheme, would therefore not lead to a change in the impacts reported. As a consequence, the amendment will not give rise to new or different significant effects in comparison to those reported in the main ES.

Effects arising during operation

- 5.2.196 The main ES identified a likely significant adverse noise effect at the community represented by approximately five dwellings in the vicinity of Eastgate, Stoneleigh, identified as OSV18-Co1⁹ on Map Series SV-01 and SV-02 (main ES Volume 5, CFA18 Map Book).
- 5.2.197 The main ES also identified, on a precautionary basis, a likely significant effect on the commercial properties, office space and an ambulance station at Stoneleigh Business Park, denoted by OSV18-No1 on Map Series SV-01 and SV-02 (main ES Volume 5, CFA18 Map Book).
- 5.2.198 An assessment has been undertaken to determine whether operational noise levels from the amendment would result in a new or different likely significant effect, using the significance criteria detailed in the main ES (Volume 5: Appendix SV-001-000).
- 5.2.199 The amendment to the landscape earthworks reduces the operational airborne noise slightly, but not to the extent that the operational airborne noise impacts categories identified in the main ES are altered.
- 5.2.200 The amendment does not result in any new or different operational sound, noise or vibration effects compared to those reported in the main ES.

Mitigation and residual effects

Construction

- 5.2.201 The assessment of construction noise and vibration assumes the implementation of the principles and management processes set out in the draft CoCP (Volume 5: Appendix CT-003-000).
- 5.2.202 This amendment will not give rise to a new or different likely residual significant effect compared to those reported in the main ES.

Operation

- 5.2.203 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.2.204 This amendment will not give rise to a new or different likely residual significant effect compared to those reported in the main ES.

⁹ Significant operational noise (on a community basis) effects are identified with a unique identification number, OSVXX-CXX. Further detail on these effects can be found in Volume 5, Appendix SV-004-018 of the main ES."

Cumulative effects

- 5.2.205 There are no new or different likely significant cumulative effects for sound, noise and vibration as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Traffic and transport

Introduction

- 5.2.206 This section of the report describes the environmental baseline in relation to traffic and transport that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme, taking into account any relevant AP2 amendments.

Scope, assumptions and limitations

- 5.2.207 The assessment scope, key assumptions and limitations of the traffic and transport assessment are set out in Volume 1, the SMR (Volume 5: Appendix CT-0001-000/1) and the SMR Addendum (Volume 5: Appendix CT-0001-000/2) of the main ES.

Existing baseline

- 5.2.208 The existing baseline is as described in the main ES (Volume 2, CFA18, Chapter 12), as updated by the additional revised baseline traffic surveys and revised road layout included in SES3.
- 5.2.209 The baseline analysis determined that existing traffic flows along the B4113 Stoneleigh Road are 8,000 vehicles per average weekday and along the B4115 Ashow Road are 2,000 vehicles per average weekday.

Future baseline

Construction

- 5.2.210 The future baseline for traffic and transport is as described in Volume 2, CFA18, Section 12 of the main ES, as updated by the additional revised baseline traffic surveys and revised road layout.

Operation (2026 and 2041)

- 5.2.211 The future baselines for traffic and transport are as set out in Volume 2, CFA18, Section 12 of the main ES, as updated by the additional revised baseline traffic surveys and revised road layout.

Effects arising during construction

- 5.2.212 The amendment includes a number of changes within Stoneleigh Business Park in relation to traffic and pedestrian access. Although the SES3 changes impact on traffic levels on the B4115 Ashow Road (as described in Section 3.3 of this report), this amendment has no impact on these traffic levels. The amendment does not generate any changes to levels of construction traffic on the B4113 Stoneleigh Road.
- 5.2.213 There were no traffic congestion effects with the original scheme, although there was a minor significant adverse effect due to increases of HGV traffic on the B4113 Stoneleigh Road. The SES3 changes result in a major significant adverse effect on the

B4115 Ashow Road due to increases in HGV traffic. Both of these effects remain the same with this amendment.

- 5.2.214 The proposed Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES and SES3.

Effects arising during operation

- 5.2.215 The amendment includes permanent changes to the access to the Stoneleigh Business Park from B4113 Stoneleigh Road and provision of a new underpass beneath the B4115 Ashow Road to the Crewe Farm Fields. This underpass would provide safer and more direct access on event days. This would further mitigate any adverse impacts on internal access for Stoneleigh Business Park.
- 5.2.216 The original scheme provided a new roundabout from the B4113 Stoneleigh Road to Stoneleigh Business Park and a priority junction to provide access to Hares Parlour field used for event parking. The amendment relocates this roundabout northwards to align with the Business Park access road and includes an additional arm to access Hares Parlour field. The new arrangements would not generate any traffic congestion effects.
- 5.2.217 The proposed Stoneleigh Park area amendments will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.2.218 No additional mitigation measures in addition to those identified in the main ES and SES3 are proposed.
- 5.2.219 This amendment will not give rise to a new or different likely residual significant effect and will not change the level of significance of the residual effects reported in the main ES.

Cumulative effects

- 5.2.220 The above assessment has taken into account cumulative effects, including planned developments, by taking account of background traffic growth, as well as traffic and transport impacts of works being undertaken in neighbouring areas.
- 5.2.221 There are no new or different likely significant effects for traffic and transport as a result of the AP4 amendments interacting with one another or AP2 amendments.

Summary of new or different likely residual significant effects as a result of the amendment

- 5.2.222 The Stoneleigh Park area amendment will result in a reduction in the loss of ancient woodland from the unnamed area of woodland south of the B4115 Ashow Road, in comparison to the SES scheme, from approximately 0.6ha to approximately 0.2ha. This is a different residual adverse effect which remains significant at up to district/borough level.

- 5.2.223 The proposed extended access road east of the railway and the construction of an additional accommodation overbridge will give rise to a different residual significant visual effect during construction from viewpoints 266.3.003: south-west from PRoW (bridleway) W157; 266.6.007: south-west from Stoneleigh Park; and 267.6.007: north-east from Stoneleigh Park. The construction works will be seen through and beyond intervening mature woodland along the western bank of the River Avon. However, this will not change the level of significance of the effects reported in the main ES.
- 5.2.224 The Stoneleigh Park area amendment will result in different significant effects but does not change the significance of environmental effects as set out in the main ES.

5.3 Revised accommodation access for Millburn Grange Farm (AP4-018-003)

- 5.3.1 The Bill provides for the construction of a new farm accommodation bridge (a new overbridge crossing the route) at Millburn Grange Farm, located immediately to the south-east of the Coventry to Leamington Spa Line (refer to maps CT-05-096 and CT-06-096, grid reference E6 in the main ES Volume 2, CFA18 Map Book). The farm accommodation overbridge included within the Bill incorporates a short access track on the eastern side, and a longer access track running near parallel to the line on the western side of the route.
- 5.3.2 Since the submission of the Bill, it has been identified that the design of the western accommodation overbridge access track prevents HGV access to a barn at Millburn Grange Farm. The extent of the landscape mitigation earthworks and the length of the western accommodation access track will be reduced to ensure that HGV access between the landscape mitigation earthworks and the barn access is maintained (refer to maps CT-05-096 and CT-06-096, grid reference E6 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The height of landscape mitigation earthworks will be maintained, and noise fence barriers locally readjusted, to provide an equivalent level of noise and visual screening to the original scheme.
- 5.3.3 The Bill limits include all the land required to facilitate this amendment to the accommodation access and associated landscape mitigation earthworks. No additional land will be required on a temporary basis to facilitate this amendment. The land required permanently for this change will be reduced by approximately 0.06ha.
- 5.3.4 The amendment is not considered to result in changes that will require a reassessment of the effects or proposed mitigation as set out in the main ES with respect to: agriculture, forestry and soils; air quality; community; cultural heritage; ecology; land quality; socio-economics; traffic and transport; and water resources and flood risk assessment. However, reassessment is considered to be required in respect of landscape and visual assessment and sound, noise and vibration.

Landscape and visual assessment

Introduction

- 5.3.5 This section of the report describes the environmental baseline in relation to landscape and visual that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.3.6 The assessment scope, key assumptions and limitations for landscape and visual assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES. Updates to the methodology for the landscape and visual assessment are also described in Volume 1 of the AP1 ES and Volume 1 of the SES and AP2 ES.

Existing baseline

- 5.3.7 The area of land required for the amendment is located within the Stoneleigh Parklands LCA as described in the main ES (Volume 2, CFA18, Section 9.3).
- 5.3.8 The viewpoint at Millburn Grange Farm (Viewpoint 271.2.002) is located in close proximity to the amendment and is described in the main ES (Volume 5: Appendix LV-001-018 Part 2).

Future baseline

Construction (2017)

- 5.3.9 The future baseline for construction in 2017 remains unchanged from that reported in the main ES.

Operation (2026)

- 5.3.10 The future baseline for operation in 2026 remains unchanged from that reported in the main ES.

Effects arising during construction

Landscape assessment

- 5.3.11 The Stoneleigh Parklands LCA was assessed as being affected by the original scheme and will also be affected by this amendment. The condition of the LCA is assessed as fair, having a medium level of tranquillity and as being of regional value; therefore, it is considered to be of medium sensitivity to change. The main ES reported a moderate adverse significant effect during construction due to the wide visibility of construction works and a loss of tranquillity.
- 5.3.12 The nature of the construction activities associated with the peak construction phase of the revised accommodation access at Millburn Grange Farm will be similar to those reported in the main ES. Given the scale of changes required by this amendment within the overall geographic extent of the Stoneleigh Park LCA, the amendment will not give rise to a new or different significant landscape effect and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.3.13 Viewpoint 271.2.002: north from Millburn Grange Farm, was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a major adverse significant effect on this viewpoint due to the proximity of the construction works for the route and the accommodation overbridge and its approach embankments in the foreground.

- 5.3.14 The nature and extent of the construction operations of the amended western approach embankment to improve HGV access at Millburn Grange Farm will be similar to those reported in the main ES. Therefore, the amendment will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising during operation

Landscape assessment

- 5.3.15 The Stoneleigh Parklands LCA was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect during year 1 of operation, due to the introduction of engineering infrastructure into a predominantly rural area and a reduction in tranquillity due to the presence of trains. Although mitigation planting would mature over time, the moderate adverse significant effects on landscape character would continue to year 15 and beyond to year 60.
- 5.3.16 The proposed amendment will affect only a small part of the wider geographical extent of this LCA and therefore will not give rise to a new or different significant effect, and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.3.17 Viewpoint 271.2.002: north from Millburn Grange Farm was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect in the winter of year 1 due to the visibility of the farm accommodation overbridge and approach embankment, although the bridge will be partially filtered by intervening buildings and seen in the context of the existing Coventry to Leamington Spa rail line overbridge. This effect will reduce by year 15 to be minor adverse (non-significant) due to the maturing of mitigation planting west of the route, and further reduce by year 60 to be negligible (non-significant).
- 5.3.18 Although the amendment will reduce the width of the area available for landscape mitigation planting, the remaining area will be sufficient to provide visual mitigation over time as planting matures, and therefore will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.3.19 In this amendment the mitigation planting is reduced in comparison to the original scheme, but will still be sufficient to provide adequate visual screening for Millburn Grange Farm. No additional mitigation measures to those identified in the main ES are required.
- 5.3.20 This amendment will not give rise to a new or different likely residual significant effect and will not change the level of significance of the residual effects reported in the main ES.

Cumulative effects

- 5.3.21 There are no new or different likely significant effects for the landscape and visual assessment as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments or any relevant committed development.

Sound, noise and vibration

Introduction

- 5.3.22 This section of the report describes the environmental baseline in relation to sound, noise and vibration that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.3.23 The assessment scope, key assumptions and limitations for sound, noise and vibration are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.3.24 Local assumptions and limitations for sound, noise and vibration are set out in main ES (Volume 2: CFA18 Stoneleigh, Kenilworth and Burton Green).

Existing baseline

- 5.3.25 The existing baseline sound and vibration information for this area is described in Volume 2, CFA18, Section 11.2 of the main ES. Baseline sound levels representative of the assessment locations affected by the amendment have been used in the construction and operational assessments.

Future baseline

- 5.3.26 Without the original scheme, existing sound levels in this area are likely to increase gradually over time. This is primarily due to road traffic growth on the existing road network. Changes in car technology may offset some of the expected sound-level increases due to traffic growth on low-speed roads. On higher-speed roads, tyre sound dominates overall levels and hence the expected growth in traffic is likely to continue to increase ambient sound levels.

Construction (2017)

- 5.3.27 The future baseline for construction in 2017 remains unchanged from that reported in the main ES (Volume 2, CFA18, Section 11.2).

Operation (2026)

- 5.3.28 The future baseline for operation in 2026 remains unchanged from that reported in the main ES (Volume 2, CFA18, Section 11.2).

Effects arising from construction

- 5.3.29 No construction noise or vibration significant effects in the vicinity of the access road at Millburn Grange Farm were reported in the main ES.

- 5.3.30 The closest noise-sensitive receptor is the residential property located approximately 65m to the east of the amendment (ID 225955) shown on map series SV-03 (main ES, Volume 5, CFA18 Map Book).
- 5.3.31 The works associated with the amendment, their duration and the intervening distance to receptors, do not represent a substantive change to that detailed in the main ES. The proposed revised accommodation access for Millburn Grange Farm will not give rise to a new or different significant effect compared to those reported in the main ES.

Effects arising from operation

- 5.3.32 An assessment has been undertaken to determine whether operational noise levels from the amendment would result in a new or different likely significant effect, using the significance criteria detailed in the main ES (Volume 5: Appendix SV-001-000).
- 5.3.33 The height of landscape mitigation earthworks will be maintained, and noise fence barriers locally readjusted, to provide an equivalent level of acoustic screening to the original scheme.
- 5.3.34 The amendment does not alter the operational noise levels at the nearby properties, and therefore will not give rise to a new or different significant effect compared to those reported in the main ES.

Mitigation and residual effects

- 5.3.35 The assessment of construction noise and vibration assumes the implementation of the principles and management processes set out in the draft CoCP (Volume 5: Appendix CT-003-000).
- 5.3.36 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.3.37 This amendment will not give rise to a new or different likely residual significant effect compared to those reported in the main ES.

Cumulative effects

- 5.3.38 There are no new or different likely significant effects for sound, noise and vibration as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments or any relevant committed development.

Summary of new or different likely residual significant effects as a result of the amendment

- 5.3.39 The revised accommodation access for Millburn Grange Farm will not result in new or different significant effects and does not change the level of significance of environmental effects as set out in the main ES (Volume 2, CFA18, Stoneleigh, Kenilworth and Burton Green).

5.4 Revised woodland compensation proposals in the vicinity of Burton Green (AP4-018-004)

- 5.4.1 The Bill provides for the following areas of woodland mitigation and compensation within the Stoneleigh, Kenilworth and Burton Green area:
- approximately 0.9ha of woodland habitat creation to the south of Stareton Park Farm;
 - approximately 6ha of woodland habitat creation on both sides of the route of the scheme in the vicinity of Crackley Wood (refer to maps CT-05-097 and CT-06-097, grid references D5-D6, E5-E6, F6-F7, G6-G7, in the main ES Volume 2, CFA18 Map Book);
 - an area of 13.2ha between Broadwells Wood and Burton Green to comprise woodland habitat creation, 2.3ha of ancient woodland soil and seed bank translocation, as well as a small area of grassland and ponds (refer to maps CT-05-098 and CT-06-098, grid references A6-I6; A7-I7, A8-I8, in the main ES Volume 2, CFA18 Map Book); and
 - secondary woodland habitat creation south of Stareton Park Farm, adjacent to Crackley Wood and between Broadwells Wood and Burton Green Farm.
- 5.4.2 Since submission of the Bill, some areas of woodland affected by the proposed scheme have been identified as likely to be ancient woodland. As identified in Part 1 of the SES and AP2 ES, an increased area of Black Waste Wood is considered to be ancient woodland and Little Pours Wood is also now considered to be ancient. Both are likely to be added to the ancient woodland inventory.
- 5.4.3 To compensate for losses of ancient woodland, an 8.7ha area of existing woodland at Black Waste Wood will be subject to woodland management and enhancement to compensate for losses to newly designated ancient woodland. This will also compensate for the impact of AP2 amendments at the Burton Green southern tunnel portal and the reduction in the size of the mitigation area between Broadwells Wood and Burton Green (refer to maps CT-05-099 and CT-06-099, grid references G2-5, H2-5 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The management and enhancement will include measures such as the removal of invasive plant species, for example rhododendron, and management of deadwood habitat and trees for the benefit of wildlife, particularly invertebrates and bats.
- 5.4.4 In addition, to reduce the impacts on agricultural use of the land, the following woodland compensation areas will be amended as follows:
- removal of a small triangle of landscape mitigation planting between the realigned Crackley Lane and Roughknowles cutting to reduce impacts on farming operations (approximately 0.2ha). A 20m strip of planting will be retained to maintain visual screening (refer to map CT-05-097 and CT-06-097, grid references C6 in the SES3 and AP4 ES Volume 2, CFA18 Map Book);
 - removal of a 3.7ha area of woodland habitat creation adjacent to the south section of Broadwells Wood from the original scheme (refer to maps CT-05-098 and CT-06-098, grid references H7-8, I7-8 in the SES3 and AP4 ES Volume

2, CFA18 Map Book). This will be replaced by 2.4ha of land in an alternative field to the north, near South Hurst Farm (refer to maps CT-05-098 and CT-06-098, grid references G4-5, H4-5 in the SES3 and AP4 ES Volume 2, CFA18 Map Book).

- 5.4.5 The amendment is not considered to result in changes that will require a reassessment of the effects or proposed mitigation as set out in the main ES with respect to: air quality, community; land quality; socio-economics; sound, noise and vibration; traffic and transport; or water resources and flood risk assessment. However, reassessment is considered to be required in respect of agriculture, forestry and soils; cultural heritage; ecology; and landscape and visual assessment.

Agriculture, forestry and soils

Introduction

- 5.4.6 This section of the report describes the environmental baseline in relation to agriculture, forestry and soils that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.4.7 The assessment scope, key assumptions and limitations for agriculture, forestry and soils are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.4.8 The area of agricultural land affected by the amendment is relatively small (approximately 6.3ha) and therefore will not alter the significance of effect, or result in a different effect, on best and most versatile (BMV) agricultural land or forestry land within the CFA18 area. The route-wide effects on BMV land and forestry land are reported in Volume 3.

Existing baseline

- 5.4.9 The amendment will directly affect holding CFA18/15 South Hurst and Bockendon Grange Farms. The holding is a predominantly arable enterprise with a medium sensitivity to change, covering a large area of 1,092.7ha. The enterprise includes diversified activities, such as residential lets and shooting.

Future baseline

Construction (2017)

- 5.4.10 The future baseline for construction in 2017 remains unchanged from that reported in the main ES Volume 5: Appendix CT-004-000.
- 5.4.11 Most existing Environmental Stewardship agreements will expire in 2015 and will be replaced by a new environmental land management scheme (countryside stewardship) which, together with the new greening measures introduced by Common Agricultural Policy reform, will affect the detailed management of individual farm holdings. These are not expected to change fundamentally the baseline circumstances described.

Operation (2026)

- 5.4.12 The future baseline for operation in 2026 remains unchanged from that reported in the main ES Volume 5: Appendix CT-004-000.

Effects arising during construction

- 5.4.13 The main ES reported a temporary moderate adverse significant effect on South Hurst and Bockendon Grange Farms, mainly due to the effects of construction noise and dust on a residential let at South Hurst Farm. This amendment will not require any temporary additional land and therefore will not give rise to a new or different significant effect and will not change the level of significance of the effect reported in the main ES (moderate adverse significant).
- 5.4.14 The amendment will return some of the agricultural land previously required for woodland compensation planting back to South Hurst and Bockendon Grange Farm (3.8ha). However, the amendment requires some additional agricultural land permanently from elsewhere on the holding (2.4ha). The amendment therefore results in a 1.4ha net reduction in agricultural land requirements.
- 5.4.15 In addition, 8.7ha of woodland is required permanently. In terms of the effect on the amount of land within the holding overall (i.e. agricultural land and woodland), the amendment will therefore result in an increase of 7.3ha of land required permanently. This will increase the total area of land required permanently from 42.4ha to 49.7ha (5%). Overall, the amendment will not give rise to a new or different significant effect and the significance of the permanent effect remains as minor adverse, which is not significant, as reported in the main ES.
- 5.4.16 The revised woodland compensation proposals in the vicinity of Burton Green will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.4.17 The revised woodland compensation proposals in the vicinity of Burton Green will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.4.18 No additional mitigation measures (i.e. in addition to those identified in the main ES and subsequent SES reports) are required.
- 5.4.19 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.4.20 There are no new or different likely significant cumulative effects for agriculture, forestry and soils as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Cultural heritage

Introduction

- 5.4.21 This section of the report describes the environmental baseline in relation to cultural heritage that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.4.22 The assessment scope, key assumptions and limitations for cultural heritage are as set out Volume 1, the SMR (Volume 5: Appendix CT-001 -000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Existing baseline

- 5.4.23 The cultural heritage baseline for the assessment takes into account information collected in support of the main ES, which included walk-over survey, geophysical survey, remote-sensing data, and data from national and local registers. A full list is provided in the main ES, Volume 2, CFA18, Section 6.3. In addition, the baseline was updated with the results of additional survey work in the SES and AP2 ES.

- 5.4.24 The amendment is located in the vicinity of the following heritage assets:

- Black Waste Wood (asset reference STN074), a designated ancient woodland of high value;
- Broadwells Wood (asset reference STN064), a designated ancient woodland of high value; and
- Crackley Assarted¹⁰ Woodland (asset reference STN106), a non-designated historic landscape of low value.

Future baseline

Construction (2017)

- 5.4.25 The future baseline for construction in 2017 remains unchanged from that reported in the main ES.

Operation (2026)

- 5.4.26 The future baseline for operation in 2026 remains unchanged from that reported in the main ES.

Effects arising during construction

- 5.4.27 The original scheme had the following impacts on the assets in the vicinity of the amendment:
- a minimal adverse impact on the setting of the high-value Black Waste Wood ancient woodland (asset reference STN074), resulting in a minor adverse

¹⁰ An assart is a field or group of fields created by medieval clearance of woodland.

effect, which is not significant;

- a high adverse impact on Broadwells Wood (asset reference STNo64), resulting in a major adverse effect, which is significant; and
- a high adverse impact on the Crackley Assarted Woodland (asset reference STN106), resulting in a moderate adverse effect, which is significant.

5.4.28 The amendment will provide additional planting for ecological mitigation and will change the landscape within the proposed planting areas.

5.4.29 The amendment will continue to result in a minimal adverse impact on the setting of Black Waste Wood (asset reference STNo74), an asset of high value, by introducing new planting on the edge of the ancient woodland, which may alter the legibility of the ancient woodland's boundaries. However, the boundaries of the original ancient woodland have been previously altered through development and are already indistinct, thus limiting the impact of the amendment to a minimal magnitude. This impact will result in a minor adverse effect, which is not significant. The effect on Black Waste Wood therefore remains the same as reported in the main ES.

5.4.30 The amendment will continue to result in a high adverse impact on the form and setting of Broadwells Wood (asset reference STNo64), an asset of high value, through alterations to the boundaries of the ancient woodland that may alter the ability to recognise and understand the significance of the asset. This will result in a major adverse effect, which is significant. The amendment for revised woodland compensation in the vicinity of Burton Green will give rise to a different significant effect by impacting the form and setting of Broadwells Wood (asset reference STNo64). However, this will not change the level of significance of the effect reported in the main ES.

5.4.31 The amendment will continue to result in a medium adverse impact on the form of the landscape of the Crackley Assarted Woodland (asset reference STN106), an asset of low value, due to alterations to the pattern of assarting that defines the asset. This would result in a minor adverse effect, which is not significant. This will not change the level of significance of the effect on this heritage asset reported in the main ES.

Effects arising from operation

5.4.32 The original scheme had the following impacts on heritage assets:

- a minimal adverse impact on the setting of Black Waste Wood (asset reference STNo74), an asset of high value, due to an increase in noise, resulting in a minor adverse effect which is not significant;
- a high adverse impact on Broadwells Wood (asset reference STNo64), an asset of high value, due to visual impacts and increases in noise. This will result in a major adverse effect, which is significant; and
- a high adverse impact on the setting of Crackley Assarted Woodland (asset reference STN106), an asset of low value, through visual and increased noise. This will result in a moderate adverse effect, which is significant.

- 5.4.33 The amendment will not change the effects on these heritage assets during operation, as it will not significantly change the visual impacts and noise of the scheme.
- 5.4.34 The amendment for revised woodland compensation in the vicinity of Burton Green will not give rise to a new or different significant effect from operation and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.4.35 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.4.36 The revised woodland compensation proposals in the vicinity of Burton Green will give rise to a different significant effect during construction on the form and setting of Broadwells Wood (asset reference STNo64). However, this will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.4.37 There are no new or different likely significant cumulative effects for cultural heritage as a result of the AP4 changes interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Ecology

Introduction

- 5.4.38 This section of the report describes the environmental baseline in relation to ecology that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.4.39 Updates to the scope of the assessment for ecology are set out in Volume 1 of the SES3 and AP4 ES. The key assumptions and limitations, and the methodology for determining significance of effects are as set out in Volume 1, the SMR and the SMR Addendum (Volume 5: Appendix CT001-000/01 and CT-001-000/02 of the main ES) and in Addendum 4 to the SMR (SES 3 and AP4 ES Volume 5: Appendix CT-001-000/5).
- 5.4.40 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported in the main ES, Volume 5: Appendix CT-001-000/2. This constitutes a 'reasonable worst-case' basis for the subsequent assessment. The precautionary approach to the assessment that has been adopted identifies the likely significant ecological effects of the AP4 revised scheme.

Existing baseline

- 5.4.41 The ecological baseline of the land required for the amendment has been based on field data collated for the main ES and SES and AP2 ES, additional survey work for great crested newt undertaken from April 2015 to June 2015, aerial photography and relevant existing information gathered from national organisations and from regional and local sources, including Warwickshire County Council (Warwickshire Biological Records Centre) and Warwickshire Wildlife Trust.

5.4.42 A summary of the baseline information relevant to the assessment of the amendment is provided below. This takes account of any relevant new or updated baseline information provided in SES3 and AP4 ES Volume 5: Appendix-001-003. For those receptors described in the main ES, further details are provided in Volume 2, CFA18, Section 7 and in Volume 5, including maps EC-01 to EC-12.

Designated sites

5.4.43 There are no statutory designated nature conservation sites relevant to the assessment.

5.4.44 There are three non-statutory designated nature conservation sites, all Local Wildlife Sites (LWS), within 500m of the land required for the construction of the amendment. These are:

- Broadwells Wood LWS – comprises two areas of ancient semi-natural woodland joined by an area of replanted ancient woodland. It is located immediately to the west of land required for the amendment;
- Black Waste Wood LWS – ancient semi-natural woodland, lies within land required for the amendment; and
- Big Pools and Little Pools Wood LWS – comprising two small separate blocks of oak woodland with bracken and bramble understorey. Little Pools Wood is located approximately 110m to the south-west of the land required for the amendment.

5.4.45 All of the above LWS were reported in the main ES as being of county/metropolitan value.

Habitats

5.4.46 There are three areas of ancient woodland within 500m of the land required for the amendment. These are:

- Roughknowles Wood, approximately 400m from the land required for amendment and valued in the main ES as of county/metropolitan value;
- Broadwells Wood, immediately adjacent to land required for the amendment and valued in the main ES as of county/metropolitan value; and
- Black Waste Wood, within the land required for the amendment and valued in the main ES as of county/metropolitan value.

5.4.47 As reported in Part 1 of the SES and AP2 ES, it is assumed that ancient woodland at Black Waste Wood extends further to the south than is at present identified on the ancient woodland inventory, and is of county/metropolitan value. The SES identified Little Pools Wood and Big Pools Wood as likely to be ancient; Little Pools Wood was valued in the SES as being of district/borough value and Big Pools Wood was valued in the SES as being of county/metropolitan value. For the purposes of assessment, Black Waste Wood, Little Pools and Big Pools Wood are considered as ancient woodland.

- 5.4.49 The additional land required for the amendment is located immediately to the east of Broadwells Wood and within Black Waste Wood, which are each of county/metropolitan value. The land which is no longer required for woodland habitat creation to the south of the route is arable land, with hedgerows and a single waterbody. The land no longer required for landscape planting to the north of the route is arable land of negligible value.
- 5.4.50 The habitats occurring within the land required for the woodland habitat creation area east of Broadwells Wood include improved grassland, species-rich hedgerow and an unnamed tributary of the Canley Brook. The improved grassland within the area was reported as having negligible value in the main ES. The hedgerow network within the area was reported in the main ES as having district/borough value. Minor watercourses (tributaries) were reported in the main ES to be of local/parish value.
- 5.4.51 The habitats occurring within the land required for woodland management and enhancement at Black Waste Wood include a mosaic of broadleaved woodland, broadleaved parkland/scattered trees, poor semi-improved grassland, improved grassland, amenity grassland, scrub, tall ruderal vegetation and a minor watercourse or ditch. The whole of Black Waste Wood (i.e. the broadleaved woodland complex containing those areas identified on the ancient woodland inventory, and those not on the inventory but are likely to be added to the ancient woodland inventory) was collectively valued in the main ES and Part 1 of the SES and AP2 ES as being of county/metropolitan value.
- 5.4.52 There are 19 ponds within 250m of the land required for the amendment, although none of these are within the land required for the amendment. Each of these ponds has been reported in the main ES to have local/parish value.

Protected and/or notable species

- 5.4.53 The main ES identified assumed metapopulation (AMP)₁₄ (east of Broadwells Wood) as having four waterbodies, three of which have been surveyed. The land required for the woodland habitat creation area east of Broadwells Wood lies within AMP₁₄ and approximately 5m to the west of a confirmed great crested newt breeding pond. Great crested newts from this pond are likely to use the improved grassland and hedgerows within the land required for the amendment as terrestrial habitat. A single pond within AMP₁₄ was reported to contain a small population size class of great crested newt. However, due to incomplete surveying, as a precaution it was assumed within the main ES that AMP₁₄ could support a medium population size class of great crested newt and was reported as being of up to county/metropolitan level.
- 5.4.54 A small population size class of great crested newt was recorded in a garden pond within residential curtilage approximately 40m away from the land required for the amendment located west of Black Waste Wood. Great crested newts from this pond will likely use the broadleaved woodland and areas of semi-improved grassland within the land required for the woodland management and enhancement area at Black Waste Wood as terrestrial habitat. This pond is within AMP₁₈ (Burton Green) and was reported in the main ES to be of district/borough value
- 5.4.55 A medium population size class of great crested newt was recorded in one pond approximately 200m away from the land required for the woodland management and enhancement area located east of Black Waste Wood. This pond forms part of AMP₁₅

(north of Broadwells Wood, west of Brockendon Road) and was reported in the main ES to be of county/metropolitan value.

- 5.4.56 Two potential otter holts were recorded in an unnamed drain within the land required for the woodland habitat creation area east of Broadwells Wood. In addition, Broadwells Wood was identified as having the potential to support breeding habitat for otter. These holts and terrestrial site form part of the evidence base which identified a population of otter on the River Avon catchment in the main ES. The otter population was valued in the main ES as being of district/ borough value.
- 5.4.57 There are no buildings or trees supporting known bat roosts within the land required for the amendment. The land required for the woodland management and enhancement area at Black Waste Wood is adjacent to assumed key commuting routes located along the eastern edge of Black Waste Wood. The land required for the woodland habitat creation area east of Broadwells Wood is adjacent to assumed key commuting routes located along the eastern edge of Broadwells Wood and an assumed key area of foraging habitat at Broadwells Wood. These commuting routes and foraging areas form part of the land used by the assemblage of bats (comprising common pipistrelle, soprano pipistrelle, brown long-eared, Daubenton's, noctule, Leisler's and *Myotis* species) defined in the main ES as using foraging and commuting woodland habitat, including Crackley Wood, Roughknowles Wood, Broadwells Wood and Black Waste Wood, together with adjacent habitats including the Kenilworth Greenway. This assemblage is of county/metropolitan value as reported in the main ES.
- 5.4.58 Broadwells Wood supports an assemblage of terrestrial invertebrates valued in the main ES at a district/borough level. Broadwells Wood is located immediately adjacent to the land required for the woodland habitat creation area east of Broadwells Wood.

Future baseline

Construction (2017)

- 5.4.59 The future baseline for construction in 2017 remains unchanged from that reported in the main ES.

Operation (2026)

- 5.4.60 The future baseline for operation in 2026 remains unchanged from that reported in the main ES.

Effects arising during construction

Avoidance and mitigation measures

- 5.4.61 The assessment assumes implementation of the measures set out within the draft CoCP (Volume 5: Appendix CT-003-000 of the main ES), which includes translocation of protected species where appropriate.

Designated sites

- 5.4.62 The main ES reported the loss of approximately 1.1ha (11%) of the 9.95ha Black Waste Wood LWS, resulting in an adverse effect on the integrity of the LWS which will be significant at a county/metropolitan level. The land required for the amendment will

result in the remaining area of Black Waste Wood LWS being used to compensate for additional ecological effects reported in part 1 of the SES and AP2 ES and to compensate for a reduction in mitigation area between Broadwells Wood and Burton Green. The compensation would include the management and enhancement of Black Waste Wood for the benefit of nature conservation, which is discussed further in the 'Mitigation and residual effects' section below. There will be no additional loss of land within Black Waste Wood LWS as a result of the amendment and it will not give rise to any new or different significant adverse effects on Black Waste Wood LWS as a result of the amendment, and will not change the level of significance of the effects reported in the main ES.

Habitats

- 5.4.63 Part 1 of the SES and AP2 ES reported that the loss of 1.4ha of ancient woodland from Black Waste Wood will have an adverse effect on the conservation status of ancient woodland which will be significant at a county/metropolitan level. The remaining areas of ancient woodland within Black Waste Wood will be incorporated into the woodland management and enhancement area as part of the amendment to compensate for the additional ecological effects reported in Part 1 of the SES and AP2 ES. There will be no additional loss of ancient woodland as a result of the amendment at Black Waste Wood and it will not give rise to a new or different significant adverse effect, and will not change the level of significance of the effects reported in Part 1 of the SES and AP2 ES.
- 5.4.64 The main ES reported that the combined loss and severance of hedgerows within the original scheme will result in an adverse effect on the conservation status of the hedgerow network which will be significant at a district/borough level. In the case of the woodland habitat creation area east of Broadwells Wood, the hedgerows, particularly the species-rich sections, will be incorporated into the woodland habitat creation area. There will therefore be no additional loss of hedgerow as a result of the amendment. The amendment will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.65 The amendment will result in the loss of an additional 2.5ha of improved grassland. However, this loss of habitat will not result in any new or different significant effects, or change the level of significance of the effects arising from the SES scheme.
- 5.4.66 It is unlikely that the amendment will result in any other new or different effects on habitats of relevance at more than the local/parish level. Local/parish effects which are in addition to those identified in the main ES and SES and AP2 ES are listed in Volume 5: Appendix EC-003-003 of the SES3 and AP4 ES.

Protected and/or notable species

- 5.4.67 The original scheme resulted in the permanent loss of 1.9ha of broadleaved woodland and 2.3ha of arable land within 250m of the great crested newt breeding pond in AMP14. This was not considered likely to result in significant effects on the great crested newt population. There is an additional 1.7ha of improved grassland, comprising two agricultural fields, within the AMP14 boundary that will be lost as a result of the AP4 revised scheme (woodland habitat creation in an area east of Broadwells Wood) which is likely to be used by great crested newts as terrestrial habitat. The improved grassland fields are located at their closest point within 5m of

the breeding pond. The works to implement the habitat creation in this area could have temporary impacts on individual great crested newts within the population. Implementation of measures within the CoCP will ensure there will be no killing or injury of newts as a result of the amendment. Any mitigation required to avoid killing/injury will be undertaken in accordance with the principles of ecological mitigation identified within the SMR Addendum of the main ES (Volume 5: Appendix CT-001-000/2). This amendment does not result in a new or different significant effect on the great crested newt population in AMP14 and will not change the level of significance of the effects reported in the main ES.

5.4.68 There were no likely significant effects on AMP18 reported in the main ES. There is an additional 0.6ha of semi-improved grassland within the boundary of AMP18 that is within the land required for woodland management and enhancement area at Black Waste Wood. These management and enhancement measures are not expected to result in any adverse impacts on the population. Implementation of measures within the CoCP will ensure there will be no killing or injury of newts as a result of the amendment. Any mitigation required to avoid killing/injury will be undertaken in accordance with the principles of ecological mitigation identified within the SMR Addendum of the main ES (Volume 5: Appendix CT-001-000/2). This amendment does not result in a new or different significant effect on the great crested newt population in AMP18 and will not change the level of significance of the effects reported in the main ES.

5.4.69 There were no likely significant effects on AMP15 reported in the main ES. There is an additional 0.4ha of broadleaved woodland located in Black Waste Wood within the boundary of AMP15 that is within the land required for woodland management and enhancement at Black Waste Wood. These management and enhancement measures are not expected to have any adverse impacts on the population. Implementation of measures within the CoCP will ensure there will be no killing or injury of newts as a result of the amendment. Any mitigation required to avoid killing/injury will be undertaken in accordance with the principles of ecological mitigation identified within the SMR Addendum of the main ES (Volume 5: Appendix CT-001-000/2). This amendment does not result in a new or different significant effect on the great crested newt population in AMP15 and will not change the level of significance of the effects reported in the main ES.

5.4.70 It is unlikely that the amendment will result in any other effects (i.e. in addition to those identified in the main ES or SES) on species of relevance at more than the local/parish level.

Cumulative effects

5.4.71 There are no new or different likely significant cumulative effects for ecology as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Mitigation and residual effects

Other mitigation measures

5.4.72 The Bill provides for areas of woodland mitigation and compensation within the Stoneleigh, Kenilworth and Burton Green area. Since the submission of the Bill, some

areas of woodland affected by the proposed scheme have been identified as likely to be ancient woodland. In addition, alternative locations for the proposed woodland planting areas have also been identified, which would also reduce the impacts on agricultural use of the land. The amendment relates to changes in areas and locations of proposed woodland planting provided within the original scheme and the addition of an 8.7ha area of existing woodland at Black Waste Wood for woodland management and enhancement.

5.4.73 The function of the woodland planting areas provided will remain the same as stated in the main ES. Overall, there is a greater area of compensation for habitat loss provided in the AP4 revised scheme than that identified in the original scheme, comprising both woodland creation and enhancement and management of existing woodland.

5.4.74 Part 1 of the SES and AP2 ES reported that the loss of ancient woodland at Black Waste Wood will result in an adverse effect on the conservation status of the ancient woodland that is significant at a county/metropolitan level. The measures brought forward in this proposed amendment provide compensation to address the loss of additional ancient woodland in this area identified in Part 1 of the SES and AP2 ES. However, the amendment does not change the level of significance of the effects on ancient woodland at Black Waste Wood reported in the SES and there remains a significant residual effect due to the loss of 1.4ha of ancient woodland at Black Waste Wood.

Summary of likely residual effects

5.4.75 The adoption of management and enhancement measures within Black Waste Wood will compensate for an adverse residual effect identified in Part 1 of the SES and AP2 ES as a result of the loss of ancient woodland. However, there remains a significant residual effect on the conservation status of ancient woodland due to the loss of 1.4ha of ancient woodland at Black Waste Wood. Ancient woodland is an irreplaceable resource.

Effects arising from operation

5.4.76 The amendment does not change the operation of the scheme and so there are no new or different significant operation effects for ecology as a result of the proposed amendment, in comparison with the main ES or SES and AP2 ES.

Landscape and visual assessment

Introduction

5.4.77 This section of the report describes the environmental baseline in relation to landscape and visual that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

5.4.78 The assessment scope, key assumptions and limitations for landscape and visual assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Updates to the methodology for the landscape and visual assessment are also described in Volume 1 of the AP1 ES and Volume 1 of the SES and AP2 ES.

Existing baseline

- 5.4.79 The area of land required for the amendment is located within the Stoneleigh Parklands LCA, as described in the main ES (Volume 2, CFA18, Section 9.3).
- 5.4.80 The following viewpoints are located in close proximity to the amendment and are described in the main ES (Volume 5: Appendix LV-001-018 Part 2):
- viewpoint 277.3.006: north-east from Kenilworth Greenway (part of the Coventry Way);
 - viewpoint 277.3.007: north-west from PRow (Footpath) W168;
 - viewpoint 278.2.001: south from South Hurst farmhouse and South Hurst;
 - viewpoint 279.2.003: north-east from Le Van House and Two Oaks Nursery on Red Lane;
 - viewpoint 279.2.004: north-east from residential properties along Cromwell Road and Red Lane;
 - viewpoint 279.3.006: north-west from Kenilworth Greenway (part of the Coventry Way);
 - viewpoint 280.2.012: south from Brockendon Grange; and
 - viewpoint 280.3.001: south-west from PRow (Footpath) W168a.

Future baseline

Construction (2017)

- 5.4.81 The future baseline for construction in 2017 remains unchanged from that reported in the main ES.

Operation (2026)

- 5.4.82 The future baseline for operation in 2026 remains unchanged from that reported in the main ES.

Effects arising during construction

Landscape assessment

- 5.4.83 The Stoneleigh Parklands LCA was assessed in the main ES as being affected by the original scheme and will also be affected by this amendment. The condition of the LCA is assessed as fair, having a medium level of tranquillity and as being of regional value; therefore, it is considered to be of medium sensitivity to change. The main ES reported a moderate adverse significant effect during construction due to the wide visibility of construction works and loss of tranquillity.
- 5.4.84 The nature of the construction activities associated with the peak construction phase for this amendment will be similar to those reported in the main ES. Therefore, the scale of the changes required by the amendment, when seen within the overall

geographical extent of the Stoneleigh Park LCA, will not give rise to a new or different significant landscape effect and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.4.85 Viewpoints 277.3.006: north-east from Kenilworth Greenway (part of the Coventry Way), 277.3.007: north-west from PRoW (Footpath) W168, and 279.3.006: north-west from Kenilworth Greenway (part of the Coventry Way) were assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported that the removal of vegetation in the foreground of these views, the proximity of a temporary material stockpile, and the extensive views of the construction works in the background would result in a major adverse significant effect.
- 5.4.86 The amendment will not affect the nature of construction activities. Therefore, it will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.87 Viewpoint 278.2.001: south from South Hurst farmhouse and South Hurst was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported that intervening vegetation in the middle ground of the view would partially screen views of the route construction in the background, resulting in a moderate adverse significant effect. The amendment will not affect the nature of construction activities and will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.88 Viewpoint 279.2.003: north-east from Le Van House and Two Oaks Nursery on Red Lane was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported that construction works will be visible in the middle ground, seen beyond foreground vegetation. Visible in the background would be cranes used in the construction of Burton Green green tunnel, resulting in a moderate adverse significant effect.
- 5.4.89 The amendment will not affect the construction activities; therefore, it will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.90 Viewpoint 279.2.004: north-east from residential properties along Cromwell Road and Red Lane was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported that the removal of ancient woodland in Black Waste Wood, the construction of Kenilworth Greenway realignment and Burton Green green tunnel would be visible in the middle ground, resulting in a major adverse significant effect.
- 5.4.91 The amendment will not affect the construction activities; therefore, it will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.92 Viewpoints 280.2.012: south from Brockendon Grange and 280.3.001: south-west from PRoW (Footpath) W168a were assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported that the partial

loss of key characteristic vegetation, the proximity and scale of the construction works and the location of a temporary material stockpile within the middle ground would result in major adverse significant effect.

- 5.4.93 The amendment will not affect the nature of construction activities; therefore, it will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising during operation

Landscape assessment

- 5.4.94 The Stoneleigh Parklands LCA was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect during year 1 of operation, due to the introduction of engineering infrastructure into a predominantly rural area and a reduction in tranquillity due to the presence of trains. Although mitigation planting would mature over time, the moderate adverse significant effects on landscape character would continue to year 15 and beyond to year 60.
- 5.4.95 The amendment to the locations of proposed woodland mitigation planting areas will affect only a small part of the wider geographic extent of this LCA, and therefore will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Visual assessment

- 5.4.96 Viewpoints 277.3.006: north-east from Kenilworth Greenway (Part of the Coventry Way), and 279.3.006: north-west from Kenilworth Greenway (part of the Coventry Way) were assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a major adverse significant effect in the winter of year 1 for these viewpoints, due to the height of landscape mitigation earthworks crossing gently undulating landform and screening views of the HS2 route and wider views in the middle ground and background. These effects will remain for years 15 and beyond to year 60, due to the maturing of mitigation planting on the landscape mitigation earthworks in the foreground foreshortening the long-distance views.
- 5.4.97 None of the proposed changes to areas of woodland within the amendment will be visible from these viewpoints; therefore, the amendment will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.98 Viewpoint 277.3.007: north-west from PRow (Footpath) W168 was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported major adverse significant effect in year 1 of operation, due to the visibility of the route in the middle ground, either at grade or with the upper elements of trains and overhead line equipment seen above intervening landscape earthworks. These effects will remain for years 15 and beyond to year 60, due to the absence of mitigation planting.
- 5.4.99 Although the amendment will reduce areas of proposed woodland habitat creation east of the viewpoint, between the Kenilworth Greenway and Broadwells Wood, this

will not be visible from this viewpoint and will not give rise to a new or different significant effect, and will not change the level of significance of the effects reported in the main ES.

- 5.4.100 Viewpoint 278.2.001: south from South Hurst farmhouse and South Hurst was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect in the winter of year 1 of operation, reducing in summer to be minor adverse non-significant due to the intervening mature vegetation being in leaf. By year 15 and beyond to year 60, the maturing of mitigation planting would further reduce effects to be negligible and non-significant.
- 5.4.101 The amendment for the removal of woodland planting west of the scheme, between Broadwells Wood and the Kenilworth Greenway, will not be visible from this viewpoint and will not alter the view from this receptor; therefore, it will not give rise to a new or different significant effect, and will not change the level of significance of the effects reported in the main ES.
- 5.4.102 Viewpoint 279.2.003: north-east from Le Van House and Two Oaks Nursery on Red Lane was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a minor adverse, non-significant effect in the winter of year 1 of operation, reducing in summer to be negligible non-significant due to intervening mature vegetation being in leaf. The negligible effect would continue to year 15 and beyond to year 60.
- 5.4.103 The amendment for management and habitat enhancement of existing woodland in Black Waste Wood, east of the HS2 route, will be screened from the viewpoint by intervening mature vegetation west of the route. Therefore, the amendment will not give rise to a new or different significant effect, and will not change the level of significance of the effects reported in the main ES.
- 5.4.104 Viewpoint 279.2.004: north-east from residential properties along Cromwell Road and Red Lane was assessed as being affected by the original scheme and will also be affected by this amendment. The main ES reported a moderate adverse significant effect in year 1 of operation, reducing by year 15 to be minor adverse, non-significant and beyond to year 60 to be negligible and non-significant due to the maturing of mitigation planting.
- 5.4.105 The amendment for management and habitat enhancement of existing woodland in Black Waste Wood, east of the HS2 route will not alter the view from this receptor, as growth within the woodland will be screened from this viewpoint by the maturing of mitigation planting west of the route. Therefore, the amendment will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.106 Viewpoint 280.2.012: south from Brockendon Grange was assessed as being affected by the original scheme due to the height of landscape mitigation earthworks east of the HS2 route in the background screening views of mature woodland along the Kenilworth Greenway beyond, and will also be affected by this amendment. The main ES reported a moderate adverse significant effect in year 1, reducing by year 15 to be minor adverse non-significant and by year 60 to be negligible, and non-significant due to the maturing of mitigation planting.

- 5.4.107 The amendment will be visible from this viewpoint and will not alter the view from the receptor. Therefore the amendment will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.
- 5.4.108 Viewpoint 280.3.001: south-west from PRoW (Footpath) 168a was assessed as being affected by the original scheme due to the height of landscape mitigation earthworks east of the HS2 route in the foreground, cutting across gently undulating landform and screening views of mature woodland along the Kenilworth Greenway in the background, and will also be affected by this amendment. The main ES reported a major adverse significant effect in year 1 which would remain to years 15 and 60, as although mitigation planting will have matured, the scale and proximity of the landscape earthworks east of the route will remain a prominent component of the view.
- 5.4.109 The amendment will not alter the view from this receptor; therefore, it will not give rise to a new or different significant effect, and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.4.110 This amendment reduces the area of landscape mitigation planting in comparison to the original scheme; however, the mitigation identified previously remains sufficient to address the significant effects arising from the SES3 scheme. No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.4.111 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.4.112 There are no new or different likely significant cumulative effects for the landscape and visual assessment as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments or any relevant committed development.

Summary of new or different likely residual significant effects as a result of the amendment

- 5.4.113 The revised woodland compensation proposals in the vicinity of Burton Green will give rise to a different significant effect on cultural heritage during construction on the form and setting of Broadwells Wood (STNo64). However, this will not change the level of significance of the effects reported in the main ES.
- 5.4.114 The adoption of management and enhancement measures within Black Waste Wood will compensate for an adverse residual effect identified in Part 1 of the SES and AP2 ES as a result of the loss of ancient woodland. The revised woodland compensation proposals in the vicinity of Burton Green will result in different significant effects, but do not change the significance of residual environmental effects as set out in the main ES. Ancient woodland is an irreplaceable resource.

5.5 Additional land required along Red Lane for the temporary Kenilworth Greenway diversion (AP4-018-005)

- 5.5.1 The Bill provided for local temporary realignment of the Kenilworth Greenway, which runs along the route of the dismantled Kenilworth to Balsall railway line. A temporary diversion route for the Kenilworth Greenway is to be provided at Burton Green. This also would serve as a diversion route for the Coventry Way and Sustrans NCR No. 523 which share the same route as the Greenway through Burton Green. Under the Bill, the temporary realignment diverged from the existing Greenway alignment to the south of Cromwell Lane, running along a section of Red Lane, crossing Hob Lane and running around the perimeter of fields to the south-west of the route (refer to map CT-05-099, grid references G8, H8, I7-I8, in the main ES Volume 2, CFA18 Map Book).
- 5.5.2 Since submission of the Bill, it has been identified that there is insufficient width in the existing verge of Red Lane to include the temporary realignment of the Kenilworth Greenway permissive bridleway. An alternative alignment, of approximately the same length, is therefore proposed (refer to map CT-05-099, grid references G8, H7-H8, I8 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The revised realignment will also ensure the main access to the adjacent plant nursery is not affected during construction works.
- 5.5.3 The revised temporary realignment will cross Red Lane and then pass through and continue behind the hedge, running along the southern verge of Red Lane, passing back through the hedge at the Hob Lane and crossing to re-join the Kenilworth Greenway temporary diversion. An area of additional land is required temporarily (approximately 0.1ha) outside the current Bill limits to ensure sufficient width is available to provide an appropriate greenway from the Hob Lane/Red Lane junction to the point where the route would cross Red Lane. The remainder of the temporary realignment would be located within the current Bill limits.
- 5.5.4 The AP1 revised scheme (Land to facilitate pipeline diversion adjacent to Burton Green green tunnel AP1-018-030) proposed to secure 0.9ha of additional land adjacent to the Burton Green green tunnel (south portal) satellite compound on a temporary basis to facilitate the diversion of a fuel pipeline and provision of a permanent easement for maintenance. This AP4 amendment is dependent on the adoption of the AP1 revised scheme as the Kenilworth Greenway diversion route utilises part of this additional land.
- 5.5.5 The amendment is not considered to result in changes that will require a reassessment of the effects or proposed mitigation as set out in the main ES with respect to: air quality; ecology; land quality; landscape and visual assessment; socio-economics; sound, noise and vibration traffic and transport; and water resources and flood risk assessment. However, reassessment is considered to be required in respect of agriculture, forestry and soils; community; and cultural heritage.

Agriculture, forestry and soils

Introduction

- 5.5.6 This section of the report describes the environmental baseline in relation to agriculture, forestry and soils that is relevant to the assessment. It then identifies any

new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.5.7 The assessment scope, key assumptions and limitations for agriculture, forestry and soils are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.5.8 The area of agricultural land affected by the amendment is small (approximately 0.1ha temporarily required) and therefore will not alter the significance of effect, or result in a different effect, on best and most versatile (BMV) agricultural land or forestry land within the CFA18 area. The route-wide effects on BMV land and forestry land are reported in Volume 3.

Existing baseline

- 5.5.9 This amendment will affect an agricultural holding which has not been assessed previously. This is Burrow Hills Nursery (holding reference: CFA18/27), which is a 3.0ha nursery of high sensitivity to change.

Future baseline

Construction (2017)

- 5.5.10 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.11 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on agriculture, forestry and soils.
- 5.5.12 Most existing Environmental Stewardship agreements will expire in 2015 and will be replaced by a new environmental land management scheme (countryside stewardship) which, together with the new greening measures introduced by Common Agricultural Policy reform, will affect the detailed management of individual farm holdings. These are not expected to change fundamentally the baseline circumstances described.

Operation (2026)

- 5.5.13 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.14 None of the identified developments affect the assessment of the AP4 amendment's likely operational impacts on agriculture, forestry and soils.

Effects arising during construction

- 5.5.15 This amendment will require 0.1ha (3% of the holding) temporarily from Burrow Hills Nursery. The significance of this change is assessed as being minor adverse, which is not significant. No land is required permanently.

- 5.5.16 The additional land required along Red Lane for the temporary Kenilworth Greenway diversion will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.5.17 The amendment relates to the construction stage only. The additional land required along Red Lane for the temporary Kenilworth Greenway diversion will therefore not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.5.18 No additional mitigation measures (i.e. in addition to those identified in the main ES and subsequent SES reports) are required.
- 5.5.19 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.5.20 There are no new or different likely significant cumulative effects for agriculture, forestry and soils as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Community

Introduction

- 5.5.21 This section of the report describes the environmental baseline that is relevant to the community assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme, taking into account the AP1 and AP2 amendments.

Scope, assumptions and limitations

- 5.5.22 The assessment scope, key assumptions and limitations for the community assessment are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Existing baseline

- 5.5.23 As described in the main ES (Volume 2, CFA Report 18, Section 5), the Kenilworth Greenway occupies the line of the disused railway between Kenilworth and Berkswell. It is managed as a linear country park and is well used by walkers and cyclists as a recreational resource. It is also used by equestrians with an annual permit. There are no public open spaces at Burton Green which makes the Greenway a particularly important resource. It forms part of the Sustrans National Cycle Route (NCR) 523 which runs from Crackley to Burton Green.

Future baseline

Construction (2017)

- 5.5.24 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.25 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on community.

Operation (2026)

- 5.5.26 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.27 None of the identified developments affect the assessment of the amendment's likely operational impacts on community.

Effects arising during construction

- 5.5.28 The main ES identified a major adverse significant amenity effect with regard to users of the Kenilworth Greenway related to HGV movements and visual effects associated with the use of the Red Lane and Hob Lane.
- 5.5.29 The main ES also identified a moderate adverse significant effect on the basis that the temporary diversion route is more circuitous, less suited to cycling and also requires crossing roads at Red Lane and Hob Lane. The main ES also identified that the temporary loss of use of the access point to the Greenway at Cromwell Lane would mean that residents on the north side of the village would have to cross through roadworks to access a temporary diversion to the south, and negotiate construction traffic accessing the compound to the north of Cromwell Lane. This would add a distance of approximately 300m to reach the Red Lane temporary diversion route.
- 5.5.30 The revised route for the temporary diversion of the Kenilworth Greenway will provide an equivalent access for walkers, cyclists and pedestrians to that described in the main ES. The additional land required along Red Lane for the temporary Kenilworth Greenway diversion will therefore not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.5.31 The amendment relates to the construction stage only. The additional land required along Red Lane for the temporary Kenilworth Greenway diversion will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.5.32 No additional mitigation measures (i.e. in addition to those identified in the main ES and subsequent SES reports) are required.
- 5.5.33 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.5.34 There are no new or different likely significant cumulative effects for community as a result of the AP4 amendments interacting with one another, the AP1 amendments, or any relevant committed development.
- 5.5.35 The Burton Green area amendment (AP2-018-004) removed the major adverse significant amenity HGV traffic effect from Red Lane and Hob Lane reported in the main ES. The AP4 amendment interacting with the previous AP2 amendment to the Kenilworth Greenway will not result in any new or different significant cumulative effects.

Cultural heritage

Introduction

- 5.5.36 This section of the report describes the environmental baseline in relation to cultural heritage that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.5.37 The assessment scope, key assumptions and limitations for cultural heritage are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.

Existing baseline

- 5.5.38 The cultural heritage baseline for the assessment takes into account information collected in support of the main ES, which included walk-over survey, geophysical survey, remote-sensing data, and data from national and local registers. A full list is provided in the main ES Volume 2, CFA18, Section 6.3. In addition, the baseline was updated with the results of additional survey work in SES and AP2 ES.
- 5.5.39 The amendment is located in the vicinity of the following heritage assets:
- The Hollies (asset reference STN076), a non-designated built heritage asset of low value; and
 - ovoid enclosure¹¹ north of Burton Green Farm (asset reference STN078), a non-designated asset of low value.

Future baseline

Construction (2017)

- 5.5.40 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.41 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on cultural heritage.

¹¹ An archaeological cropmark identified through aerial photography.

Operation (2026)

- 5.5.42 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.
- 5.5.43 None of the identified developments affect the assessment of the amendment's likely operational impacts on cultural heritage.

Effects arising during construction

- 5.5.44 The main ES recorded no impacts (i.e. no change) on both the Hollies (asset reference STNo76) and the ovoid enclosure north of Burton Green Farm (asset reference STNo78). The amendment would require an additional 0.07ha of land in comparison with the original scheme. The new land required would be outside the boundaries of both the Hollies and the ovoid enclosure north of Burton Green Farm. The amendment would not introduce any changes that would have an impact on the setting of the Hollies and would therefore have no impact (i.e. no change) on this asset. The amendment would also have no impact (i.e. no change) on the ovoid enclosure north of Burton Green Farm.
- 5.5.45 The amendment for additional land for the temporary Kenilworth Greenway diversion will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Effects arising from operation

- 5.5.46 The original scheme resulted in a low adverse impact and minor adverse effect on the setting of the Hollies (asset reference STNo76), which is not significant. The amendment would not alter the distance of the asset from the scheme, and the low adverse impact and minor adverse effect would remain. The original scheme resulted in no change to the ovoid enclosure (asset reference STNo78) and the amendment would not change this.
- 5.5.47 The amendment for additional land for the temporary Kenilworth Greenway diversion will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.5.48 No additional mitigation measures (i.e. in addition to those identified in the main ES) are required.
- 5.5.49 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.5.50 There are no new or different likely significant cumulative effects for cultural heritage as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Summary of new or different likely residual significant effects as a result of the amendment

- 5.5.51 The additional land required along Red Lane for the temporary Kenilworth Greenway diversion will not result in new or different significant effects and does not change the level of significance of environmental effects as set out in the main ES (Volume 2, CFA18, Stoneleigh, Kenilworth and Burton Green) AP1 ES or SES and AP2 ES.

5.6 Alternative access for overhead power line diversion south of Moat Farm (AP4-018-006)

- 5.6.1 The Bill provided for diversion of the Berkswell substation 132kV overhead electricity line in the vicinity of Burton Green. A temporary access route leading from Hob Lane at Moat Farm was to be provided to the winching location to facilitate the diversion (refer to map CT-05-099-L1, grid references F5-F7, in the main ES Volume 2, CFA18 Map Book). This would require the upgrade of two accommodation bridges. The initial section of the temporary access route from Hob Lane through Moat Farm was located within CFA18 Stoneleigh, Kenilworth and Burton Green, with the remainder of the route to the winching location located within CFA23 Balsall Common and Hampton-in-Arden.
- 5.6.2 Since submission of the Bill, further information has come to light that has confirmed that the proposed access through Moat Farm is unsuitable, and an alternative temporary access route to the winching location has been identified. The alternative route avoids Moat Farm and the need for upgrade of the accommodation bridges. This revised route will be provided further south, via agricultural land from the A452 Kenilworth Road east of Black Hales Farm (refer to map CT-05-099-L2, grid references F1-F6 in the SES3 and AP4 ES Volume 2, CFA18 Map Book). The revised access will follow existing field boundaries, crossing one field boundary with established vegetation. At this field boundary, vegetation will need to be locally removed, with replanting on completion of the works. It is assumed that no topsoil stripping or hardcore placement of the route will be required.
- 5.6.3 Approximately 0.67ha of additional land outside the Bill limits is required temporarily for the alternative access. The majority of this lies within CFA18, Stoneleigh, Kenilworth and Burton Green, with 0.03ha within CFA23, Balsall Common and Hampton-in-Arden. There is also an approximate 0.17ha reduction in land required temporarily, with 0.05ha of this within CFA23. Overall, there is a net increase of approximately 0.5ha of land required temporarily for the alternative access.
- 5.6.4 The amendment is not considered to result in changes that will require a reassessment of the effects or proposed mitigation as set out in the main ES with respect to: air quality; community; cultural heritage; land quality; landscape and visual assessment; socio-economics; sound, noise and vibration; traffic and transport; and water resources and flood risk assessment. However, reassessment is considered to be required in respect of agriculture, forestry and soils; and ecology.

Agriculture, forestry and soils

Introduction

- 5.6.5 This section of the report describes the environmental baseline in relation to agriculture, forestry and soils that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.6.6 The assessment scope, key assumptions and limitations for agriculture, forestry and soils are as set out in Volume 1, the SMR (Volume 5: Appendix CT-001-000/1) and the SMR Addendum (Volume 5: Appendix CT-001-000/2) of the main ES.
- 5.6.7 Moat Farm is a private residential (i.e. non-agricultural) holding and as a result was excluded from the assessment of likely significant effects on agricultural receptors in the main ES. Moat Farm is therefore not considered further in the agricultural assessment of this amendment.
- 5.6.8 The area of agricultural land affected by this amendment alone is negligible and therefore will not alter the significance of effect, or result in any different effect, on best and most versatile (BMV) agricultural land or forestry land within the CFA18 area. The route-wide effects on BMV land and forestry land are reported in Volume 3.

Existing baseline

- 5.6.9 This amendment will affect one agricultural holding which has not been assessed previously. This is Redfern Manor (holding reference: CFA18/29), a 119.1ha arable holding of medium sensitivity.

Future baseline

Construction (2017)

- 5.6.10 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2017, additional to those identified in the main ES and the SES and AP2 ES.
- 5.6.11 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on agriculture, forestry and soils.
- 5.6.12 Most existing Environmental Stewardship agreements will expire in 2015 and will be replaced by a new environmental land management scheme (countryside stewardship) which, together with the new greening measures introduced by Common Agricultural Policy reform, will affect the detailed management of individual farm holdings. These are not expected to change fundamentally the baseline circumstances described.

Operation (2026)

- 5.6.13 Volume 5: Appendix CT-004-000 of the SES3 and AP4 ES provides details of the developments which are assumed to have been implemented by 2026, additional to those identified in the main ES and the SES and AP2 ES.

- 5.6.14 None of the identified developments affect the assessment of the AP4 amendment's likely construction impacts on agriculture, forestry and soils.

Effects arising during construction

- 5.6.15 This amendment will require 0.6ha (0.5% of the holding) temporarily from Redfern Manor. The significance of the effect is assessed as negligible and is not significant. No land is required permanently from Redfern Manor.

Effects arising from operation

- 5.6.16 The alternative access south of Moat Farm will not give rise to a new or different significant operational effects and will not change the level of significance of the effects reported in the main ES.

Mitigation and residual effects

- 5.6.17 No additional mitigation measures (i.e. in addition to those identified in the main ES and subsequent SES reports) are required.

- 5.6.18 The amendment will not give rise to a new or different residual significant effect and will not change the level of significance of the effects reported in the main ES.

Cumulative effects

- 5.6.19 There are no new or different likely significant cumulative effects for agriculture, forestry and soils as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Ecology

Introduction

- 5.6.20 This section of the report describes the environmental baseline in relation to ecology that is relevant to the assessment. It then identifies any new or different likely significant environmental effects as a result of the amendment, compared to those of the SES3 scheme.

Scope, assumptions and limitations

- 5.6.21 Updates to the scope of the assessment for ecology are set out in Volume 1 of the SES3 and AP4 ES. The key assumptions and limitations, and the methodology for determining significance of effects are as set out in Volume 1, the SMR and the SMR Addendum (Volume 5: Appendix CT001-000/1 and CT-001-000/2 of the main ES) and in Addendum 4 to the SMR (SES 3 and AP4 ES Volume 5: Appendix CT-001-000/5).
- 5.6.22 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported in the main ES, Volume 5: Appendix CT-001-000/2. This constitutes a 'reasonable worst-case' basis for the subsequent assessment. The precautionary approach to the assessment that has been adopted identifies the likely significant ecological effects of the AP4 revised scheme.

Existing baseline

- 5.6.23 The ecological baseline of the land required for the amendment has been based on aerial photography and relevant existing information gathered from national

organisations and from regional and local sources, including Warwickshire County Council (Warwickshire Biological Records Centre) and Warwickshire Wildlife Trust.

- 5.6.24 A summary of the baseline information relevant to the assessment of the amendment is provided below. This takes account of any relevant new or updated baseline information provided in the SES3 and AP4 ES, Volume 5: Appendix-001-003.

Designated sites

- 5.6.25 There are no statutory or non-statutory designated nature conservation sites or ancient woodland relevant to the assessment.

Habitats

- 5.6.26 The land required for the amendment consists primarily of arable land in the form of a single field assessed as having negligible value.
- 5.6.27 The northern part of the proposed temporary access track consists of improved grassland and is assessed as having negligible value.
- 5.6.28 The proposed temporary access track will run alongside a hedgerow with trees, and a small copse of trees associated with the hedgerow. The land required for the amendment passes through the hedgerow at the northern and southern ends. The hedgerow network in the CFA18 area was reported as having district/ borough value in the main ES.
- 5.6.29 Seven water bodies are located within 250m to the west of the proposed temporary access track, although none of these are located within the land required for the amendment. These field ponds, associated with Black Hales Farm and Redfern Farm, were not reported in the main ES as they were outside the ecological scope of the original scheme. The main ES considered water bodies which were not surveyed due to access restrictions as having up to district/ borough value, as a precautionary measure. Taking a similar precautionary approach, these ponds are each considered to be of up to district/ borough value.
- 5.6.30 The land no longer required for the utilities construction access at Moat Farm located in the CFA18 area was reported in the main ES to consist of bare ground and amenity grassland, and was assessed as having negligible value. The land no longer required for the utilities construction access within the Moat Farm landholding in CFA23 Balsall Common and Hampton-in-Arden consists of improved grassland and arable land and was assessed as having negligible value in the main ES.

Protected and/or notable species

- 5.6.31 No records of protected or notable species within or adjacent to the land required for the amendment were reported in the main ES or SES for either CFA18 or CFA23.
- 5.6.32 There are seven water bodies located within 250m to the west of the land required for the amendment, the closest of which is located 6m to the west. One of these water bodies, located approximately 230m to the north of the amendment area, is not considered suitable to support breeding populations of great crested newt based on a review of aerial imagery. The main ES reported that water bodies which have not been surveyed could support breeding populations of great crested newts of medium population size class, and taking a precautionary approach, these populations were

assessed as having up to county/metropolitan value. Following the same precautionary approach, assumed great crested newt populations in the six suitable water bodies within 250m of the land required for the amendment are each assessed to have up to county/metropolitan value.

- 5.6.33 The hedgerow and trees within the area required for the amendment could be used by roosting, foraging and commuting bats. An assemblage of bats (comprising common pipistrelle and soprano pipistrelle and brown long-eared bats) using roosting, foraging and commuting habitats within and adjacent to Little Pools Wood and Big Pools Wood, including Burton Green, was reported in the main ES. This area was reported as a key area of foraging habitat and a key commuting route and is located approximately 800m to the north-east of the land required for the amendment. Taking a precautionary approach, it is assumed that this assemblage of bats could use roosting, foraging and commuting resources provided by the hedgerow and trees within the land required for the amendment. This assemblage of bats was reported as having district/borough value in the main ES.

Future baseline

Construction (2017)

- 5.6.34 The future baseline for construction in 2017 remains unchanged from that reported in the main ES.

Operation (2026)

- 5.6.35 The future baseline for operation in 2026 remains unchanged from that reported in the main ES.

Effects arising during construction

Avoidance and mitigation measures

- 5.6.36 The assessment assumes implementation of the measures set out within the draft CoCP (Volume 5: Appendix CT-003-000 of the main ES), which includes translocation of protected species where appropriate.

Designated sites

- 5.6.37 The amendment will not give rise to any new or different significant effects relating to designated sites and will not change the level of significance of the effects reported in the main ES.

Habitats

- 5.6.38 The amendment will result in the loss of part of an existing hedgerow with trees (approximate 20m length) along the boundary of arable fields to the north and south of the access route, for access purposes. The remainder of the hedgerow with trees will be retained. The main ES reported that the combined loss and severance of hedgerows affected by the scheme will cause an adverse effect on the conservation status of the hedgerow network which will be significant at a district/borough level. Based on the small scale of the change (20m), the amendment will not result in a new or different significant effect on the hedgerow network, and will not change the overall level of significance of the effects reported in the main ES.

- 5.6.39 It is unlikely that the amendment will result in any other new or different effects on habitat receptors of relevance at more than the local/parish level. Local/parish level effects which are in addition to those identified in the main ES and the SES and AP2 ES are listed in Volume 5: Appendix EC-003-003 of the SES3 and AP4 ES.

Protected and/or notable species

- 5.6.40 No significant effects on the assemblage of bats using roosting, foraging and commuting habitats within and adjacent to Little Pours Wood and Big Pours Wood, including Burton Green, were reported in the main ES. It was reported that the majority of commuting and foraging habitat will still be available for use by the bat assemblage post-construction, and the habitat loss associated with the amendment does not change this assessment. The main ES reported that none of the bat roosts used by this assemblage of bats will be lost.
- 5.6.41 Taking a precautionary approach, the amendment will result in the loss of mature trees which could support bat roosts used by this assemblage of bats. Loss of a bat roost used by the assemblage could result in an adverse effect on the conservation status of the assemblage that would be significant at up to a district/borough level. This is a new significant effect.
- 5.6.42 It is considered unlikely that the amendment will result in any other new or different significant effects on species of relevance at more than the local/parish level. Local/parish level effects which are in addition to those identified in the main ES and the SES and AP2 ES are listed in Volume 5: Appendix EC-003-003 of the SES3 and AP4 ES.

Cumulative effects

- 5.6.43 There are no new or different likely significant cumulative effects for ecology as a result of the AP4 amendments interacting with one another, the AP1 amendments, AP2 amendments, or any relevant committed development.

Mitigation and residual effects

Other mitigation measures

- 5.6.44 Any hedgerow trees with confirmed bat roosts will be avoided wherever possible, and disturbance of roosts minimised in line with the measures in the draft CoCP. Any loss of roosts would be mitigated in accordance with the principles of ecological mitigation identified within the SMR Addendum (Volume 5: Appendix CT-001-000/2). Replacement roosting habitat would be provided within the limits of the Bill, if required. With these measures in place, the effect on the assemblage of bats using roosting, foraging and commuting habitats within and adjacent to Little Pours Wood and Big Pours Wood, including Burton Green, will be reduced to a level which is not significant.
- 5.6.45 No further additional mitigation measures (i.e. in addition to those identified in the main ES) are required.

Summary of likely residual effects

- 5.6.46 No new or different residual effects on ecological receptors occur as a consequence of the amendment. The significant residual effects of the AP4 revised scheme in this area are therefore unchanged from those reported in the main ES.

Effects arising from operation

- 5.6.47 The alternative access south of Moat Farm will not be present during the operational phase of the scheme and therefore will not give rise to a new or different significant effect and will not change the level of significance of the effects reported in the main ES.

Summary of new or different likely residual significant effects as a result of the amendment

- 5.6.48 The alternative access for an overhead power line diversion south of Moat Farm will not result in new or different residual significant effects and does not change the level of significance of environmental effects as set out in the main ES.

6 Combined effects of amendments in this CFA due to changes in traffic flows

- 6.1.1 All of the effects of the changes proposed in this CFA have been described above and there are no further combined effects to report.

High Speed Two (HS2) Limited

One Canada Square
London E14 5AB

T 020 7944 4908

E hs2enquiries@hs2.org.uk

Z24