# A417 Missing Link
# TR010056

# 6.7 Environmental Statement - Updates and Errata

Planning Act 2008

APFP Regulation 5(2)(a)
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 6

October 2021

Infrastructure Planning

Planning Act 2008

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

# A417 Missing Link

## Development Consent Order 202[x]

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### Environmental Statement - Updates and Errata

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|---|---|
| **Regulation Number:** | 5(2)(a) |
| **Planning Inspectorate Scheme Reference** | TR010056 |
| **Application Document Reference** | 6.7 |
| **Author:** | A417 Missing Link |

| Version | Date | Status of Version |
|---|---|---|
| C01 | October 2021 | Procedural Deadline A |

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# 1 Introduction

## 1.1 Purpose of this document

1.1.1 This document (Document Reference 6.7) has been prepared to detail updates to and errata in the Environmental Statement (ES) (Document Reference 6.2, APP-032 to APP-049) for the A417 Missing Link (hereafter referred to as 'the scheme'), which was submitted as part of the Development Consent Order (DCO) application in June 2021.

1.1.2 It is intended that during the Examination, further points of clarification or amendments which arise through (but not limited to) the Written Questions, Written Representations and the Issue Specific Hearings would be added to this document which would remain live throughout. It will be submitted, where appropriate, at each of the prescribed Deadlines as set out by the Planning Inspectorate.

1.1.3 A strikethrough has been used for text which is now removed from the appropriate chapter and section of ES chapters, whilst text in red is new and altered text.

# 2 Environmental Statement Updates

2.1.1 Table 2-1 Environmental statement chapter updates has been produced to detail any amendments, including updates, to the ES (Document Reference 6.2, APP-032 to APP-049) which have been identified through the Examination and provides updates and amendments as appropriate.

## Table 2-1 Environmental statement chapter updates

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 1 Introduction (APP-032) | **Paragraph 1.3.16** of **National Planning Policy Framework** to be updated in line with the revised National Planning Policy Framework published in July 2021. | **Paragraph 1.3.16** of ES Chapter 1 - Introduction is amended to:<br>"In addition, the NPPF originally published in March 2012 and most recently updated in ~~June 2019~~ July 2021, sets out the government's planning policies for England and provides a framework within which locally prepared plans can be produced. The NPPF is 'an important and relevant' matter to be considered in decision making for NSIPs. The NPPF is supplemented by the Planning Practice Guidance (PPG) web-based resource launched in February 2014. The PPG is updated by the Ministry of Housing, Communities and Local Government as necessary." |
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Paragraph 14.3.3** to be updated for the sixth carbon budget. | **Paragraph 14.3.3** of ES Chapter14 is amended to:<br><br>The Climate Change Act 2008 requires that five-yearly carbon budgets are set and not exceeded to ensure that regular progress is made towards the target. The first three carbon budgets were set in 2009, with the fourth and fifth following in 2011 and 2016 respectively, as outlined in Table 14-1. ~~The UK Government agreed with the recommendation from the Climate Change Committee on the sixth carbon budget on Tuesday 20 April 2021. The stated intention is that this new target will be enshrined in UK law by the end of June 2021.~~ The sixth carbon budget was legislated for in June 2021. |
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Paragraph 14.3.4** to be updated for the Carbon Budget Order 2021. | **Paragraph 14.3.4** of ES Chapter14 is amended to:<br><br>The third, fourth and fifth carbon budgets, as set out in the Carbon Budgets Order 2009 , the Carbon Budget Order 2011 and the Carbon Budget Order 2016, are based on an 80% reduction as legislated by the Climate Change Act 2008. The ~~recommended~~ sixth carbon budget as set out in the Carbon Budget Order 2021, is based on the target for 100% reduction in emissions by 2050, it requires a 78% reduction in GHG emissions between 1990 and 2035. GHG emissions from the scheme are reported against the ~~latest~~ legislated carbon budgets, in line with the requirements of DMRB LA 114 and the NPSNN (Paragraph 5.17). |

<table>
<tr><th>Document reference</th><th>Reason for amendment to the ES</th><th>Amendment to the ES</th></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045)</td><td>Table 14-1 of ES Chapter 14 Climate (Document Reference 6.2, APP- 045) to include the sixth carbon budget (2033 - 2037) and to show the reduction below 1990 levels.<br><br>Table 14-1 UK third, fourth and fifth carbon budgets (as legislated by the Climate Change Act 2008 and set out in the Carbon Budgets Order 2009, the Carbon Budget Order 2011 and the Carbon Budget Order 2016)</td><td>Table 14-1 of ES Chapter 14 Climate (Document Reference 6.2, APP- 045) is amended to include the 6th carbon budget.<br><br>Table 14-1 UK third, fourth, ~~and~~ fifth and sixth carbon budgets (as legislated by the Climate Change Act 2008 and set out in the Carbon Budget Order 2009, the Carbon Budget Order 2011, ~~and~~ the Carbon Budget Order 2016 and the Carbon Budget Order 2021)
<table>
<tr><th>Carbon budget</th><th>Carbon budget level<br>Million tonnes of carbon dioxide equivalents ($MtCO_2e$)</th><th>Reduction below 1990 levels</th></tr>
<tr><td>Third carbon budget (2018 - 2022)</td><td>2,544 $MtCO_2e$</td><td>37% by 2023</td></tr>
<tr><td>Fourth carbon budget (2023 - 2027)</td><td>1,950 $MtCO_2e$</td><td>51% by 2025</td></tr>
<tr><td>Fifth carbon budget (2028 - 2032)</td><td>1,725 $MtCO_2e$</td><td>57% by 2030</td></tr>
<tr><td>Sixth carbon budget (2033 - 2037)</td><td>965 $MtCO_2e$</td><td>78% by 2035</td></tr>
</table></td></tr>
</table>

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Decarbonising transport: a better, greener Britain**<br>On 14th July 2021, the Department for Transport (DfT) published Decarbonising transport: a better, greener Britain , a plan to decarbonise the entire transport system in the UK.<br><br>Section **14.3 Legislative and policy framework** to include new policy. | **14.3 Legislative and policy framework**<br><br>Add under **National policy** heading.<br><br>**Decarbonising transport: a better, greener Britain**<br>The decarbonisation plan sets out the Government's commitments and the actions needed to decarbonise the entire transport system in the UK. This plan considers GHG emissions produced from use of the UK's transport system and details how the UK will enhance resilience to climate change risks across road, rail, ports, and aviation, harbour authorities and road and rail organisations.<br><br>The decarbonisation plan outlines a number of commitments by the Government to remove all emissions from road transport to achieve net zero target by 2050.<br><br>Commitments that will have a direct impact on road user emissions from the Scheme will include:<br><br>• An end to the sale of new petrol and diesel cars and vans by 2030<br>• All new cars and vans to zero emissions at the tailpipe by 2035<br>• All new L-category vehicles to be fully zero emissions at the tailpipe by 2035<br>• The end of the sale of all non-zero emissions HGVs by 2040<br><br>In addition, the Government is providing support for at least 4,000 zero emission buses and has committed to holding a consultation on a date to end the sale of new non-zero emissions motorbikes.<br><br>This plan states that major infrastructure projects outlined in the "ambitious roads programme reflects – and will continue to reflect – that in any imaginable circumstances the clear majority of longer journeys, passenger, and freight, will be made by road; and that rural, remote areas will always depend more heavily on roads." This supports the Road Investment Strategy (RIS2) which this project sits within. |

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Net zero highways: Our 2030 / 2040 / 2050 plan**<br>On 20th July 2021, National Highways published its Net zero highways: our 2030 / 2040 / 2050 plan. This responds to the government's Decarbonising transport: a better, greener Britain.<br><br>Section **14.3 Legislative and policy framework** to include new policy. | **14.3 Legislative and policy framework**<br><br>Add under **National policy** heading.<br><br>**Net zero highways: Our 2030 / 2040 / 2050 plan**<br><br>Net zero highways: our 2030 / 2040 / 2050 plan, responds to the Government's Decarbonising Transport: A Better, Greener Britain. The plan sets out how England's motorways and A-roads will be decarbonised, so they can continue to bring significant benefits to people and businesses in a net-zero economy.<br><br>National Highways recognises that it has a key role in the development and maintenance of a strategic road network that will facilitate the journey to net zero emissions.<br><br>The plan maps how the company will progress rapidly in this area, focusing on innovation and zero carbon solutions while using offset only as a very last resort. In summary:<br><br>• **By 2025**: National Highways has made a Greening Government Commitment to reduce its own carbon emissions by 75% compared with the 2017/18 baseline.<br>• **By 2030**: National Highways will be net-zero for its own carbon emissions. This includes switching to light-emitting diode (LED) lighting, changing its vehicle fleet to electric and planting up to 3 million additional trees on its own land next to roads.<br>• **By 2035**: National Highways will bring together best practice and latest technologies to construct the first net-zero road scheme.<br>• **By 2040**: All construction and maintenance activities carried out on the strategic road network will be net-zero.<br>• **By 2050:** The vehicles on the strategic road network will be zero emission. |

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Paragraph 14.4.21** to be updated for the sixth carbon budget (2033 - 2037). | **Paragraph 14.4.21** of ES Chapter 14 is updated to include the 6th carbon budget:<br><br>An estimate of the likely magnitude of GHG emissions associated with the scheme has been assessed against the legislated national UK carbon budgets. The UK Government has currently passed into law carbon budgets up to 2032:<br>• The third carbon budget period (2018 to 2022) allows the UK to emit 2,544 $MtCO_2e$.<br>• The fourth carbon budget (2023 to 2027) allows the UK to emit 1,950 $MtCO_2e$.<br>• The fifth carbon budget (2028 to 2032) allows the UK to emit 1,725 $MtCO_2e$.<br>• The sixth carbon budget (2033 - 2037) allows the UK to emit 965 $MtCO_2e$. |

<table>
<tr><th>Document reference</th><th>Reason for amendment to the ES</th><th>Amendment to the ES</th></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045)</td><td>Table 14-18 Assessment of scheme net emissions (up to 2032) against UK Government carbon budgets to reflect the sixth carbon budget is now included in the assessment.</td><td>
Table 14-18 Assessment of scheme net emissions (up to ~~2032~~ 2037) against UK Government carbon budgets
<table>
<tr><th rowspan="2">Project stage</th><th rowspan="2">Estimated total (cumulative) GHG emissions over carbon budgets ($tCO_2e$) ('Do-Something' scenario)</th><th rowspan="2">Net (cumulative) GHG emissions over carbon budgets ($tCO_{2e}$) ('Do-Something'- 'Do-Minimum')</th><th colspan="4">Net (cumulative) scheme GHG emissions per relevant carbon budget ($tCO_2e$)</th></tr>
<tr><th>Third (2018 - 2022)</th><th>Fourth (2023 - 2027)</th><th>Fifth (2028 - 2032)</th><th>Sixth[1] (2033 - 2037)</th></tr>
<tr><td>Construction (over a period of 42 months, assumed to commence in early 2023-2026)</td><td>57,932</td><td>57,932</td><td>n/a</td><td>57,932</td><td>n/a</td><td>n/a</td></tr>
<tr><td>Operation (modelled from 2026 through to 2037)</td><td>2,372,480</td><td>152,642</td><td>n/a</td><td>22,234</td><td>61,196</td><td>69,211</td></tr>
<tr><td>Total</td><td>2,430,411</td><td>210,573</td><td>n/a</td><td>80,166</td><td>61,196</td><td>69,211</td></tr>
</table>
[1] ~~The sixth carbon budget has been committed to by government and is expected to become law by June 2021.~~
</td></tr>
</table>

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Paragraph 14.10.12** to reflect the sixth carbon budget is now included in the assessment. | **Paragraph 14.10.12**<br>If the DCO is granted, construction is expected to start in early 2023 and the scheme is expected to be open to traffic in 2026. Therefore, the construction period for the scheme falls wholly within the fourth carbon budget. Operation of the scheme would commence in 2026 and is assessed against the fourth, ~~and~~ fifth and sixth carbon budgets, up to ~~2032~~ 2037. ~~Operational and maintenance emissions between 2033 and 2037 (the period for the sixth carbon budget) are provided in Table 14-18, however emissions after 2032 are not assessed as this new target has yet to be legislated. The UK Government has indicated it intends to enshrine the sixth carbon budget in UK law by the end of June 2021.~~ |
| Volume 6.2 Environmental Statement Chapter 14 Climate (APP-045) | **Paragraph 14.10.13** to reflect the sixth carbon budget is now included in the assessment. | **Paragraph 14.10.13**<br>Significant effects<br>The construction and operation phases of the scheme which fall within legislated carbon budget periods are expected to have an insignificant impact on the ability of the UK Government to meet its carbon budgets. Construction of the scheme is estimated to contribute approximately 0.00380% of the fourth carbon budget. Operation of the scheme is estimated to contribute approximately 0.00114% of the fourth carbon budget, ~~and~~ 0.00355% of the fifth carbon budget and 0.00717% of the sixth carbon budget. It is considered that this magnitude of emissions from the scheme in isolation would not have a material impact on the ability of the UK Government to meet its carbon budgets, and therefore is not anticipated to give rise to a significant effect on climate, in line with the position set out within Section 5.18 of the NPSNN. |

# 3 Environmental Statement Errata

3.1.1 Table 3-1 Environmental statement chapter errata has been produced to detail any errors or omissions within the ES which have been identified through the Examination and provides corrections as appropriate.

## Table 3-1 Environmental statement chapter errata

<table>
<tr><th>Document reference</th><th>Reason for amendment to the ES</th><th>Amendment to the ES</th></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 2 – The Project (APP-033)</td><td>Paragraphs 2.5.7 to 2.5.10 provides detail on the expected future baseline scenario, including expected changes to landscape, ecological and heritage assets, and climate change. However, there is no mention of the future baseline of flood risk, although this is assessed within ES Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044).</td><td>Paragraph 2.5.10 of ES Chapter 2 – The Project is amended to:<br>“Based on the current land use, the future baseline in the absence of the scheme is unlikely to change significantly by 2041. Subtle changes are expected due to climate change, such as some movements of certain species and local population changes; however, the overall habitats and species composition in the study area (as defined in ES Chapter 4 Environmental Assessment Methodology (Document Reference 6.2)) are expected to be broadly similar to that of the existing baseline. Potential changes to road drainage and water environment receptors in the future would not be noticeable, as discussed in Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2). Therefore, the future baseline would remain the same as set out in the existing baseline.”</td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 5 Air Quality (APP-APP-036)</td><td>Paragraph 5.10.30 erroneously reports that Receptor 17 has the largest increase in concentration as 0.6 ug/m$^3$, instead of 0.9 ug/m$^3$.</td><td>Paragraph 5.10.30 of ES Chapter 5 is amended to:<br>“Receptors 17, 19 and 22 are located in the Cheltenham AQMA. Receptor 17 has the largest increase in concentration (~~0.6~~ 0.9µg/m$^3$ ) as a result of the scheme. The highest predicted concentration due to the scheme in the Cheltenham AQMA is at receptor 22 (31.6µg/m$^3$). There are no modelled exceedances in the Cheltenham AQMA.”</td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 5 Air Quality (APP-APP-036)</td><td>Paragraph 5.10.24 - omission of Receptor 71 from discussion of results.</td><td>Paragraph 5.10.24 of ES Chapter 5 is amended to:<br>“In this discussion region ~~eight~~ nine receptors (see Table 5-6) have been selected to represent the scale of impacts associated with the scheme. Scheme-specific and local authority monitoring showed that roadside concentrations of annual mean NO2 in the Birdlip AQMA were above the AQO. A maximum monitored concentration of 61µg/m3 was recorded at the roadside of the Air Balloon roundabout. It is not representative of receptor exposure in this location as properties are set back further from the road. There are no predicted exceedances of the NO2 annual mean objective in the baseline scenario at any of the receptor locations. There are two receptors at risk of exceedance at the Air Balloon Cottages (receptors 50 and 51). Receptor 71 shows a high rate of change (2.7 ug/m$^3$). Although the annual mean $NO_2$ concentrations still remain below the relevant air quality threshold and therefore there is no likely significant effect in accordance with DMRB LA105.”</td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 5 Air Quality (APP-APP-036)</td><td>Table 5-6 $NO_2$ concentrations at selected receptors – discussion region 1<br>Omission of Receptor 71 from Table 5-6.</td><td>Receptor 71 of ES Chapter 5 is added to Table 5-6.<br><br>Table 5-6 $NO_2$ concentrations at selected receptors – discussion region 1
<table>
<tr><th rowspan="2">Receptor</th><th colspan="2">Grid Reference (m)</th><th rowspan="2">Figure sheet reference</th><th colspan="3">Annual mean NO2 (µg/m3)</th><th rowspan="2">Change (DS-DM) (µg/m3)</th><th rowspan="2">AADT change</th></tr>
<tr><th>X</th><th>Y</th><th>2016 Base</th><th>2026 DM</th><th>2026 DS</th></tr>
<tr><td>46</td><td>394545</td><td>213635</td><td>20</td><td>25.7</td><td>22.9</td><td>12.6</td><td>-10.4</td><td>-16,448</td></tr>
<tr><td>50</td><td>393450</td><td>216124</td><td>9</td><td>43.2</td><td>39.9</td><td>23.6</td><td>-16.4</td><td>8,286</td></tr>
<tr><td>51</td><td>393457</td><td>216129</td><td>9</td><td>42.7</td><td>39.1</td><td>22.8</td><td>-16.3</td><td>8,286</td></tr>
<tr><td>53</td><td>393752</td><td>215136</td><td>9</td><td>10.7</td><td>8.6</td><td>9.5</td><td>0.8</td><td>2,235</td></tr>
<tr><td>55</td><td>393391</td><td>215756</td><td>9</td><td>23.1</td><td>19.5</td><td>13.6</td><td>-5.9</td><td>-14,681</td></tr>
<tr><td>71</td><td>393869</td><td>215412</td><td>9</td><td>10.7</td><td>8.6</td><td>11.3</td><td>2.7</td><td>45,149</td></tr>
<tr><td>73</td><td>394208</td><td>215344</td><td>9</td><td>10.1</td><td>8.2</td><td>10.2</td><td>2.0</td><td>43,054</td></tr>
<tr><td>96</td><td>392879</td><td>215807</td><td>9</td><td>25.3</td><td>22.8</td><td>22.4</td><td>-0.4</td><td>8,286</td></tr>
<tr><td>99</td><td>392968</td><td>215759</td><td>9</td><td>17.7</td><td>15.3</td><td>17.2</td><td>1.9</td><td>8,286</td></tr>
</table></td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 6 – Cultural Heritage (APP-037)</td><td>Paragraph 6.7.2 states an erroneous distance of 70m between the proposed scheme and Emma’s Grove. This should be 50m.</td><td>Paragraph 6.7.2 of ES Chapter 6 is amended to:<br>“One designated resource lies within the DCO Boundary, but outside of the footprint of the scheme. This scheduled monument consists of a group of three round barrows, known collectively as Emma’s Grove (NHLE 1017079). This resource is located approximately ~~70m~~ 50m to the south of the scheme at its closest point.”</td></tr>
</table>

<table>
<tr><th>Document reference</th><th>Reason for amendment to the ES</th><th>Amendment to the ES</th></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 6 – Cultural Heritage (APP-037)</td><td>Table 6-6 Scheduled monuments (high value)<br>Table 6-6 states an erroneous distance of 80m between the proposed scheme and Emma’s Grove. This should be 50m.</td><td>Row 10 of Table 6-6 of ES Chapter 6 is amended as follows.<br>Table 6-6 Scheduled monuments (high value)
<table>
<tr><th>NHLE No.</th><th>Name</th><th>Distance from scheme</th><th>Setting</th><th>Nature of impact</th><th>Magnitude of impact</th><th>Significance of effect</th></tr>
<tr><td>1017079</td><td>Three bowl barrows, known as Emma's Grove barrows</td><td>~~80m~~ 50m</td><td>The barrows are located immediately to the east of the ‘Air Balloon’ roundabout and are hidden within a small copse. The wider setting of the barrows comprises an undulating rural landscape, featuring a mixture of historic and modern fields, boundaries, tracks and woodlands. The topography is such that long distance views are rare and this sense of hiddenness and discovery as an observer moves through the landscape, encountering other contemporary prehistoric monuments as they appear in view, is a key aspect of setting that adds to its significance. This ‘mind visibility’ is likely to have been important to the builders of the barrow, and therefore the significance of the barrow is sensitive to changes to the landform within this setting, regardless of whether these changes are visible.</td><td>Passing approximately 50m to the north of these barrows, the scheme would alter the immediate setting of the barrows, although this would be ameliorated slightly by the removal of the Existing A417 immediately to the west. The scheme would represent a modern alteration to the wider rural landscape within which these barrows sit. This wider rural setting, which contains a number of other prehistoric funerary monuments, provides context to the barrow, of which the concept of movement through the landscape is a key aspect. The scheme would create a physical barrier in the landscape that would be highly intrusive in the setting of the barrows and as a result adversely affect the significance of the resource. This would equate to a moderate adverse effect according to the criteria in Table 6-4.</td><td>Minor adverse</td><td>Moderate adverse (significant effect)</td></tr>
</table></td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 8 Biodiversity (APP-039)</td><td>Paragraph 8.9.32 requires revision as it understates the total amount of woodland created by the scheme.</td><td>The text refers to a specific area only (the main area of woodland loss).<br>Paragraph 8.9.32 of ES Chapter 8 is amended to:<br>“~~A total of~~ Approximately 7.5ha of new broadleaved woodland species of native variety characteristic of existing woodland would be planted along the southern verge of the new A417 from Brockworth to the Crickley Hill area to replace woodland lost during construction and to ensure continuity of woodland habitat along this section of the scheme for the benefit of bat species. Mixed broadleaved woodland and a buffer of scrub species of approximately 5ha in area would also be planted round the borders of a field to the south of Ullen Wood. This would provide a woodland edge buffer for the ancient woodland. Similarly, additional trees and scrub would be planted on the eastern and northern edge of Emma’s Grove to create a tiered buffer of vegetation including hazel scrub and small trees.”</td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 8 Biodiversity (APP-039)</td><td>Table 8-6 Summary of field survey methods used for each type of biodiversity resource relevant to the scheme<br>Table 8-6 should clarify what time of year the Extended Phase 1 Habitat survey was undertaken.</td><td>Row 1 of Table 8-6 is amended as follows.<br>Table 8-6 Summary of field survey methods used for each type of biodiversity resource relevant to the scheme
<table>
<tr><th>Biodiversity survey</th><th>Field survey methods</th><th>Dates of survey</th><th>Reference/ Appendix</th></tr>
<tr><td>Extended Phase 1 habitat survey</td><td>Habitats within the study area were mapped, and potential for protected and notable species established following the standard JNCC methodology[23].</td><td>May and June 2017, and localised updates in various summer months in 2019, 2020 and 2021.</td><td>ES Appendix 8.1 (Document Reference 6.4), and the 2017 Preliminary Ecological Appraisal report[24].</td></tr>
</table></td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 9 – Geology and Soils (APP-040)</td><td>Paragraphs 9.10.25 and 9.10.33 contain an error where the significance of effect on surface water is reported as ‘neutral and permanent slight adverse’, when it should have been reported as ‘permanent slight adverse’.</td><td>Paragraph 9.10.25 of ES Chapter 8 is amended to:<br>“Although the Tier 2: GQRA have identified localised areas where elevated contamination levels may pose a risk to the controlled water receptors during construction, on application of essential mitigation no significant effects on controlled waters during construction have been identified. Therefore, overall the effect of the scheme on risks from contamination on groundwater during construction is assessed as neutral and slight adverse and not significant. For surface water this is assessed as ~~neutral and~~ permanent slight adverse and not significant.”</td></tr>
</table>

<table>
<tr><th>Document reference</th><th>Reason for amendment to the ES</th><th>Amendment to the ES</th></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 9 – Geology and Soils (APP-040)</td><td>Table 9-9 Summary of effects during construction<br>Table 9-9 contains an error where the receptor sensitivity of the Tributary of Norman’s Brook was reported as ‘medium’, when it should have been reported as ‘high’.<br>Table 9-9 contains an error where the residual significance of effect was reported as ‘neutral’ for the Tributary of Horsbere Brook, Tributary of Norman’s Brook and the Tributary of River Churn, when it should have been reported as ‘slight adverse’.</td><td>Table 9-9 of ES Chapter 9 is amended as follows.<br>Table 9-9 Summary of effects during construction
<table>
<tr><th>Potential impact</th><th>Receptor</th><th>Description</th><th>Receptor sensitivity</th><th>Design and mitigation measures</th><th>Magnitude of impact</th><th>Residual significance of effect</th></tr>
<tr><td rowspan="8">Contaminated soil, leachate/ groundwater/ direct discharge and pollution of aquifers<br><br>Vertical and lateral migration of leachate/ groundwater contamination and/or direct contact with soil contamination<br><br>Contaminated soil, leachate/ groundwater/ direct discharge and impact on surface watercourses<br><br>Pollution migration through new drainage installed as part of slope stabilisation measures<br><br>Pollution migration along piles/ underground structures</td><td rowspan="3">Groundwater</td><td>Inferior Oolite and Great Oolite - Principal Aquifers</td><td>High</td><td rowspan="8">Tier 1: Preliminary Risk Assessment and Tier 2: GQRA, informed by available information on potential sources including desk study, and ground investigations (e.g. evidence of contamination and/or soil and groundwater chemical testing) have been completed. Areas of concern have been identified, subject to additional investigations and site specific assessments, remediation measures may be required. This would be presented in a remediation strategy.<br><br>The impact would be controlled through measures set out in the EMP (ES Appendix 2.1 EMP (Document Reference 6.4)) including appropriate hazardous materials storage and handling, pollution response and environmental management, materials management and dealing with known and unexpected contamination. Pollution control systems would be targeting areas of concern identified through the risk assessments.<br><br>The drainage design would prevent/reduce the risk of discharging pollutants into the aquifers via drainage pathways and control surface water runoff at its source. Further details on the drainage design are reported in Appendix 13.10 Drainage report (Document Reference 6.4).<br><br>Materials reused within the scheme in accordance with EMP and associated MMP (ES Appendix 2.1 Environmental Management Plan (Document Reference 6.4)) and therefore only materials suitable for end use, i.e. those that would not pose an unacceptable risk to controlled waters, would be reused.<br><br>FWRA to be completed for individual structures where deep foundations or ground improvement works are proposed, to be confirmed subject to the design at detailed design stage.</td><td>Negligible</td><td>Slight adverse</td></tr>
<tr><td>Superficial deposits - Secondary A aquifer</td><td>Medium</td><td>Negligible</td><td>Neutral</td></tr>
<tr><td>Lias Group - Secondary (undifferentiated) aquifer</td><td>Low</td><td>Negligible</td><td>Neutral</td></tr>
<tr><td rowspan="5">Surface water</td><td>Tributary of Horsbere Brook</td><td>Medium</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
<tr><td>Tributary of Norman’s Brook</td><td><s>Medium</s> High</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
<tr><td>River Frome and its tributaries</td><td>High</td><td>Negligible</td><td>Slight adverse</td></tr>
<tr><td>Tributary of River Churn</td><td>Medium</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
</table></td></tr>
<tr><td>Volume 6.2 Environmental Statement Chapter 9 – Geology and Soils (APP-040)</td><td>Table 9-10 Summary of effects during operation<br>Table 9-10 erroneously omitted “Superficial deposits – Secondary A aquifer” and “Lias Group – Secondary (undifferentiated aquifer)” as groundwater receptors during the operational phase of the scheme.<br>Table 9-10 contains an error where the receptor sensitivity of the Tributary of Norman’s Brook was reported as ‘medium’, when it should have been reported as ‘high’.<br>Table 9-10 contains an error where the residual significance of effect was reported as ‘neutral’ for the Tributary of Horsbere Brook, Tributary of Norman’s Brook and the Tributary of River Churn, when it should have been reported as ‘slight adverse’.</td><td>Table 9-10 of ES Chapter 9 is amended as follows.<br>Table 9-10 Summary of effects during operation
<table>
<tr><th>Potential impact</th><th>Receptor</th><th>Description</th><th>Receptor sensitivity</th><th>Design and Mitigation measures</th><th>Magnitude of impact</th><th>Residual significance of effect</th></tr>
<tr><td rowspan="2">Exposure to soil contamination</td><td rowspan="2">On-site users</td><td>Maintenance workers</td><td>Medium</td><td rowspan="4">N/A</td><td>Negligible</td><td>Slight beneficial</td></tr>
<tr><td>Highway users</td><td>Low</td><td>No change</td><td>Neutral</td></tr>
<tr><td rowspan="2">Off-site users</td><td>Residents of nearby properties</td><td>Very High</td><td>No change</td><td>Neutral</td></tr>
<tr><td>WCH (Public open space users)</td><td>High</td><td>Negligible</td><td>Slight beneficial</td></tr>
<tr><td rowspan="6">Leaching and migration of contaminates due to rainwater infiltration from soils used in construction to groundwater and lateral migration to surface water in areas of landscaping<br>Surface run-off to surface water in areas of landscaping from soils used in construction</td><td rowspan="2">Groundwater</td><td>Inferior Oolite and Great Oolite – Principal Aquifer</td><td>High</td><td rowspan="6">N/A</td><td>Negligible</td><td>Slight adverse</td></tr>
<tr><td>Superficial deposits – Secondary A aquifer</td><td>Medium</td><td>Negligible</td><td>Slight adverse</td></tr>
<tr><td>Lias Group – Secondary (undifferentiated aquifer)</td><td>Low</td><td>Negligible</td><td>Neutral</td></tr>
<tr><td rowspan="4">Surface water</td><td>Tributary of Horsebere Brook</td><td>Medium</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
<tr><td>Tributary of Norman’s Brook</td><td><s>Medium</s><br>High</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
<tr><td>River Frome and its tributaries</td><td>High</td><td>Negligible</td><td>Slight adverse</td></tr>
<tr><td>Tributary of River Churn</td><td>Medium</td><td>Negligible</td><td><s>Neutral</s><br>Slight adverse</td></tr>
</table></td></tr>
</table>

| Document reference | Reason for amendment to the ES | Amendment to the ES |
|---|---|---|
| Volume 6.2 Environmental Statement Chapter 13 Road Drainage and the Water Environment (APP-044) | **Paragraphs 13.5.7** omitted to include the nine months of surface water quality and flow data, between August 2020 and April 2021. | **Paragraphs 13.5.7** of ES Chapter 13 is amended to:<br>"The findings presented in this chapter are based upon the data available at the time of writing including data collected to end of October 2020 for groundwater and December 2020 for surface water and springs and nine months of surface water quality and flow data, between August 2020 and April 2021. Any data collected following these dates would be used to refine the conceptual models to support the detailed design phase and would form part of the ongoing dialogue with the EA and others." |
| Volume 6.2 Environmental Statement Chapter 13 Road Drainage and the Water Environment (APP-044) | **Paragraph 13.5.13** requires revision to provide clarity that the determination of groundwater conditions across the scheme is with exception of two areas, Ch.0+000 to CH. 0+500 and CH.2+100 to 2+600. | **Paragraph 13.5.13** of ES Chapter 13 is amended to:<br>"The intrusive ground investigations field work to determine the site-specific ground conditions across the majority of the scheme have now been completed and groundwater monitoring is currently ongoing, due for completion by end of June 2021. These are described in section 13.7 Baseline conditions. ~~This is with an exception of scheme section approximately~~ Groundwater monitoring was not completed in two sections of the scheme alignment: Ch.0+000 to CH. 0+500 and CH.2+100 to 2+600. Ch. 0+000 to Ch. 0+500 was not monitored as the scheme does not require significant excavations in this section (see para 13.5.14 for further details). Ch. 2+100 to 2+600 was not monitored due to~~, where~~ no land access ~~was~~ granted at the time of the field works. Ground investigations commenced in February 2021 and were completed in March 2021. Subsequent groundwater monitoring will continue until March 2022. Information obtained from these investigations will be considered at detailed design. Based on the hydrogeological conceptual model derived for the scheme informed by groundwater monitoring data obtained from scheme sections located on either end of the non-investigated section, the scheme would not intercept groundwater as the groundwater table is at least 30m below the scheme. Therefore, the available information on groundwater levels is considered sufficient to inform the assessments." |
| Volume 6.2 Environmental Statement Chapter 13 Road Drainage and the Water Environment (APP-044) | **Paragraph 13.10.14** requires clarity as to the reason behind reporting the sensitivity of Tributary of Norman's Brook as 'high', instead of 'medium' value, even though it is not designated as a WFD catchment. | **Paragraph 13.10.14** of ES Chapter 13 is amended to:<br>"*With the sensitivity of the receptor being high, and magnitude of impacts of negligible, the effect would be slight adverse and not significant. A precautionary approach has been taken, assigning the watercourse a value of high based on the potential for species protected under legislation.*" |