The Sizewell C Project

6.14 Environmental Statement Addendum
Volume 1: Environmental Statement Addendum Chapters
Chapter 3 Northern Park and Ride

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3 NORTHERN PARK AND RIDE

3.1 Introduction

3.1.1 This chapter of the **ES Addendum** provides an update to **Volume 3** of the **ES** (Doc Ref. 6.4) [APP-348 to APP-377]. The chapter presents the Additional Information prepared and the proposed changes to the proposed development at the northern park and ride site since the submission of the Application in May 2020.

3.1.2 The Additional Information of relevance to **Volume 3** of the **ES** (Doc Ref. 6.4) [APP-348 to APP-377] includes:

- refinements to the air quality modelling to account for new information published by Defra and refined strategic traffic modelling (refer to the **Transport Assessment Addendum** (Doc Ref. 8.5(A) Ad) for further information); and
- updated ecological baseline information (Doc Ref. 6.13(A)) [AS-036] submitted December 2020.

3.1.3 The proposed changes of relevance to **Volume 3** of the **ES** (Doc Ref. 6.4) [APP-348 to APP-377] comprise minor reductions to the site boundary of the northern park and ride site (as part of **Change 14**). These are further described in **section 3.2** below.

3.1.4 Furthermore, the revised assessment for air quality has considered the proposed changes to the Heavy Goods Vehicles (HGV) movements, associated with **Change 1** (potential to increase in the frequency of freight train movements to facilitate bulk material imports by rail) and **Change 2** (an enhancement of the permanent beach landing facility and construction of a new, temporary beach landing facility) described further in **Chapter 2** of this **ES Addendum**. The revised transport and noise and vibration assessments, including the assessment of impacts on the roads around Darsham are presented in **Chapter 2** of this **ES Addendum**, in line with the structure of the **ES**.

3.1.5 A review of the Additional Information and the proposed changes has been undertaken by EIA specialists across all technical assessments presented in **Volume 3** of the **ES** (Doc Ref. 6.4) [APP-354 to APP-377].

3.1.6 Further explanation of the Additional Information and proposed changes of relevance to **Volume 3** of the **ES** (Doc Ref. 6.4) [APP-357 to APP-359 and APP-363 to APP-365] is provided within this chapter for air quality (**section 3.3**) and terrestrial ecology and ornithology (**section 3.4**).

3.1.7 The Additional Information and proposed changes do not affect the following technical assessments presented in **Volume 3** of the **ES** (Doc Ref. 6.4): **Chapter 4 Noise and Vibration** [APP-354 to APP-356], **Chapter 6 Landscape and Visual** [APP-360 to APP-362], **Chapter 8 Amenity and Recreation** [APP-366 and APP-367], **Chapter 10 Soils and Agriculture** [APP-371 to APP-373], **Chapter 11 Geology and Land Quality** [APP-374 and APP-375], and **Chapter 12 Groundwater and Surface Water** [APP-376 and APP-377].

3.2 Update to the description of development

3.2.1 This section presents details on the proposed changes made to the proposed development at the northern park and ride site, since the preparation of the Application.

3.2.2 An updated version of **Volume 3, Chapter 2** of the **ES** (Doc Ref. 6.4) [APP-350] in tracked changes, to include these changes, is provided within **Volume 3, Appendix 3.2.A** of this **ES Addendum**.

3.2.3 The Additional Information submitted for the northern park and ride does not alter the design or construction assumptions presented in the **Volume 3, Chapter 2** of the **ES**.

a) Proposed development in the Application

3.2.4 The site boundary in the Application included a section of the A12 for the provision of access to the northern park and ride via a new temporary three arm roundabout, including the associated works for the temporary realignment of the A12.

b) Description of the proposed change

3.2.5 Two minor reductions to the site boundary are now proposed along the eastern side of the A12 (as part of **Change 14**). These total a reduction of approximately 0.1 ha of permanent land take. The areas of reduction are shown in **Volume 2, Figure 3.2.1** of the **ES Addendum**.

c) Why is this change proposed?

3.2.6 The two minor reductions to the site boundary are proposed to account for mapping boundary discrepancies.

3.3 Air Quality

a) Introduction

3.3.1 This section provides an addendum to the air quality assessment for the northern park and ride site with reference to the following documents submitted with the Application:

- **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357]; and
- **Volume 3, Chapter 5** of the **ES** Air Quality **Figure 5.1** (Doc Ref. 6.4 [APP-359].

3.3.2 This section presents Additional Information that has been gathered since the Application was made, and an assessment of the potential air quality effects from the reduction in HGV movements as a result of the potential to increase rail movements (**Change 1**) and the proposed enhancement of the permanent BLF and additional temporary BLF (**Change 2**).

3.3.3 The air quality assessment presented within this section considers the air quality impacts from assessment using the Additional Information presented below, and the air quality impacts associated with the relevant design changes.

3.3.4 This section is supported by the following appendices provided in **Volume 3** of this **ES Addendum**:

- **Volume 3, Appendix 3.3.A**, which presents the modelled air quality current and future year baselines in the air quality assessment; and
- **Volume 3, Appendix 2.7.C**, which presents the updated transport emissions assessment using the Additional Information and the assessment of transport emissions associated with the proposed design changes.

b) Relevant Additional Information

3.3.5 Additional Information is presented in this chapter on further air quality transport emissions modelling that has been undertaken to include the following:

- Refined traffic representative estimates of the 24-hour Annual Average Daily Traffic (AADT) (refer to **Transport Assessment Addendum** for further information (Doc Ref. 8.5(A) Ad));
- Emissions Factors Toolkit (EFT) version 10.1 (Ref. 1);

- Defra's projected 2018-based Background Pollutant Concentration Maps (Ref. 2); and
- NO_x to NO_2 conversion tool v8.1 (Ref. 3).

c) Relevant changes

3.3.6 Relevant changes for the assessment of effects on air quality at the northern park and ride include the reduced HGV movements during construction of Sizewell C with the proposed changes to increase rail movements (**Change 1**) and the additional temporary BLF (**Change 2**), as described within **Chapter 2** of the **ES Addendum**.

3.3.7 As referenced within **section 3.1.7** of this chapter, the minor revisions to the site boundary (which forms part of **Change 14**) do not change the assessment of effects on air quality and, therefore, have not been considered further.

d) Updated assessment – Additional Information

3.3.8 The traffic data for the Sizewell C Project has been updated with the refinements to the strategic traffic modelling as detailed in the **Transport Assessment Addendum** (Doc Ref. 8.5(A) Ad).

3.3.9 The refined traffic flows result in a change in modelled pollutant concentrations at receptors within the study area of the northern park and ride site, from the results presented in **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357]. Furthermore, Defra have since published the updated EFT version 10.1 (Ref. 1), updated background pollutant concentration maps (Ref. 2), and an updated version of the NO_X to NO_2 conversion tool v8.1 (Ref. 3). Therefore, a revised air quality assessment of traffic emissions has been undertaken with the full results presented within **Volume 3, Appendix 2.7.C** of this **ES Addendum**. A summary of these results within the study area of the northern park and ride site is included within this section.

3.3.10 The Additional Information does not change the legislation, policy and guidance, the methodology or other assessments for air quality, as described in **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357], with the exception of the updates made to the transport emissions modelling to take into account the latest Defra EFT version 10.1 and the NO_X to NO_2 conversion tool v8.1.

d) ii) Baseline

3.3.11 This section presents a description of the updated baseline environment characteristics within the site and the surrounding area. The site and receptors in the study area are presented in **Figure 5.1** of **Volume 3** in the **ES** (Doc Ref. 6.4) [APP-359].

d) ii) a) Current baseline

3.3.12 NO_2 and particulate matter (PM_{10} and $PM_{2.5}$) 2018 background concentrations within the site are projected to be between 7.4 and 7.7µg/m^3 for NO_2, between 15.5 and 16.2µg/m^3 for $PM_{10,}$ and between 9.2 and 9.4µg/m^3 for $PM_{2.5}$, according to the recently published Defra Background Concentration Maps (Ref. 2). The backgrounds for the current baseline are broadly in line with the background values set out within **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357].

3.3.13 The overall predicted baseline concentrations, including nearby road traffic contributions, range from 7.3 to 17.3µg/m^3 for NO_2, 15.6 to 17.7µg/m^3 for $PM_{10,}$ and 9.3 to 10.3µg/m^3 for $PM_{2.5}$ at sensitive receptors near the site.. These values are broadly in line with the baseline assessment presented within **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357], albeit the updated baseline NO_2 values are slightly reduced (by up to 2 µg/m^3), PM_{10} values are slightly increased (by up to 0.7 µg/m^3), and $PM_{2.5}$ are the same or slightly lower (by up to 0.7 µg/m^3). Further details on the modelled 2018 baseline pollutant concentrations at receptors can be found in **Volume 3, Appendix 3.3.A** and **Volume 3, Appendix 2.7.C** of the **ES Addendum**.

d) ii) b) Future Baseline

3.3.14 NO_2, $PM_{10,}$ and $PM_{2.5}$ 2023 background concentrations within the site are projected to be between 6.2 and 6.4µg/m^3 for NO_2, between 14.5 and 15.2µg/m^3 for $PM_{10,}$ and between 8.4 and 8.6µg/m^3 for $PM_{2.5}$, presenting a reduction in all three pollutants from the current baseline according to the recently published Defra Background Concentration Maps (Ref. 2).

3.3.15 NO_2, PM_{10} and $PM_{2.5}$ 2028 background concentrations within the site are projected to be between 5.5 and 5.6µg/m^3 for NO_2, between 14.1 and 14.8µg/m^3 for PM_{10} and between 8.1 and 8.3µg/m^3 for $PM_{2.5}$, presenting a reduction in all three pollutants (Ref. 2).

3.3.16 The backgrounds for the future baselines are broadly in line with the background values set out within **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357].

3.3.17 The future baseline pollutant concentrations at nearby sensitive receptors in 2023 range from 6.1 to 12.3µg/m^3 for NO_2, 14.5 to 16.6µg/m^3 for PM_{10}, and 8.4 to 9.4µg/m^3 for $PM_{2.5}$. The future baseline pollutant concentrations at nearby receptors in 2028 range from 5.4 to 9.1µg/m^3 for NO_2, 14.2 to 16.3µg/m^3 for PM_{10} and 8.2 to 9.1µg/m^3 for $PM_{2.5}$. These values are broadly in line with the baseline assessment presented within **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357], albeit the updated baseline NO_2 values are slightly reduced (by up to 2.3 µg/m^3), PM_{10} values are slightly increased (by up to 0.5 µg/m^3) and $PM_{2.5}$ are slightly reduced (by up to 0.9 µg/m^3). Further details of modelled pollutant concentrations for the years 2023 and 2028 can be found in **Volume 3, Appendix 3.3.A** and **Volume 3, Appendix 2.7.C** of the **ES Addendum**.

d) iii) Assessment

3.3.18 Details on modelled pollutant concentrations for the year 2023 (assumed peak year of construction of the northern park and ride) and 2028 (assumed peak year of operation of the northern park and ride) can be found in **Volume 3, Appendix 2.7.C** of the **ES Addendum**.

3.3.19 The updated modelling using the Additional Information (detailed in **section 5.3 b**) does not change the overall assessment of effects on air quality resulting from construction traffic related to the Sizewell C Project for either of the assessment years. The magnitude of change in NO_2, PM_{10}, and $PM_{2.5}$ concentrations would remain imperceptible across all modelled receptors and scenarios, resulting in a negligible effect which is **not significant**, as described in **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357]. No further mitigation is required.

e) Updated assessment – reduction in HGV movements (Changes 1 and 2)

3.3.20 The updated modelling of transport emissions with the reduced HGV movements associated with the proposed changes to increase rail movements (**Change 1**) and the additional temporary BLF (**Change 2**) is presented in **Volume 3, Appendix 2.7.C** to this **ES Addendum**.

3.3.21 The proposed changes do not affect the existing and future air quality baseline, as described in **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357]. The magnitude of change in NO_2, PM_{10} and $PM_{2.5}$ concentrations during 2028 average day or busiest day would remain imperceptible across all modelled receptors, resulting in a negligible effect which is **not significant**, as described in **Volume 3, Chapter 5** of the **ES** (Doc Ref. 6.4) [APP-357]. No further mitigation is required.

3.4 Terrestrial ecology and ornithology

a) Introduction

3.4.1 This section provides an addendum to the terrestrial ecology and ornithology assessment at the northern park and ride site with reference to the following documents submitted with the Application:

- **Volume 3, Chapter 7** of the **ES** (Doc Ref. 6.4) [APP-363]; and
- **Volume 3, Appendix 7A** of the **ES** (Doc Ref. 6.4) [APP-364].

3.4.2 This section presents Additional Information that has been gathered since the Application was made and is summarised in sections below. The minor revisions to the site boundary of the northern park and ride site do not change the assessment of effects on terrestrial ecology and ornithology and, therefore, have not been considered further.

b) Relevant Additional Information

3.4.3 Relevant Additional Information for the assessment of effects on terrestrial ecology and ornithology at the northern park and ride comprises an updated extended Phase 1 habitat survey submitted in December 2020 (Doc Ref. 6.13(A)) [AS-036]. The survey reviewed the habitat conditions present on site and identified whether the habitats present were suitable to support protected species and recorded any incidental field signs or observations.

c) Updated assessment – Additional Information

3.4.4 The updated extended Phase 1 habitat survey of the northern park and ride site was completed in June 2020 (Doc Ref. 6.13(A)) [AS-036].

3.4.5 The survey confirmed that the habitats on site were unchanged since the previous surveys outlined in **Volume 3, Appendix 7A** of the **ES** (Doc Ref. 6.4) [APP-364]. The habitats on site continue to be predominantly arable fields with hedgerows and narrow grass margins. A number of mature trees providing roosting opportunities for bats are still present. In addition, the waterbodies previously identified on site continue to be suitable for use by great crested newts.

3.4.6 The survey did not identify any habitat types, or protected or invasive species other than those previously considered within **Volume 3, Appendix 7A** of the **ES** (Doc Ref. 6.4) [APP-364]. The conditions on site remained the same as previously recorded and described within the **ES**.

3.4.7 Given that no changes to the ES baseline were detected during the 2020 survey, no further assessment is required and the conclusions as presented within **Volume 3, Chapter 7** of the **ES** (Doc Ref. 6.4) [APP-363] do not change.

REFERENCES

1. Department for Environment Food and Rural Affairs. (2020). Emissions Factors Toolkit (EFT) version 10.1. Available at: https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html. (Accessed November 2020).

2. Department for Environment Food and Rural Affairs. (2020). Background Pollutant Concentration Maps. Available at: https://uk-air.defra.gov.uk/data/laqm-background-home. (Accessed October 2020).

3. Department for Environment Food and Rural Affairs. (2020). NO_x to NO_2 Calculator version 8.1. Available at: https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html#NOxNO2calc. (Accessed October 2020).