SLOUGH MULTIFUEL PROJECT

# SLOUGH MULTIFUEL EXTENSION PROJECT

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Environmental Statement
Volume 3 – Appendix

## Appendix 10B – No Significant Effects

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Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

# Slough Multifuel Project

## No Significant Effects Report

SSE Slough Multifuel Limited

July 2022

Delivering a better world

## Quality information

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# 1. Introduction

1.1 Under the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) ('The Habitats Regulations') it is necessary for the relevant decision maker, in this case, the Secretary of State, to consider whether the Slough Multifuel Extension Project (the Proposed Project) may have likely significant effects upon the National Site Network, comprising designated Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), or candidate SACs or potential SPAs if relevant. As a matter of government policy, the National Planning Policy Framework (NPPF) also protects designated Wetlands of International Importance (known as Ramsar sites). Box 1 provides the legislative basis for a Habitats Regulation Assessment (HRA).

### Box 1: The legislative basis for Appropriate Assessment

**Conservation of Habitats and Species Regulations 2017 (as amended)**

The Regulations state that:

"*A competent authority, before deciding to … give any consent for a plan or project which is likely to have a significant effect on a European site … shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives… The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*".

1.2 The process of Habitats Regulation Assessment first involves identifying whether there is the potential for likely significant effects at an initial screening process (Stage 1). That is the purpose of this report. Should the potential for likely significant effects be established it is necessary to proceed to further consider the effects by way of an 'Appropriate Assessment' (Stage 2). Overall, this process of assessment is known as HRA.

1.3 This report to inform HRA has been prepared with reference to the Planning Inspectorate Advice Note 10 (Habitats Regulations Assessment)[1] on the basis that the Proposed Project will be subject to a Development Consent Order (DCO). Matrices required by The Planning Inspectorate Advice Note 10 are included. Guidance used in this report is summarised below.

### Table 1: Legislation, Policy and Guidance Used in this Report

| Document | Relevance |
|---|---|
| Conservation of Habitats and Species Regulations 2017 (as amended) | Provides the legislative basis for HRA |
| Environment Agency guidance: Air emissions risk assessment for your environmental permit[2] | Sets out the relevant distance criteria to assess stack emissions regarding European sites. For natural gas (or fuels with a similarly low sulphur content) fired |

[1] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/
[2] https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit

| Document | Relevance |
|---|---|
| | combustion plants, with more than 500 megawatt thermal input and for some larger combustion plants using more sulphurous fuels with more than 50 megawatt thermal input, the screening distance required is 15km |
| Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. Version: June 2018[3] | Although the document was written specifically regarding road traffic emissions the core principles regarding the use of the critical load and critical level and the '1% of the critical level/load' criteria are applicable to Proposed Projects with stack emissions. |
| National Planning Policy Framework (July 2021)[4] | Summarises the legislative basis for HRA and in particular clarifies (in paragraph 181) that the HRA process also applies to Ramsar sites |
| Habitats Regulations Assessments: Protecting a European site (2021)[5] | Provides broad UK government guidance on the HRA process. |
| Planning Inspectorate Advice Note 10: Habitats Regulations Assessment (2017) | Provides broad Planning Inspectorate guidance on the HRA process including terminology for reports and the templates for impact matrices to be provided with HRA reports |

1.4 This document provides information to enable the competent authority to undertake the HRA screening of the Proposed Project, covering the following three elements or tests in accordance with best practice guidelines and relevant legislation:

i. determining whether the Proposed Project is directly connected with or necessary to the management of applicable sites (SAC, SPA, Ramsar);

ii. undertaking an initial investigation to identify the potential for likely significant (direct and indirect) effects arising from the Proposed Project on the seven internationally important wildlife sites; and

iii. identifying the potential for in-combination effects on internationally important wildlife sites from the Proposed Project and other plans and projects.

1.5 With regard to the first test (i) above, the Proposed Project is not directly connected with or necessary to the management of applicable sites.

1.6 The Proposed Project comprises works to increase the efficiency and output of a generating station consented in June 2017 (Consented Development) under the Town and Country Planning Act 1990 (Ref 1) (TCPA) regime with capacity up to 50 megawatts (MW) (Planning Ref. P/00987/024 and P/00987/025), to

[3] http://publications.naturalengland.org.uk/publication/4720542048845824
[4] https://www.gov.uk/guidance/national-planning-policy-framework
[5] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

achieve up to 60 MW electrical output (MWe). The Consented Development (up to 50 MWe) was granted planning permission by Slough Borough Council in June 2017 and site works commenced in May 2021. Demolition work is already complete onsite, with construction works underway and with steel works expected to be visible above ground at the time of submitting the application for the Proposed Project.

1.7 The increase in gross generation capacity will be achieved through a number of physical works of which the majority are internal, including the installation of primary and secondary air preheating systems to the boilers to increase the thermal efficiency of the generating station, including heat exchanger bundles, pipework, valves, pipe supports, thermal insulation, instrumentation, cabling and containment, mechanical modifications to the steam turbine inlet control valve to increase the steam capacity and to the turbine control system and distributed control system to allow for an increase in the gross output of the generating station. **These processes will not be associated with any additional emissions beyond those associated with the Consented Development.** However, since the HRA process requires consideration of effects in combination with other plans and projects, and the Consented Development is not yet operational, this assessment considers the in combination effect of the Proposed Project and the Consented Development.

1.8 Given the nature of the Proposed Project and the distance between the Proposed Project and the nearest European site, the only potential linking impact pathway to European sites that has been identified is that of air quality impacts associated with stack emissions, although as noted above there will be no additional emissions beyond those associated with the Consented Development.

1.9 Based on the Environment Agency distance guidance in Table 1, four European sites lie within 15km of the Proposed Project. These are:

i. Burnham Beeches SAC
ii. Windsor Forest & Great Park SAC
iii. South West London Waterbodies SPA and Ramsar site
iv. Chilterns Beechwoods SAC (Bisham Woods component).

1.10 This report therefore considers potential air quality impacts on these four sites.

1.11 The Planning Inspectorate Advice Note 10 requires an evaluation of the potential for the Proposed Project to require other consents which could also require HRA by different competent authorities, and a statement as to whether the Proposed Project boundary overlaps with devolved administrations or other European Economic Area (EEA) States. It is confirmed that the Proposed Project boundary does not overlap with areas of devolved administrations or with those of European Economic Area (EEA) States.

# 2. Method

2.1 Figure 1 taken from Planning Inspectorate Advice Note 10 outlines the various stages of HRA. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant

changes to the plan until no adverse effects on integrity remain or (where appropriate and subject to the No Alternatives and IROPI tests) compensatory measures are agreed.

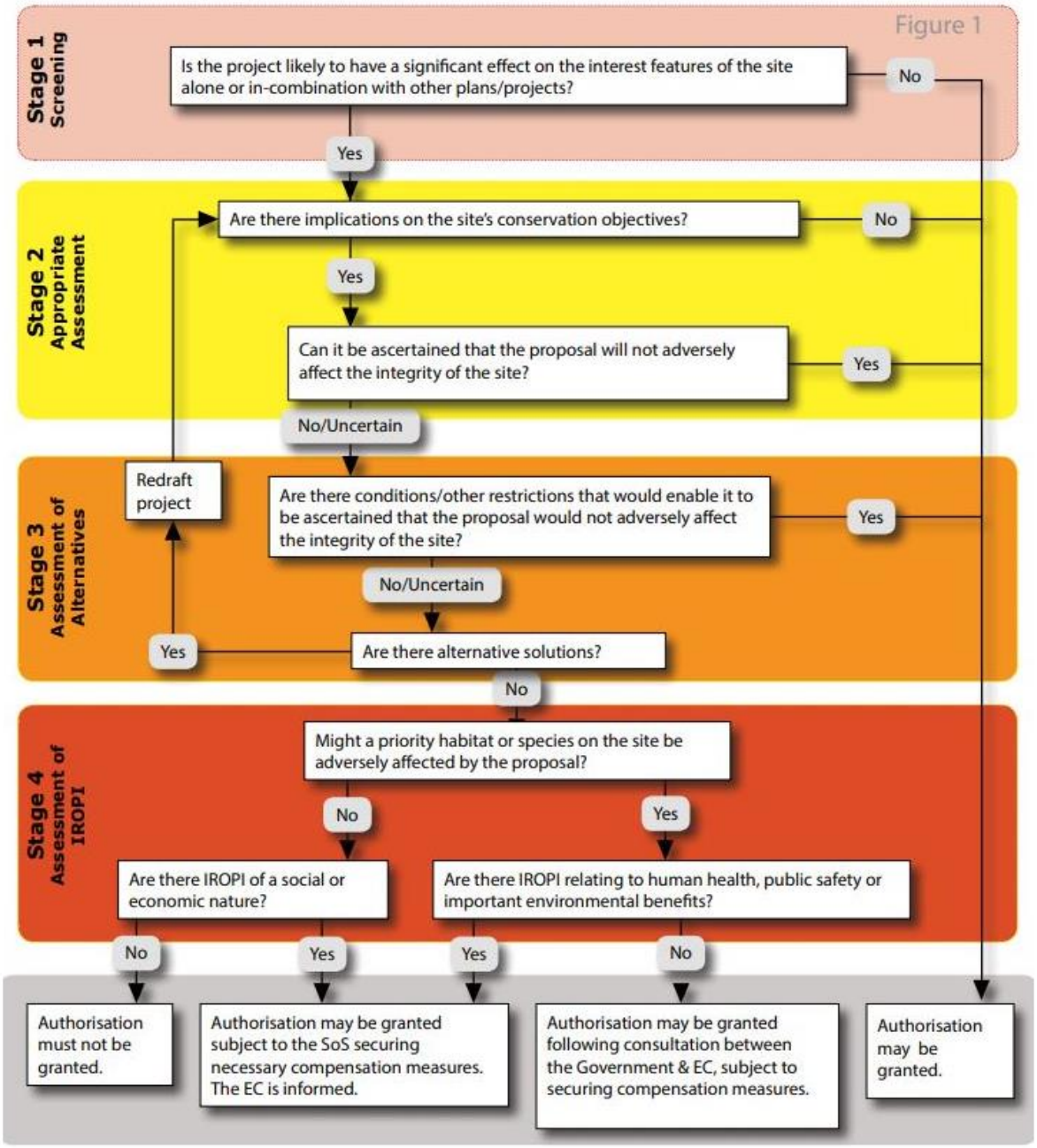


**Figure 1: Approach to Habitat Regulations Assessment**

# Likely Significant Effects

*2.2* Following evidence gathering, the first stage of the HRA process comprises a Likely Significant Effect (LSE) test, which is a high-level risk assessment to decide whether a stage 2 assessment known as Appropriate Assessment is required. If the LSE test concludes that significant effects are unlikely, no further assessment is required.

2.3 Case law[6] has determined that measures to reduce the otherwise harmful effects of a project (i.e., mitigation) on an internationally important wildlife site cannot be taken into account in the stage 1 determination of likely significant effects.

2.4 Of particular relevance to this Proposed Project given that air quality impacts are the only potential impact pathway is the concept of critical level (for pollutants in atmosphere) and critical load (for nitrogen and acid deposition):

- critical loads are defined as '*a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge'.*
- critical levels are defined as '*concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge'*.[7]

2.5 Also of relevance are the following extracts from the Natural England guidance identified in Table 1:

- Paragraph 5.26 states that '*An exceedance* [of the critical level or load] *alone is insufficient to determine the acceptability (or otherwise) of a project'*; and
- Paragraph 4.25 states '…*1% of critical load/level are considered by Natural England's air quality specialists (and by industry, regulators and other statutory nature conservation bodies) to be suitably precautionary, as any emissions below this level are widely considered to be imperceptible…There can therefore be a high degree of confidence in its application to screen for risks of an effect'.*

# Other plans and projects

2.6 It is a requirement of the Habitats Regulations that the likely significant effects of any development are not considered in isolation, but in combination with other plans and projects that may also affect the internationally important wildlife site(s) in question.

2.7 The Planning Inspectorate Advice Note 10 states that in assessing in-combination effects the following projects should be considered:

a. Projects that are under construction.
b. Permitted application(s) not yet implemented.
c. Submitted application(s) not yet determined.
d. All refusals subject to appeal procedures not yet determined.
e. Projects on the National Infrastructure's programme of projects.

2.8 In order to inform the assessment process, surrounding plans and projects have been consulted to determine the other plans and projects that could have an in-

[6] People Over Wind and Sweetman v Coillte Teoranta (case C-323/17)
[7] https://www.icpmapping.org/Definitions_and_abbreviations

combination effect with the Proposed Project through the pathway of air quality and stack emissions.

2.9 The only other plan or project that has been identified to present potential in combination effects is the Consented Development, which is not yet operational.

2.10 No other relevant plans and projects have been identified in this case.

# 3. Test of Likely Significant Effects

3.1 As identified in Section 1 of this No Significant Effects Report, the Proposed Project itself will not be associated with any emissions beyond those identified as part of the Consented Development. Therefore, no impact pathways linking the Proposed Project to any European sites have been identified alone. This assessment therefore focusses on the potential for effects 'in combination' with the Consented Development.

3.2 Air quality impacts on sensitive European sites (SACs, SPAs and Ramsar sites) within 15km of the Proposed Project including the Consented Development were modelled in line with the Environment Agency guidance in Table 1. The full results are presented in Appendix A of this report and in Tables 8A.50 to 8A.57 of **Appendix 8A [Application Document Reference 6.4.7 – Air Quality Technical Appendix]** of the ES Report. The pollutants modelled were oxides of nitrogen (NOx), ammonia, hydrogen fluoride, nitrogen deposition and acid deposition.

## South West London Waterbodies SPA/Ramsar

3.3 The South West London Waterbodies SPA/Ramsar site consists of a range of reservoirs and gravel pits designated as being of international importance for two species of duck: gadwall and shoveler. The interest features of this site depend on open water rather than vegetated habitats and therefore their ability to use the site will not be affected by NOx, sulphur dioxide, ammonia or hydrogen fluoride in atmosphere. With regard to acid deposition, the Air Pollution Information System states "*No expected negative impact on the species due to impacts on the species' broad habitat*".

3.4 Like most lowland open freshwater environments, the reservoirs and gravel pits are a phosphate limited system rather than a nitrogen limited system, meaning that the growth of negative macrophytes and algae primarily depends on the availability of phosphate[8]. Since the Proposed Project, in combination with the Consented Development, will not affect phosphate availability within any of the component waterbodies (as this does not derive from atmosphere), no likely significant effects will arise through atmospheric pollution either alone or in combination with other projects and plans. This conclusion is supported in the Air Pollution Information System (APIS), which highlights that the susceptibility of the SPA to atmospheric pollution depends on whether it is nitrogen or phosphate limited. APIS does not provide a critical nitrogen level for open, standing water, which is the habitat present in the South West London Waterbodies SPA / Ramsar, instead stating that "*No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often phosphorus limited; therefore, decisions should be taken at a site specific level"*.

## Burnham Beeches SAC, Windsor Forest & Great Park SAC and Chilterns Beechwoods SAC

3.5 The other three international sites all contain extensive stands of woodland, which is sensitive to atmospheric pollution. Therefore, for these sites all five

[8] http://www.apis.ac.uk/node/983

pollutants were modelled taking account of the Consented Development including the Proposed Project. The data summarised here and presented in full in Appendix A are for the worst-case 10.5 MJ/kg facility.

3.6 Chilterns Beechwoods SAC is also designated for calcareous grassland. However, there is no calcareous grassland at the part of the SAC (Bisham Woods) that lies within 15km of the Proposed Project. Chilterns Beechwoods SAC and Windsor Forest & Great Park SAC are both also designated for saproxylic (wood living/consuming) insects: stag beetle and violet click beetle respectively. However, for all modelled pollutants the Air Pollution Information System states for both insect species '*No expected negative impact on species due to impacts on the species' broad habitat'*. The modelling and ecological interpretation therefore focus on impacts on woodland at the three SACs.

3.7 The Predicted Environmental Concentration (PEC) illustrates the total pollutant load from existing background, the Proposed Project and the Consented Development combined. The data in Appendix A show that there is no modelled receptor where the total pollution concentration for NOx (either annual mean or 24hr mean), sulphur dioxide, or hydrogen fluoride (either 24hr mean or weekly mean) will exceed the critical level, even with the Proposed Project and the Consented Development in operation. No other plans or projects have been identified that would operate on these sites 'in combination' with the Proposed Project and Consented Development. Therefore, no likely significant will result from these pollutants on any European sites either alone or in combination with other plans and projects.

3.8 For ammonia, nitrogen deposition and acid deposition, the critical level (for ammonia) and critical loads (for nitrogen and acid) are exceeded at all modelled receptors. This is a common situation for these pollutants and is attributable to the existing background concentrations and deposition rates rather than new sources. However, following the Natural England guidance in Table 1 and paragraph 2.5 the simple fact that the critical load or level is already exceeded does not mean that a significant effect will automatically arise from additional ammonia, nitrogen or acid. As per the guidance cited in paragraph 2.5 the exceedance of the '1% of the critical level/load' standard is relevant.

3.9 The contribution of the Proposed Project and Consented Development combined for all three pollutants is below 1% of the critical level or load, being a worst-case 0.52% of the critical level for ammonia at Burnham Beeches SAC, a worst-case 0.76% of the critical load for nitrogen at Burnham Beeches SAC, and a worst-case 0.98% of the critical load for acid at Burnham Beeches SAC. This stems entirely from the Consented Development as the Proposed Project itself has no emissions. No other plans or projects have been identified that would operate on these sites 'in combination' with the Proposed Project and Consented Development. As such the total forecast ammonia, nitrogen and acid dose is below 1% of the critical level or load and in line with Natural England guidance a conclusion of no likely significant effect can be reached. Therefore, no likely significant will result from these pollutants either alone or in combination with other plans and projects.

# 4. Conclusion

4.1 In conclusion, the Proposed Project (even using the worst-case 10.5 MJ/kg scenario) will not result in a likely significant air pollution effect on any modelled designated sites either alone or in combination with other projects and plans. For those pollutants where the total pollutant concentration/deposition rate exceeds the critical level or load, the in combination effect falls below the ‘1% of the critical level/load’ threshold identified by Natural England as denoting an imperceptible impact. Moreover, even that dose stems entirely from the Consented Development rather than the Proposed Project, which has no emissions. There are no other potential impact pathways that would link the Proposed Project to any European sites.

# Appendix A Air Quality Results

To aid interpretation green shading in the 'In combination dose as a percentage of the critical level/load' column indicates an in combination dose below 1% of the critical level/load. Similarly, green shading in the 'PEC as a percentage of the critical level/load' column indicates a PEC below the critical level/load.

### Table 2: Annual Mean $NO_X$

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[9] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
| E1 | Burnham Beeches SAC | 18.6 | 30 | 0.12 | 0.4 | 18.7 | 62 |
| E2 | Windsor Forest and Great Park SAC | 18.0 | 30 | 0.06 | 0.2 | 18.1 | 60 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 16.4 | 30 | 0.03 | <0.1 | 16.4 | 55 |

[9] Proposed Project plus Consented Development Note that this stems entirely from the Consented Development as the Proposed Project has no emissions

## Table 3: 24hr Mean $NO_x$

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[10] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
| E1 | Burnham Beeches SAC | 27.9 | 75 | 2.3 | 3.0 | 30.1 | 40 |
| E2 | Windsor Forest and Great Park SAC | 27.0 | 75 | 1.1 | 1.4 | 28.1 | 37 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 24.6 | 75 | 0.6 | 0.8 | 25.3 | 34 |

## Table 4: Annual Mean $SO_2$

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[11] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
| E1 | Burnham Beeches SAC | 1.4 | 10 | 0.04 | 0.4 | 1.43 | 14 |
| E2 | Windsor Forest and Great Park SAC | 1.6 | 10 | 0.02 | 0.2 | 1.57 | 16 |

[10] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Project has no emissions
[11] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Project has no emissions

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 1.1 | 10 | <0.01 | <0.1 | 1.12 | 11 |

## Table 5: Annual Mean Ammonia

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[12] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
| E1 | Burnham Beeches SAC | 1.68 | 1 | <0.01 | 0.52 | 1.69 | 169 |
| E2 | Windsor Forest and Great Park SAC | 1.6 | 1 | <0.01 | 0.26 | 1.60 | 160 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 1.83 | 1 | <0.01 | 0.11 | 1.83 | 183 |

## Table 6: 24hr Mean Hydrogen Fluoride

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[13] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |

[12] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Project has no emissions
[13] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Project has no emissions

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| E1 | Burnham Beeches SAC | 0.01 | 5 | 0.02 | 0.38 | 0.02 | 0.5 |
| E2 | Windsor Forest and Great Park SAC | 0.01 | 5 | <0.01 | 0.18 | 0.01 | 0.2 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 0.01 | 5 | <0.01 | 0.11 | 0.01 | 0.1 |

## Table 7: Weekly Mean Hydrogen Fluoride

| ID | SITE NAME | 10.5 MJ/KG | | | | | |
|---|---|---|---|---|---|---|---|
| | | Background µg/m$^3$ | Critical Level | In combination dose[14] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
| E1 | Burnham Beeches SAC | 0.003 | 0.5 | 0.005 | 1 | 0.008 | 1.7 |
| E2 | Windsor Forest and Great Park SAC | 0.003 | 0.5 | 0.003 | 1 | 0.006 | 1.3 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 0.003 | 0.5 | 0.002 | 0 | 0.005 | 1.0 |

## Table 8: Annual Mean Nitrogen Deposition

| ID | SITE NAME | 10.5 MJ/KG |
|---|---|---|

[14] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Projectt has no emissions

| | | Background kg/ha/yr | Critical Level | In combination dose[15] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |
|---|---|---|---|---|---|---|---|
| E1 | Burnham Beeches SAC | 28.14 | 10 | 0.08 | 0.76 | 28.22 | 282 |
| E2 | Windsor Forest and Great Park SAC | 25.9 | 10 | 0.04 | 0.38 | 25.94 | 259 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 29.54 | 10 | 0.02 | 0.17 | 29.56 | 296 |

### Table 9: Annual Mean Acid Deposition

Note that there are three critical loads available for acid because acid deposition results from both sulphur dioxide and nitrogen. The Air Pollution Information System states that '*Where PEC is greater than CLminN (the majority of cases), the… total acidity input should be calculated as a proportion of the CLmaxN'*[16]. Therefore, the critical load to use for the percentage calculations in the table below is the CLmaxN.

| **ID** | **SITE NAME** | **Background nitrogen deposition keq/ha/yr** | **Background sulphur deposition keq/ha/yr** | **10.5 MJ/KG** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Critical Load CLminN | Critical Load CLmaxN | Critical Load CLmaxS | In combination dose[17] | In combination dose as a percentage of the critical level | Predicted Environmental Concentration (PEC) | PEC as a percentage of the critical level |

[15] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development as the Proposed Project has no emissions
[16] http://www.apis.ac.uk/clf-guidance
[17] Proposed Project plus Consented Development. Note that this stems entirely from the Consented Development station as the Proposed Project has no emissions

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| E1 | Burnham Beeches SAC | 2.05 | 0.21 | 0.142 | 2.056 | 1.699 | 0.02 | 0.98 | 2.28 | 111 |
| E2 | Windsor Forest and Great Park SAC | 1.92 | 0.19 | 0.142 | 1.044 | 0.759 | 0.01 | 0.97 | 2.12 | 203 |
| E3 | Bisham Woods and Chilterns Beechwoods SAC | 2.18 | 0.18 | 0.142 | 1.647 | 1.505 | 0.00 | 0.27 | 2.36 | 144 |

# Appendix B Advice Note 10 Matrices

## B.1 Potential Effects

Potential effects upon the European site(s)[18] which are considered within this HRA report are provided in the table below.

### Effects considered within the screening matrices

| Designation | Effects described in submission information | Presented in screening matrices as |
|---|---|---|
| **South West London Waterbodies SPA** | Air quality | Air quality |
| **South West London Waterbodies Ramsar site** | Air quality | Air quality |
| **Burnham Beeches SAC** | Air quality | Air quality |
| **Windsor Forest & Great Park SAC** | Air quality | Air quality |
| **Chilterns Beechwoods SAC** | Air quality | Air quality |

## B.2 Stage 1: Screening Matrices

The European sites included within the screening assessment are:

South West London Waterbodies SPA

South West London Waterbodies Ramsar site

Burnham Beeches SAC

Windsor Forest & Great Park SAC

Chilterns Beechwoods SAC

Evidence for, or against, likely significant effects on the European site(s) and its qualifying feature(s) is detailed within the footnotes to the screening matrices below.

**Matrix Key:**

✓ = Likely significant effect **cannot** be excluded
✕ = Likely significant effect **can** be excluded

C = construction
O = operation
D = decommissioning

Grey cells indicate no pathway of impact exists

[18] As defined in Advice Note 10.

## South West London Waterbodies SPA

| **Name of European site and designation: South West London Waterbodies SPA** | | | | | | |
|---|---|---|---|---|---|---|
| **EU Code: UK9012171** | | | | | | |
| **Distance to NSIP: 7.6km** | | | | | | |
| **European site features** | **Likely effects of NSIP** | | | | | |
| *Effect* | *Air quality* | | | *In combination effects* | | |
| *Stage of Development* | *C* | *O* | *D* | *C* | *O* | *D* |
| *Gadwall* | | | | | | |
| *Shoveler* | | | | | | |

The interest features of this site depend on open water rather than vegetated habitats and therefore their ability to use the site will not be affected by NOx, sulphur dioxide, ammonia or hydrogen fluoride in atmosphere. The waterbodies are phosphate limited rather than nitrogen limited and therefore, as identified on the Air Pollution Information System, eutrophication will be driven by phosphorus (which does not derive from atmosphere) rather than nitrogen. With regard to acid deposition, the Air Pollution Information System states '*No expected negative impact on the species due to impacts on the species' broad habitat'*.

## South West London Waterbodies Ramsar site

| **Name of European site and designation: South West London Waterbodies Ramsar site** | | | | | | |
|---|---|---|---|---|---|---|
| **EU Code: Not applicable** | | | | | | |
| **Distance to NSIP: 7.6km** | | | | | | |
| **European site features** | **Likely effects of NSIP** | | | | | |
| *Effect* | *Air quality* | | | *In combination effects* | | |
| *Stage of Development* | *C* | *O* | *D* | *C* | *O* | *D* |
| *Gadwall* | | | | | | |
| *Shoveler* | | | | | | |

The interest features of this site depend on open water rather than vegetated habitats and therefore their ability to use the site will not be affected by NOx, sulphur dioxide, ammonia or hydrogen fluoride in atmosphere. The waterbodies are phosphate limited rather than nitrogen limited and therefore, as identified on the Air Pollution Information System, eutrophication will be driven by phosphorus (which does not derive from atmosphere) rather than nitrogen. With regard to acid deposition, the Air Pollution Information System states '*No expected negative impact on the species due to impacts on the species' broad habitat'*.

## Burnham Beeches SAC

| **Name of European site and designation: Burnham Beeches SAC** | | | | | | |
|---|---|---|---|---|---|---|
| **EU Code: UK0030034** | | | | | | |
| **Distance to NSIP: 2.9 km** | | | | | | |
| **European site features** | **Likely effects of NSIP** | | | | | |
| *Effect* | *Air quality* | | | *In combination effects* | | |
| *Stage of Development* | *C* | *O* | *D* | *C* | *O* | *D* |
| *9120 Atlantic acidophilous beech forest* | | | | | **X a** | |

(a) The Proposed Project has no emissions. Paragraphs 3.6 to 3.8 of this No Significant Effects Report state that for all pollutants either the critical level or critical load will not be exceeded with the Proposed Project and Consented Development in operation, or the in combination dose falls below 1% of the critical level or load, or both. No other plans or projects have been identified that would operate on these sites 'in combination' with the Proposed Project.

## Windsor Forest & Great Park SAC

| **Name of European site and designation: Windsor Forest & Great Park SAC** | | | | | | |
|---|---|---|---|---|---|---|
| **EU Code: UK0012586** | | | | | | |
| **Distance to NSIP: 6 km** | | | | | | |
| **European site features** | **Likely effects of NSIP** | | | | | |
| *Effect* | *Air quality* | | | *In combination effects* | | |
| *Stage of Development* | *C* | *O* | *D* | *C* | *O* | *D* |
| *9120 Atlantic acidophilous beech forest* | | | | | **X a** | |
| *9190 Old acidophilous oak woods* | | | | | **X a** | |
| *1079 Violet click beetle Limoniscus violaceus* | | | | | | |

Windsor Forest & Great Park SAC is partly designated for violet click beetle. However, for all modelled pollutants the Air Pollution Information System states '*No expected negative impact on species due to impacts on the species' broad habitat'*.

(a) The Proposed Project has no emissions. Paragraphs 3.6 to 3.8 of this No Significant Effects Report state that for all pollutants either the critical level or critical load will not be exceeded with the Proposed Project and Consented Development in operation, or the in combination dose falls below 1% of the critical level or load, or both. No other plans or projects have been identified that would operate on these sites 'in combination' with the Proposed Project.

## Chilterns Beechwoods SAC

| **Name of European site and designation: Chilterns Beechwoods SAC** | | | | | | |
|---|---|---|---|---|---|---|
| **EU Code: UK0012724** | | | | | | |
| **Distance to NSIP: 9.7 km** | | | | | | |
| **European site features** | **Likely effects of NSIP** | | | | | |
| *Effect* | *Air quality* | | | *In combination effects* | | |
| *Stage of Development* | *C* | *O* | *D* | *C* | *O* | *D* |
| *9130 Asperulo-Fagetum beech forests* | | | | | **X a** | |
| *6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)* | | | | | **X a** | |
| *1083 Stag beetle* (*Lucanus cervus*) | | | | | | |

Chilterns Beechwoods SAC is partly designated for calcareous grassland. However, there is no calcareous grassland at the part of the SAC (Bisham Woods) within 15km of the Proposed Project. Chilterns Beechwoods SAC is also partly designated for stag beetle. However, for all modelled pollutants the Air Pollution Information System states '*No expected negative impact on species due to impacts on the species' broad habitat'*.

(a) The Proposed Project has no emissions. Paragraphs 3.6 to 3.8 of this No Significant Effects Report state that for all pollutants either the critical level or critical load will not be exceeded with the Proposed Project and Consented Development in operation, or the in combination dose falls below 1% of the critical level or load, or both. No other plans or projects have been identified that would operate on these sites 'in combination' with the Proposed Project.

# Appendix C European site information

## C.1 South West London Waterbodies SPA/Ramsar

### Introduction

The South-West London Waterbodies SPA comprises several gravel pits and reservoirs scattered around Staines in Greater London. Hundreds of migratory wintering gadwall (*Anas strepera*) and shoveler (*Anas clypeata*) spend the winter on and around these waterbodies. Their numbers are significant at a European level. Some sites appear to be favoured by one species more than the other whilst some are used by both, and individual birds move from one waterbody to another.

### Reasons for Designation

The site is designated as an SPA for its population of Annex II winter migrant species as follows[19]:

- Northern shoveler *Anas clypeata*
- Gadwall *Anas strepera*

The site is designated as a Ramsar site under the following criterion[20]:

Ramsar criterion 6 – species/populations occurring at levels of international importance.

- Species with peak counts in spring/autumn: Northern shoveler, *Anas clypeata*
- Species with peak counts in winter: Gadwall, *Anas strepera strepera*

### Current Pressures[21]

- Recreational pressure on some waterbodies, resulting in disturbance
- Hydrological changes

### Conservation Objectives[22]

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,

The distribution of the qualifying features within the site.

[19] JNCC (2015) Natural 2000 Standard Data Form: South West London Waterbodies SPA
[20] JNCC (2000) Information Sheet on Ramsar Wetlands: South West London Waterbodies
[21] Natural England (2015). Site Improvement Plan: South West London Waterbodies
[22] Natural England (2014) Conservation Objectives: South West London Waterbodies SPA

# C.2 Burnham Beeches SAC

## Introduction[23]

This site is an extensive areas of the Burnham Plateau where the Thames gravels give rise to acid soils, which support mature and developing woodland, old coppice, scrub and heath.

## Reasons for designation[24]

This site is designated as an SAC due its Annex I habitats as follows:

- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (Quercion robori- petraeae or *Ilici-Fagenion*)

## Current pressures[25]

- Air pollution: risk of atmospheric nitrogen deposition (threat)
- Public access/disturbance (pressure/threat)
- Habitat fragmentation (pressure)
- Deer (pressure/threat)
- Species decline (pressure/threat)
- Invasive species (threat)

## Conservation Objectives[26]

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely

# C.3 Windsor Forest & Great Park SAC

## Introduction[27]

Windsor Forest and Great Park comprises one of the largest continuous tracts of woodland parkland in Berkshire and lies in the local authority areas of Bracknell Forest and the Royal Borough of Windsor & Maidenhead.. This area includes a range of habitats such as coniferous and mixed plantations, mature and over-mature broadleaved woodland, woodland pasture, parkland relicts of the primary forest still

[23] Natural England (2000) SSSI citation: Burnham Beeches
[24] JNCC (2001) SAC description: Burnham Beeches
[25] Natural England (2000) Site Improvement Plan: Burnham Beeches
[26] Natural England (2000) European Site Conservation Objectives for Burnham Beeches Special Area of Conservation Site Code: UK0030034
[27] Natural England (2000) SSSI citation: Windsor Forest and Great Park

survive as ancient oak pollards scattered throughout the Park and Forest, unimproved grassland, semi-improved grassland and grass-heath.

### Reasons for designation[28]

This site is designated as an SAC due its Annex I habitats as follows:

- Old acidophilous oak woods with *Quercus robur* on sandy plains
- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)

This site is designated as an SAC due its Annex II species as follows:

- Violet click beetle *Limoniscus violaceus*

### Current pressures[29]

- Forestry and woodland management (pressure/threat)
- Invasive species (threat)
- Disease (threat)
- Air pollution: impact of atmospheric nitrogen deposition (pressure)

### Conservation Objectives[30]

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site

## C.4 Chilterns Beechwoods SAC

### Introduction

The Chilterns Beechwoods represent a very extensive tract of *Asperulo-Fagetum* beech forests in the centre of the habitat's UK range. The SAC comprises a number of semi-natural component woodlands in which beech is the most prominent and / or dominant canopy tree. The woodland components occur in a variety of settings, including a variety of soil types ranging from nutrient-poor, highly calcareous soils to

[28] JNCC (2001) Windsor Forest and Great Park
[29] Natural England (2000) Site Improvement Plan: Windsor Forest and Great Park
[30] Natural England (2000) European Site Conservation Objectives for Windsor Forest and Great Park Special Area of Conservation Site Code: UK0012586

clay-rich, poorly drained soils on the plateaus. One distinctive feature in the woodland flora is the occurrence of the rare coralroot *Cardamine bulbifera*.

As a result of the diverse location of the SAC parcels, their woodland character varies substantially and is also greatly influenced by the woodlands' past management history. Many of the component woodlands were formerly an important source of timber for furniture production. However, in recent times the Chilterns Beechwoods SAC has become a highly valued recreational resource, particularly for hiking and cycling. The closest component part of the Chilterns Beechwoods SAC, Pullingshill Wood, lies approx. 2.8km to the north-east of Wokingham Borough in the Buckinghamshire Unitary Authority.

## Qualifying Features[31]

The site was designated as being of European importance for the following features:

Annex I habitats that are a primary reason for selection of this site:

- *Asperulo-Fagetum* beech forests

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*; important orchid sites)

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- Stag beetle *Lucanus cervus*

## Conservation Objectives[32]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

[31] https://sac.jncc.gov.uk/site/UK0012724 [Accessed on the 08/11/2021]
[32] http://publications.naturalengland.org.uk/publication/4808896162037760 [Accessed on the 08/11/2021]

## Threats and Pressures to Site Integrity[33]

The following threats and pressures to the site integrity of the Chilterns Beechwoods SAC have been identified in Natural England's Site Improvement Plan:

- Forestry and woodland management
- Deer
- Changes in species distributions
- Invasive species
- Disease
- Public access / disturbance
- Air pollution: Impact of atmospheric nitrogen deposition

[33] http://publications.naturalengland.org.uk/publication/6228755680854016 [Accessed on the 08/11/2021]

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