



TERENCE
O'ROURKE

Alistair de Joux
Development Management
Planning
Slough Borough Council
St Martins Place
51 Bath Road
Slough Berks
SL1 3UF

4th December 2019

Our Reference: 227705

Dear Mr de Joux,

**P/17826/000 Replacement Lakeside EfW and HTI Facilities Planning
Application – Regulation 25 Request**

Thank you for your letter of the 4th December 2019 setting out the council's request for further information in relation to the above application. As some of the points made within the Regulation 25 request letter are not actually requests for additional information, but also includes points of clarification, a response is provided as follows or is included within the Environmental Statement (ES) Addendum that is submitted with this letter for the council's consideration /further consultation.

Chapter 2 – Site description

1. Paragraph 2.16: *This paragraph refers to a historic hedgerow; is this in a different location from the hedgerow remnants mentioned in Chapter 8, paragraph 8.47 and 8.54?*

Applicant response: please refer to 'Amendments to Chapter 2: Site description' within the attached ES Addendum which corrects the error made.

Chapter 6 – Air Quality and Appendix D

This Chapter and Appendix contains a number of points that require clarification, as follows:

1. ES 3.8: The ES explains that the 55 m stack height “was determined following consultation with Heathrow Airport Limited, National Air Traffic Services and the Civil Aviation Authority.” It is understood that this sets a practical limit on the stack height, but this is not necessarily the optimum

LONDON
7 Heddon Street
London
W1B 4BD

BIRMINGHAM
Enterprise House
115 Edmund Street
Birmingham
B3 2HJ

BOURNEMOUTH
Everdene House
Deansleigh Road
Bournemouth
BH7 7DU

TELEPHONE
020 3664 6755

www.torltd.co.uk



height for mitigation of the air quality impacts of the proposed facility. An investigation into the potential benefits of reducing the building height to offset the limitations on the stack height should be undertaken.

Applicant response to point of clarification: the effect of reducing the building height was considered at an earlier stage of the project. This analysis set out that it may be possible to lower the entire building by up to 5m by additional excavation, but it would be necessary to make more fundamental changes to reduce the height any further. Even by lowering by 5m further consideration would have to be given to the following:

- Impact on existing underground services
- Impact on the new Heathrow rail link
- Impact on the adjacent Thames Water site
- Increasing the site area by approx. 15m on most boundaries if a 1:3 batter was to be used or impacting on the layout of the site further reducing the effective usable area as on the west and east the batters, due to other land uses (or proposed land uses), would need to be within the site
- Increasing the land take and impact of the access road which would need to also service a site a further 5m below current ground levels

All of the above make excavations impractical. The analysis showed that lowering the building by 5m would reduce the peak impact, which occurs in a field to the north of the M25 where there are no residential receptors. When considering the distribution of emissions, the ground level impacts would be slightly lower at the areas of relevant exposure, but the overall conclusions of the assessment would be the same.

Please refer to 'Amendments to Technical Appendix D: Air quality' within the attached ES Addendum.

2. Paragraphs 5.27 to 5.31: A short list of cumulative projects is provided in Table 5.2. It is not clear how this list was determined. For example, a search of the National Infrastructure Planning website indicates a number of potentially relevant projects which could have cumulative impacts on air quality. These include
 - M25 junction 10/A3 Wisley interchange improvement
 - M4 Junctions 3 to 12 Smart Motorway

A number of further projects are listed as being in the pre-application stage. Please clarify how the cumulative projects were identified. A wider range of projects should be considered in relation to air quality impacts, and the study conclusions updated accordingly. If any additional plans or projects with potential for in-combination air quality impacts are identified, potential in-combination impacts on designated sites should also be assessed in accordance with relevant legislation, case law and guidance.

Applicant response: the methodology for assessing cumulative effects is set out in paragraphs 17.1 – 17.5 of ES Technical Appendix A and paragraphs 5.27 – 5.31 of chapter 5 of the ES. No amends have therefore been made to the ES on this issue.



Please see 'Amendments to Chapter 6: Air quality' within the attached ES Addendum for full coverage of cumulative air quality impacts.

3. Paragraph 6.9: The ES refers to the closest monitoring points to the site, which are continuous analysers at Slough Lakeside 1 and Slough Lakeside 2. These instruments are presumably linked to the operation of the existing facility. These instruments should be relocated to commence monitoring at least one year prior to operation of the facility, in order to establish a baseline, with monitoring at both the two existing locations and the two new locations for a minimum of one year.

Applicant response: The applicant will willingly engage in discussions regarding the relocation of the air quality monitoring equipment and early monitoring.

No amends have been made to the ES.

4. Table 6.27: Baseline levels of dioxins, furans and dioxin-like PCBs in this table should be expressed in femtograms toxic equivalent (TEQ) per cubic metre.

Applicant response: please refer to 'Amendments to chapter 6: air quality' within the attached ES Addendum within corrects the error made.

5. Paragraphs 6.14 and 6.42: The ES states that "*the impact of the existing Lakeside facilities has been subtracted to give the net change in impacts.*" This approach relies on a maximum of two process lines operating at any one time. While I have an understanding of how it is intended to achieve this, the ES should demonstrate a robust mechanism to show how the simultaneous operation of 3 or 4 lines would be avoided at all times during commissioning.

Applicant response: SBC has requested additional modelling which identifies the impact of the facility on its own merits, and that a commissioning plan is submitted to demonstrate how commissioning and testing of only two lines at a time can be achieved. The Facility would only need to be moved if the Heathrow Expansion project is implemented. Therefore, it is appropriate to consider the change in impact as a result of the project (i.e. the net impact). The Air Quality Technical Appendix set out the impact of the relocated facility (EfW and HTI plant) in isolation (i.e. on its own merit) and where the impact could not be screened out as 'insignificant' using the Environment Agency guidance or 'negligible' using the IAQM guidance, additional consideration was made of the impact of the net impact of the Proposed Development – i.e. accounting for the change from the impact of the existing facilities.

The applicant does not have an appointed contractor at this stage and it is therefore not possible to prepare a commissioning plan now. However, the requirement to provide a commissioning plan that can be discussed and agreed with Slough Borough Council and the Environment Agency will be prepared prior to commissioning.



No amends have been made to the ES.

6. Paragraphs 6.65 to 6.69; Appendix D Table 39: The assessment of cadmium is based on emissions being at 35% of the specified limit, as “typical”. No justification is provided that emissions from the proposed facility would be adequately represented by the use of a “typical” figure. This is particularly important, as the facility is proposed to operate to a more demanding emission limit than the majority of existing installations, and further justification is required to demonstrate that the facility could achieve 35% of this more demanding level. Measured levels from a directly comparable facility may be of assistance.

Applicant response: please refer to ‘Amendments to Technical Appendix D: air quality’ within the attached ES Addendum.

7. Table 6.18; Appendix D Table 56: The concentration values in these tables are shown in units of pg/m³, not µg/m³ as stated. Is this correct, or does it simply require correction?

Applicant response: please refer to ‘Amendments to chapter 6: air quality’ within the attached ES Addendum within corrects the error made.

8. Table 6.21; Appendix D Table 59: Note 2 is incorrect as regards chromium VI which was assessed based on average not maximum measured concentration; please refer to note for paragraph 6.83, below.

Paragraph 6.83: This section explains that the assessment of chromium VI is based on the average, not maximum measured concentrations. This approach is based on Environment Agency guidance, which states that applicants must justify the use of any data lower than the maximum emission concentrations listed in the guidance. No justification is provided. Additionally, this paragraph states that the average measured concentration in emissions is 0.001 ng/m³, whereas the EA guidance Table A1 quotes a value of 3.5×10^{-5} mg/Nm³, equivalent to 35 ng/Nm³. This discrepancy should be clarified, as it seems to under-estimate the potential impacts due to chromium VI. Please provide justification that the use of the average chromium VI discharge concentration is appropriate, and clarify of the assumed emission concentration in the light of the data provided by the Environment Agency.

Applicant response: The results presented in the table are based on emissions of chromium (VI) being similar to the maximum concentration as presented in the Environment Agency Metals Guidance with the additional analysis in Section 6.7.12.1 considering the average data.

The value used in the analysis was 0.00013 mg/Nm³ (or 1.3×10^{-4}) for the maximum monitored concentration, and 0.000035 mg/Nm³ (or 3.5×10^{-5}) for the average concentration as presented in the Environment Agency Metals Guidance. The figures in the report should not have been rounded as this may have been confusing. However, the correct concentrations were used in the modelling and so the predicted impact is correct, in that the process contribution of chromium (VI) at the point of maximum impact, if it is assumed



that emissions are similar to the average monitored concentration, is 0.92% of the AQAL.

The concentration of chromium (VI) in the emissions to atmosphere is not measured at the current facility, or at any EfW facilities, as the concentration is too low to be measured. The specification of chromium into the different species is measured in the APC residues. The analysis presented in the EA's metal guidance uses the measured concentration of total chromium and the fraction of chromium (VI) in the APC residues to calculate a concentration of chromium (VI).

The twelve most recent measurements of chromium at the existing plant were between 0.006 mg/Nm³ and 0.0249 µg/Nm³, with an average of 0.0117 µg/Nm³. The EA metals guidance has an average measured concentration of 0.0084 mg/Nm³ and a maximum concentration of 0.092 mg/Nm³. This confirms that emissions from the current facility are more similar to the average across the UK rather than the peak.

The waste for the new Facility will be the same as that for the existing facility, so it is reasonable to assume that the concentration of chromium would also be similar as this is dependent on the fuel composition. Therefore, it is appropriate to use the mean chromium (VI) data for the purpose of the assessment to represent likely impacts from the new Facility.

Please refer to 'Amendments to Technical Appendix D: air quality' within the attached ES Addendum.

9. Paragraph 6.89; Appendix C Section 7.2: The Framework Construction Environmental Management Plan Section 7.2 specifies a list of dust mitigation measures in the form of adopting certain best practice construction measures which are specified within the Plan. A commitment should be included that all relevant mitigation measures in the relevant guidance published by the IAQM will implemented, as appropriate for the forecast risk of impacts.

Applicant response: please refer to 'Amendments to Chapter 6: air quality' and 'Amendments to Technical Appendix D: air quality' within the attached ES Addendum.

10. Appendix D, Table 39: The air quality assessment relies on the proposed facility achieving demanding NO_x emissions limits of 120 mg/Nm³ (HTI) and 100 mg/Nm³ (EfW). Please clarify whether the higher NO_x limit for the HTI is correct. While responsibility for enforcing these emission limits will lie with the Environment Agency, in light of the constraint on stack height referred to paragraph 3.8 the selection and use of this site requires these emission limits to be achieved. Further explanation is required as to how the proposed emission limits will be achieved in practice, using measurement data from a comparable reference installation. It needs to be demonstrated that achieving these limits would not compromise achieving other operational limits and standards, in particular the proposed ammonia emission limit of 10 mg/Nm³.



Applicant response: please refer to 'Amendments to Technical Appendix D: air quality' within the attached ES Addendum.

11. Appendix D Section 6.5.3: This section states: "*The building has a variable height of between 16 m and 42m with an aerodynamic shape and it was considered that including the full height of the building would overstate its effect on dispersion. Therefore, a more representative height of 34 m was used.*" It seems likely, that adopting a height of 34 m where the building height would actually go up to 42 m could underestimate the influence of the building on dispersion, in view of the relatively low stack height of 55 m and confirmation of the influence of the building on dispersion shown in section 6.6.2. A sensitivity study would enable this to be understood. An alternative approach would be to develop a further model scenario using a set of buildings to represent the change in height over the building envelope. Please provide an assessment of the actual building envelope on dispersion of emissions from the facility; if this indicates the potential for higher impacts on air quality, the study conclusions and proposed mitigation should also be reviewed.

Applicant response: please refer to 'Amendments to Technical Appendix D: air quality' within the attached ES Addendum.

12. Paragraph 6.44; Appendix D Section 4.1.2, Figure 12: Appendix D Section 4.1.2 notes that "... *the background concentration closer to main roads will be higher and this will be considered for each receptor.*" While this has generally been done, we consider that impacts close to Richings Way/North Park north of the proposed facility may have been under-estimated. Air quality measurements at SB21 on Richings Way/North Park indicate that annual mean baseline levels of nitrogen dioxide are 39 µg/m³, close to the air quality standard of 40 µg/m³. Figure 12 shows that the contribution to NO₂ levels in this area is approximately 1% of the air quality standard. This road lies within the South Bucks District Council AQMA No.2. Consideration of impacts in this area presents a different perspective to that set out in ES paragraph 6.44. Please comment on the significance of this increase in levels of nitrogen dioxide in the South Bucks District Council AQMA No.2, and provide details of whether further mitigation is required.

Applicant response: as set out in Section 6.7.2 of Appendix D, in the Richings Way / North Park area the closest property is set back 4 m from the road. The assessment explains that the concentration at properties is likely to be lower than that monitored at the SB21 monitoring site in this area as this is only 1.6 m from the kerbside. The DEFRA distance adjustment correction was applied to this monitoring data to determine the likely concentration at the distance receptors are away from the road. In this area the PC is predicted to be 1% and the PEC is predicted to be less than 95% of the AQAL. Therefore, the magnitude of change is predicted to be negligible and further mitigation is not needed.

No amends have been made to the ES.



Chapter 8 – Cultural Heritage

1. Paragraph 8.24: Please clarify the reference to marine resources

Applicant response: please refer to ‘Amendments to Chapter 8: Cultural heritage’ within the attached ES Addendum which corrects the error made.

Chapter 10 – Visual Assessment and Appendix I

1. Paragraphs 10.4 (Table 10.1), 10.5 and 10.14 - 10.16: Please note that the London Plan is not part of the development plan for Slough.
2. Appendix I: Paragraphs 1.62 – 1.81: As above.

Applicant response: the London Plan has been referenced within the LVIA as the London Borough of Hillingdon forms the eastern part of the study area.

No amends have therefore been made to the ES.

Chapter 11 – Natural Heritage

1. Paragraph 11.58 and Technical Appendix J.15: The otter survey noted in this paragraph and in the Appendix J contents page was not included in the submission, and should be provided. It is noted that a non-breeding otter holt was found along the Colne Brook in close proximity to the eastern boundary of the site, and otters have been recorded in the wider area at Orlitts Lake, Colnbrook West Lake and Old Slade Lake which are in the adjacent LWS. While non-breeding holts are below the LWS criteria for Berkshire, and the limited presence of otters are therefore considered to be of local value (low sensitivity), the construction phase, particularly drainage works, will result in an increase in noise and human presence in the local area. This may result in indirect effects on the otters through noise disturbance. Details of how mitigation will be provided are required.

Applicant response: please refer to ‘Amendments to Chapter 11: Natural heritage’ and ‘Amendments to Technical appendix J: Natural heritage’ within the attached ES Addendum. Please also see confidential plan to accompany the otter report that will be submitted separately.

2. Paragraph 11.62 – 11.72: Further details of how construction noise and visual disturbance will be minimised including provision of visual screening and details of different operations (in particular percussive piling works) that may affect the SPA birds within the Old Slade LWS is required to rule out adverse effects on the integrity of the Ramsar/SPA site.

Applicant response: the predicted construction noise levels in the noise impact assessments are total levels at 10m from the site boundary. This is very much a worst case assessment as it assumes that all of the plant is operational at the site boundary when in reality, the noise sources will be spread out over a much greater area which will reduce the noise levels at the nearest receptors. The noise levels are 10-hour working day average noise



levels, rather than maximum noise levels which would be applicable to the 60 dB noise level described (at the bird).

The maximum noise levels measured during the unattended noise survey were due to road traffic on the M4 motorway, aircraft noise from Heathrow and the 24/7 HGV use of Lakeside Road directly adjacent to the lakes. Daytime maximum noise levels were typically 65-85 dB L_{AFmax} at a distance of approximately 100m from the motorway. The L_{AFmax} metric is measured over a 1/8th second period and so these levels would be deemed to be sudden single noises (as referenced in the 60dB level at the bird).

Old Slade Lake is approximately 20m from the M4 motorway slip road at the closest point. It is also close to the M25, under the flight path of Heathrow and adjacent to Lakeside Road which is an industrial estate road used 24/7. Therefore, it is expected that maximum (sudden) noise levels will already exceed the 60 dB level due to road traffic and aircraft, and maximum noise levels due to road traffic from the M4 will be higher than the levels measured during the unattended noise survey due to closer proximity to the motorway.

The maximum (sudden) noise levels from construction activities are expected to be due to piling. The level of noise will depend upon which piling technique is implemented although the assessment assumes that a percussive (high noise level) technique will be used. Best Practicable Means will be implemented to minimise noise emissions from all construction activities.

Given the existing noise background levels and the noise levels associated with construction activity it is considered unlikely that gadwall or shoveler using the lakes will be disturbed during construction activities.

And as set out in chapter 11 of the ES – paragraphs 11.64 – 11.65:

During construction, it is anticipated that there will be increased levels of noise including from vehicle engines, piling and use of equipment and visual disturbance (workers in high-visibility clothing, and construction vehicles and plant). The South-West London Waterbodies Ramsar and SPA is considered sufficiently distant from the replacement site that no effects are likely in terms of disturbance from construction activities (noise or visual). However, there is a functional link between the Ramsar/SPA and the Old Slade Lake LWS which supports the two Ramsar/SPA species, which is located 55m to the east of the replacement site at its closest point.

The noise and vibration assessment (a non-EIA supporting study) sets out the maximum construction noise level will be 96dB. At this level of noise, research shows that birds in excess of 20m from the source exhibit little or no behavioural change (ie, they are not disturbed) (Cutts et al, 2013). The LWS is approximately 55m from the replacement site construction compound boundary, therefore construction noise will not disturb birds using Old Slade Lake LWS. Furthermore, the construction site, where activities such as piling will take place, is over 250 m from the LWS at its closest point. Between the construction site and the LWS is the Iver South sludge dewatering centre providing an acoustic barrier as well as a source of noise in its own right to which birds are habituated.



In addition, a detailed construction environment management plan (CEMP) will be prepared and will expand on the points made in paragraphs 7.5 – 7.11 of the framework CEMP submitted with the application, i.e.:

During construction, the contractor will employ best practicable means to control noise from construction operations. This includes the selection of relatively quiet, modern and well-maintained construction plant. Lined and sealed acoustic covers will be provided for equipment where applicable. Silencers will be fitted to plant, machinery and vehicles where applicable.

Stationary equipment and plant such as generators will be placed as far as practicable from noise-sensitive receptors and preferably in areas benefitting from natural or purpose-built attenuation such as bunding or behind non-sensitive buildings.

Delivery of materials and removal of waste from the site will be planned to minimise disturbance to neighbouring properties. Idling of plant, machinery and delivery vehicles will be prohibited when not in use. All plant being intermittently used will be throttled back to the minimum at every opportunity.

Construction activities (audible outside of the site boundary) will not take place between the hours of 19:00 and 07:00 Monday to Saturday or on the remaining hours of the weekend, with the exception of delivery of oversize plant and equipment, internal fit-out, internal works and other non-intrusive works, without additional consideration to controlling noise and with the prior approval of Slough Borough Council.

Where possible, piling measures such as continuous flight auger or helical displacement piling, which generate lower overall noise levels, will be used. Construction management will also consider minimising simultaneous noisy operations in close proximity to sensitive receptors.

In addition to the above, all other guidance within BS5228 will be followed at all times.

With regard to visual disturbance, the screening provided by existing vegetation will prevent any visual disturbance. As set out in paragraph 11.66 of the ES:

In terms of potential visual disturbance to the birds utilising the LWS, the zone of theoretical visibility (ZTV) included in chapter 10: landscape, townscape and visual effects, shows that there is no intervisibility between the replacement site and Old Slade Lake LWS. A dense belt of trees surrounds the LWS, and the lakes are below the level of the surrounding land including the construction site and compounds preventing views onto the development. Therefore, any shoveler and gadwall using the LWS will not be visually disturbed by the construction of the replacement EfW and HTI facilities.

The existing mature vegetation referred to above ranges in height from an estimated 5 – 14m (this has been estimated using topographical data and 2m Digital Surface Modelling) and includes the following species: bramble, elder,



alder, willows (white/crack willow and grey/goat as well), horse chestnut, ivy, sycamore and hazel. This existing mature vegetation around the lakes complex, together with the mass of the existing wastewater treatment works, will provide good, robust visual screening between the site and the lakes complex.

There is already a public right of way running along the western side of the lakes and the lakes are all used for fishing, so birds using this area will already be habituated to human activity (as well as the noise and activities associated with the commercial and industrial businesses along Lakeside Road which border the lakes on their eastern boundary).

In conclusion, the applicant does not consider the birds using the lakes will be disturbed by construction noise or visual disturbance, and no adverse effects on the birds will arise.

No amends have therefore been made to the ES.

3. Paragraph 11.74: Prior to construction of the proposed development 0.46 ha of the HPI broadleaved woodland would be felled resulting in a net loss of biodiversity and loss of a Habitat of Principal Importance. Mitigation planting for this loss has been proposed but is insufficient. Please confirm how sufficient mitigation proposals will be provided.

Applicant response: as set out in Chapter 11 of the ES (paragraphs 11.36 and 11.74) the broadleaved woodland within the replacement site boundary is relatively small and poor in structure and its loss (0.46 ha) represents a very small percentage (5.6%) of the woodland in the wider area of land between the M4, M25, A4 and Horton Brook. Mitigation for this loss is difficult on site due to a lack of space and therefore off-site mitigation is proposed via a financial contribution. This would be dealt with via a S106 Agreement.

Chapter 12: Summary tables:

1. The Summary tables should be updated to reflect changes in Chapters 2-11

Applicant response: please refer to 'Amendments to Chapter 12: Summary tables' within the attached ES Addendum.

Non technical assessment (NTS):

1. The NTS should also be updated, to reflect changes in Chapters 2-12.

Applicant response: please refer to 'Amendments to Non-technical summary' within the attached ES Addendum.



I trust that the information provided in this letter, in the ES Addendum and in our responses to all the consultee comments meet your additional information / clarification requirements.

Yours sincerely,

A handwritten signature in black ink that reads "Paul Rogers".

Paul Rogers
Technical Director

cc Andrew Short, Project Manager, David Jarvis Associates