Adams Hendry
Planning Solutions

Alton Advanced Energy Recovery Facility Regulation 25 Submission

Representations on behalf of No Wey Incinerator

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Representations on Alton Advanced Energy Recovery Facility Regulation 25 Submission

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Adams Hendry Consulting Ltd.
Sheridan House, 40 – 43 Jewry Street, Winchester, SO23 8RY
T 01962 877414
E info@adamshendry.co.uk

www.adamshendry.co.uk

Author Name: Emma Barnett Date: February 2021

Certified to ISO9001 Standard

ISO 9001 Registration Number Q10324

Registered Office: Sheridan House, 40 – 43 Jewry Street, Winchester, SO23 8RY
Registered in England No. 3804753 VAT Registration No. 807 9759 79

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1 Introduction

1.1 This representation is submitted on behalf of No Wey Incinerator (NWI), a campaign group of local residents, businesses and farmers concerned at Veolia's plans to build an energy recovery facility in the heart of the beautiful Wey Valley.

1.2 The Applicant, Veolia ES (UK) Ltd, is seeking planning permission for the construction and operation of an Energy Recovery Facility (ERF) on the site of the existing Materials Recovery Facility (MRF) and Waste Transfer Station (WTS) at Holybourne, Alton. The facility would have a generating capacity of 33MW of electricity following the combustion of typically 330,000 tpa of non-hazardous residual waste.

1.3 Following the submission of the planning application, Hampshire County Council (HCC) as Local Planning Authority issued three separate requests for further information under Regulation 25 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, to enable the full and proper consideration of the likely environmental effects of the proposed development.

1.4 The first Regulation 25 request issued on the 23rd October 2020 related to the need for the facility, the consideration of alternatives, ecology and nature conservation and the historic environment. A deadline of 13th November was given for the receipt of the further information.

1.5 The second Regulation 25 request relating to air quality was issued on the 12th November 2020 with a deadline given for the receipt of the further information of 3rd December 2020.

1.6 The final Regulation 25 request relating to landscape and visual effects was issued on the 11th December 2020 with a deadline for the receipt of the further information on the 4th January 2021.

1.7 Veolia did not respond to each Regulation 25 request in accordance with the deadlines set by HCC, rather they submitted a combined response to all of the requests on the 14th December, just three days after the final Regulation 25 request was issued.

1.8 HCC also issued a request for clarification on a number of issues.

1.9 This report has been prepared in response to the requests for further information issued by HCC. The issues raised in the initial representations still stand and should be considered by the LPA in determining this planning application.

2 Need for the Proposal

2.1 In its Regulation 25 request, HCC note that Hampshire currently has three active ERFs and that a fourth large-scale facility may not be able to operate solely on residual waste. The consequence of this is that the proposal could impact on the provision of recycling facilities and drive waste down the waste hierarchy. An assessment of the sources of waste that the proposals would handle may mean that their local plans may be of relevance.

2.2 The applicant's response to the Regulation 25 request fails to include an assessment of the sources of waste that the proposal would handle or to consider the implications of taking waste from other planning areas in terms of compliance with local planning policy. Without this information, it is not possible to determine whether the facility is in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets in England.

2.3 The Applicant makes it clear that as a merchant facility, waste will be sourced from areas outside Hampshire, (the Highways Technical Note includes a scenario where as much as 25% of waste is sourced from areas outside Hampshire including Surrey and one which assumes a 45 minute drivetime catchment of the site which will include a number of other local authority areas) however no information has been included to demonstrate what impact the management of this waste will have on existing facilities in the different waste management areas or on local waste management targets.

2.4 In light of the fact that the proposed ERF will source waste from outside Hampshire, the reliance on Project Integra to demonstrate that obligations to manage municipal waste in accordance with the waste hierarchy are being met it is not sufficient.

2.5 The justification put forward by the Applicant for ensuring that C&I waste is managed in accordance with the waste hierarchy is down to predominantly fiscal incentives, with the costs of recycling waste being significantly lower than the alternative management methods such as energy recovery or disposal. To demonstrate the point, they refer to the annual gate fee report produced by WRAP. It should be noted that the gate price does not include the cost of transporting waste to the facility. Whilst it is accepted that the fee for disposing waste to landfill is higher than that for EfW, over 80% of this cost is made up of landfill tax, which is currently set at £94.15 a tonne. The median gate fee for landfill in the South East net of landfill tax as set out in the 2019 WRAP report, was only £10 a tonne.

2.6 The WRAP report makes it clear that the likely factors influencing gate fees will be the merchant EfW capacity (there are some active projects coming through), the availability of landfill (which will drive local disposal gate fees) and the impact on RDF exports post Brexit. Any fiscal incentives will therefore clearly be subject to fluctuation in response to external influences.

2.7 In September 2019, Tolvik launched the UK Energy from Waste – Merchant Gate Fee Report. This makes it clear that as the EfW market in the UK expands and with new EfW projects less dependent on long term 'anchor' residual waste supply contracts, so the proportion of 'merchant' EfW capacity is rising. As a result, future gate fees will be driven

by wider market pricing.

2.8 It is therefore clear that for merchant facilities such as the one proposed by the Applicant, the gate fees can be adjusted in response to market forces. Fiscal incentives cannot therefore be relied upon to ensure that waste is managed in accordance with the waste hierarchy.

2.9 The landfill tax has been successful in diverting waste from landfill, however as the amount of waste being sent to landfill has fallen, so the amount of waste sent to energy recovery has increased. Further investment in incineration will act as a disincentive to moving up the waste hierarchy in dealing with waste generally, and in looking at it as a resource to be recycled, reused and put back into the circular economy.

2.10 The Government made it clear in the Resources and Waste Strategy published in December 2018, that it will consider introducing a tax on the incineration of waste if its long-term waste ambitions to maximise the amount of waste sent for recycling are not being met. The implications of this are that the amount of residual waste available for recovery will decrease and therefore in order to supply the ERF, operators will need to source waste from a much larger area, contrary to the proximity principle. Alternatively, the cost of sending waste for incineration will increase through taxation, leading the market to look for alternative ways of disposing of waste, undermining the case for a fourth incinerator in Hampshire.

2.11 The 2020 Review of the Hampshire Minerals and Waste Plan was considered in a report to HCC's Executive Member for Economy, Transport and Environment on the 14th January 2021. It included consideration of the delivery for non-hazardous waste management capacity over the plan period against the target capacity set out in Table 6.7 of the HMWP, concluding that that there was no need to review the targets

2.12 The HMWP sets out a requirement of 388,000 tpa of recovery capacity between 2011 and 2030. The aforementioned report makes it clear that actual capacity between 2011 and August 2020 was 645,690 tpa, (i.e. 294,782 tpa or 84% above the target 10 years early). Even assuming no further recovery capacity is permitted between 2021 and 2030, the requirement would already be significantly exceeded. If the Alton ERF was permitted, this would increase the recovery capacity by a further 330,000 tpa to 975,690 tpa, two and a half times that required under Policy 27 of the HMWP. This level of over provision would be contrary to the statutory development plan and increasing recovery provision to the detriment of recycling provision would be contrary to the waste hierarchy. It is noted that over the period 2011 to 2020, there has been a shortfall of recycling capacity of 66% i.e.147,858 tpa against the target set out in the HMWP.

2.13 The Applicant's assessment of capacity set out at Table 2.2 of the ES Volume 5 is clearly at odds with the Council's assessment. As the Waste Local Planning Authority are responsible for producing the plan, it is reasonable to conclude that it is able to effectively monitor performance against the targets in that plan and therefore that the assessment set out in the January 2021 report can be relied upon.

2.14 The clarification report makes it clear that the proposed ERF would only go ahead if the Alton MRF is replaced by a facility elsewhere in Hampshire and that any new MRF would need to be fully operational before the Alton MRF is closed. Given that a planning

application has yet to be submitted for the replacement facility, it could be many years before development on the ERF is able to be commenced, let alone be operational. It is therefore premature to determine an application based on data (both in terms of waste management capacity/requirements and also environmental data included in the ES) that will be out of date many years before the development commences.

2.15 It is questionable whether a Grampian condition prohibiting development authorised by the planning permission until a new MRF is consented, built and operational, would be reasonable and enforceable under the terms of the NPPF. Planning Practice Guidance makes it clear that conditions requiring works on land that is not controlled by the applicant, or that requires the consent or authorisation of another body often fail the tests of reasonableness and enforceability.

2.16 To impose such a Grampian condition could be suggested to fetter the discretion of the Waste Planning Authority in its consideration of the replacement MRF as there must be a reasonable likelihood that the development can be implemented for the condition to be imposed. This would be very difficult to justify given that the planning application has not even been submitted.

2.17 The fact that the Alton site is being proposed for an ERF is purely as a result of the decision to relocate the MRF. The applicant freely acknowledges that in the event that an alternative site is not secured for the replacement MRF, the ERF will not be constructed, and the need claimed by the applicant would go unmet. If the need was as great as the applicant is suggesting, surely it would be looking at sites that are not dependent on another facility coming forward and the Waste Planning Authority would be actively looking at sites capable of meeting that need as part of the review of the HMWP. In fact, as discussed previously, the Waste Planning Authority has very recently reviewed the targets in the HMWP and has concluded that they are being met and there is no requirement to update the Plan in this regard.

Alternative Sites

2.18 The October 2020 Regulation 25 request makes it clear that the Environmental Statement should include an assessment of alternatives specifically in relation to the choice of site and location. This was a specific requirement of the Scoping Opinion issued in September 2019. This failure to consider alternative sites was therefore contrary to Regulation 18(4)(a) of the EIA Regulations which makes it clear that the ES should be based on the most recent scoping opinion.

2.19 Whilst the Applicant has now undertaken an assessment of alternative sites, it clearly did not form part of the decision to locate the ERF on the application site as the ES makes it clear at paragraph 3.1.4 that no material regard was given to alternative sites. This is then repeated at paragraph 3.1.5 (Volume 5 of the ES) which states that it is a matter of fact that when deciding to proceed with an application for an ERF at the site, the applicant did not consider or study any alternative site. On this basis it is very difficult to seek to retrospectively justify the choice of site without the assessment appearing to be contrived.

2.20 The applicant is seeking to rely on Schedule 4, paragraph 4 of the EIA Regulations to justify its decision not to include an assessment of alternative sites, but selectively ignores the requirement in paragraph 18(4) of the EIA Regulations which requires the ES to be

based on the most recent scoping opinion.

2.21 The Scoping Opinion made it clear that it was not acceptable to assume just because the land is already owned by the developer that it is the only site. However, it seems that this is one of, if not the key criteria for the choice of site. This justification is repeated in paragraph 3.1.6 of the additional information submitted by the Applicant (Volume 5 of the ES) where it states that the fact that the site is already in the ownership and control of Veolia and therefore the considerations that were explored related only to the suitability of the site and the consideration of alternative technologies and designs.

2.22 The applicant also seeks to justify the decision not to consider alternative sites on the basis that the site is protected for future waste use (see paragraph 3.1.6 of Volume 5 of the ES). This is in fact not the case. Policy 26 makes it clear that waste management infrastructure is not safeguarded if the waste management capacity can be relocated or provided elsewhere. As the fact that the existing waste facility is being relocated elsewhere, the site would no longer be safeguarded for waste management uses.

2.23 The first Regulation 25 request sets out the types of sites that would be suitable for an ERF, with reference to the consented ERF at Chickenhall Lane in Eastleigh and the operational ERFs located at Portsmouth, Marchwood and Chineham. It is not suggesting that these sites should be considered as an alternative to the application site rather that these are indicative of the type of site that would be appropriate for such a facility. Alternative sites should have been identified based on a search for these types of sites in the waste catchment area, i.e. not just limited to sites in Hampshire.

2.24 Reliance on HCC's Assessment of Sites and Areas for Waste Management Facilities in Hampshire, which was published in February 2012, i.e. nine years ago, is certainly not representative of current availability, and is clearly inappropriate. It is noted that the applicant did not rely on the conclusions of this document when proposing the application site for a recovery facility, as the adjoining sites were clearly assessed as not being suitable for recovery facilities.

2.25 Local Plan allocations within the waste catchment area should have been considered as part of the assessment of alternative sites. Strategic allocations such as that at Whitehall and Bordon have the potential to accommodate an ERF in a planned way with ready access to heat consumers.

2.26 Further information is required on what policy limitations have been assumed to rule out development of the site for waste management uses.

2.27 Whether a site is reasonably available to Veolia is irrelevant in determining whether a site is a suitable alternative. There is no need for additional recovery facilities based on requirements set out in the statutory development plan at least until 2030 and certainly no specific requirement for an ERF or for such a facility to be operated by the applicant. The Waste Planning Authority are monitoring the provision of recovery facilities on a regular basis (the most recent report prepared only last month) and will review the HMWP at the point that either the targets need to be updated or additional provision needs to be made. The current speculative proposal undermines the development plan and Strategic Environmental Assessment process, and the lack of a proper site assessment has the potential of locking the Waste Planning Authority into a solution that is not the most

environmentally acceptable for many years to come.

2.28 The recently published Waste Management Plan for England 2021 makes it clear that the Government is targeting energy from waste incinerators to produce heat for heat networks as this substantially reduces their emissions by making use of the otherwise wasted heat to displace gas boiler heating, noting that only a quarter of energy from waste plants operate in combined heat and power mode, despite most being enabled to do so. It emphasises that particular attention should therefore be given to the location of the plant to maximise opportunities for heat use.

2.29 The heat plan submitted with the planning application confirms that no large heat consumer has been identified within the specified 15km search radius. Rather the applicants rely on allocations in the East Hampshire District Local Plan which have yet to be implemented. The proximity to large heat consumers should have been a key consideration in the identification of alternative sites.

2.30 The location of the site relative to available waste/fuel supply within Hampshire and surrounding areas should also be taken into account in determining the optimum location for a strategic facility such as is being proposed. This is a specific requirement of paragraph 5.36 of the HMWP which makes it clear that where the source of waste for a facility may arise from a range of geographic locations, the impact of developing a network of smaller facilities, rather than one larger central facility, should be assessed.

2.31 Again, no information is provided on the source or amount of any residual waste, which is a significant omission.

3 Assessment Chapters

Landscape and visual effects

3.1 The terra firma Consultancy Ltd has reviewed the supplementary information submitted by the Applicant, concluding that it is misleading and insufficiently addresses the issues raised within the Regulation 25 request. The key deficiencies are set out below, with further detail set out in an appendix to this report.

3.2 The landscape and visual impact assessment presumes that adverse effects would be mitigated to some degree by the proposed 'living wall'. Notwithstanding the fact that the landform of Hanger woodlands are not features of flat valley bottoms, and accordingly the location of the proposed development site is fundamentally at-odds with the design concept, questions remain regarding the likelihood of this proposed feature establishing successfully and achieving its design objectives. In particular, the applicant has not confirmed the species which would be used or given any account of how the 'living walls' could be accessed for routine maintenance operations.

3.3 The assessment of landscape effects continues to be discursive, and over-reliant on published Landscape Character Assessments without any independent, objective study of the landscape at a local level, based on fieldwork. Its judgements of the Wey Valley's susceptibility to change fails to take into account the documented 'threat' to *"open interrupted skylines*" posed by "*tall vertical structures, which break the flow of the landscape and undermine the scale of the valley*". Its judgements of potential magnitude of effect repeatedly reference the degree to which the proposed development would be visible (fundamentally contracting the dual approach to LVIA, whereby effects on visual amenity are assessed separately to those on landscape) and fails to take into account potential changes to the perceived or experiential landscape.

3.4 Taking this into account, the landscape assessment undertaken is not *"in accordance with good practice guidance provided within the GLVIA*", and therefore contrary to the applicant's Scoping Report, and the LVIA's own project specific methodology. In not providing any new assessment work, the submitted information does not adequately respond to the Regulation 25 requirement to *"**update** and inform it's assessment... in respect of **landscape** and visual effects upon the South Downs National Park"* (our emphasis).

3.5 The Applicant now acknowledges that a total of 30 visual receptors would experience significant adverse visual effects as a consequence of the proposed ERF, seven of which are either within or on the boundary of the South Downs National Park (SDNP). A further seven are beyond the boundary but have a visual relationship with the SDNP which would be interrupted by the proposed ERF. The dismissal of the impact on the SDNP on the basis that it should be considered in relation to the whole of the National Park and its setting significantly underplays the actual impact of the ERF and is not accepted. Such an approach to the assessment of impacts on the SDNP would render the impact of any development (no matter its size) as extremely small. This is clearly not in alignment with Government policy on National Parks or their statutory purposes.

3.6 There is a notable increase in the incidence of significant adverse visual effects, compared with the 12 visual receptors identified in the original assessment. The combined visual assessments have now identified more significant adverse effects than non-significant effects that would be caused by the proposed ERF.

3.7 In this context, it is reasonable to question the 2km area of search with regard to interrogating visual effects from PROWs and local minor roads, and the 1km area of search with regard to private views. Applying these arbitrary thresholds may have excluded more visual receptors which may otherwise have been identified as potentially experiencing significant adverse visual effects as a consequence of the proposed ERF. The cumulative effect of vegetation clearance relating to the Esso Pipeline may further increase the incidence of significant adverse visual effects. Moreover, the potential of the emissions plume to "*draw attention to the presence of the Proposed Development from the surrounding area, thereby increasing the influence of the new structures upon the views available*" may also increase the incidence of significant adverse visual effects, particularly when atmospheric conditions would reveal the 'worst- case' plume visibility.

3.8 The Regulation 25 request required the applicant to use the methodologies and analysis methods already employed to consider the visual effects from three specific additional viewpoints. However, no systematic assessment has been provided in relation to the view from Water Lane near West Worldham, and no explanation has been provided for its exclusion from systematic assessment. Accordingly, the work undertaken does not adequately respond to the Regulation 25 request.

3.9 The high incidence of potential significant adverse visual effects, and the inadequacies of the landscape assessment effects are both relevant to considering whether the proposed ERF would have adverse implications for conserving the natural beauty, tranquillity, wildlife and cultural heritage of the South Downs National Park and its setting for the benefit of public understanding and enjoyment. Accordingly, the assessment undertaken fails to give proper consideration to whether the proposed development might compromise the statutory purposes of the National Park designation.

Air Quality

3.10 Air Quality Consultants has considered the additional information submitted as part of the Regulation 25 request and also provided a response to issues raised in the assessment of the air quality chapter by Atkins.

3.11 Further information is required regarding the emissions from the routine operation of the diesel generators and the how these releases will combine with other Scheme-generated emissions to affect annual mean, 1-hour mean, and 24-hour mean concentrations. As this has not been assessed, it cannot be assumed that this will have no effect on the conclusions of the ES without any evidence to support this assumption.

3.12 The Regulation 25 response on Ecology dated 8th December provides a new assessment which appears to contain the following errors:

1) The assessment relies heavily on forecast future reductions in NOx concentrations predicted by one (but not all) of the in-combination assessments referred to without any consideration of the concurrent forecast increase to NH_3 concentrations. The assessment

is thus flawed.

2) The assessment relies heavily on forecast future reductions in NOx concentrations despite repeated claims that it is not reliant on these forecast trends. The assessment is thus misleading; and

3) The assessment claims that in-combination effects from live projects with emissions from non- traffic sources are included in the air quality model when they are not. This part of assessment thus appears not to have been provided.

3.13 Further detailed technical comment on air quality is provided as an appendix to this report.

Ecology and Nature Conservation

3.14 Jonathan Cox Associates has considered the additional information submitted by the Applicant in response to both the Regulation 25 request and points of clarification.

3.15 There is an inconsistency within the ES and associated HRA regarding the way in which autonomous improvements in air quality have been considered in the assessment. It is clear from the in-combination assessment provided in the Regulation 25 response that such autonomous reductions in pollution levels and loads have been heavily relied upon yet there are also claims elsewhere that the assessment is not reliant on these forecast trends. This inconsistency undermines the reliability that can be placed on the air quality assessment of impacts on European protected sites.

3.16 The evidence provided in the Information for Appropriate Assessment (ES Vol 3 Appendix 6.6) identifies predicted increases in ammonia levels in Shortheath Common SAC of 0.39% of the Critical Level and nitrogen deposition increases of 0.8% of Critical Load. The absence of any assessment of the combined effects of ammonia concentrations on these values is a significant concern, as when combined with the contribution from the proposed development, these additional ammonia levels could result in ecologically damaging impacts on Bog Woodland and other habitats for which this SAC has been designated.

3.17 Non-traffic sources of emissions have not been included in the air quality model in the in-combination assessment. It therefore cannot be relied upon to provide a proper assessment of the combined effects of air quality changes on European protected wildlife sites.

3.18 As a consequence of these significant flaws and errors in the assessment the impact of air pollution on sites of European nature conservation importance from the proposed development cannot be relied upon and certainly do not meet the strict levels of certainty needed to conclude that the development will have no adverse effect on Shortheath Common SAC.

3.19 The Regulation 25 request refers to a number of issues relating to the assessment of impacts of the development on protected species, in particular hazel dormouse and reptiles. As the construction compound is not part of the application site, there would be no control over the use of this area of land and therefore any assurances from the Applicant that it is confident that the construction compound can be accommodated within this area cannot be relied upon.

3.20 It is also possible that areas of 'exposed aggregate' provide important habitat for reptiles whilst lighting, noise and activity adjacent to wildlife habitats could cause disturbance to other protected species. In the absence of any baseline ecological survey, it must be assumed that there is high potential for the construction compound to have significant impacts on protected species. This is considered a major shortfall in the application and accompanying ES that should be addressed through appropriate baseline ecological surveys and conditions on future use.

3.21 The impacts of air quality on locally designated wildlife sites have not been fully addressed in the ES with some potentially significant increases in the pollutant level or load being dismissed with no attempt at mitigation.

3.22 The ES remains deficient in its assessment of the potential magnitude of ecological effects on locally designated wildlife sites, is unduly dismissive of the impacts it has identified and proposes no mitigation to offset these.

3.23 Many of the risks to the water environment from the operation of the incinerator remain of concern. The sensitivity of the local water environment is evident with the River Wey being an example of both a priority Chalk River and the Floating Ranunculus habitat listed on Annex 1 of the EU Habitats Directive.

3.24 Potential impacts of the development on ground water flows and water quality could have catastrophic impacts on this sensitive ecological habitat. Whereas some of these can be controlled through appropriate mitigation measures, the current design for an underground storage bunker containing contaminated waste that is below the water table and in hydrological continuity with this river appears to be inherently unsafe and should not be permitted until the risks have been sufficiently explored.

3.25 Further detailed technical comment on ecology is provided as an appendix to this report.

Ground Conditions and Hydrology

3.26 A response to the additional information submitted has been prepared by Hydrogeo on behalf of NWI. A summary of the conclusions is set out below:

- There is a continued lack of basic site specific geological and hydrogeological data which is crucial to the development of a robust conceptual site model. The current impact assessment is therefore based on insufficient evidence and there remains uncertainty in which geological unit or groundwater bearing strata the bunker construction will be founded.
- There remains an absence of detailed risk assessments at this stage, including detailed groundwater impact, dewatering and piling risk assessments. These assessments may ultimately influence the feasibility of the proposal.
- There is a lack of parallel tracking of both planning and permitting applications. Although not required, both the Local Authority and Environment Agency have released documentation stating the benefits of doing so at an early stage in aiding the decision-making process in environmentally complex and sensitive sites.
- The current drainage strategy does not follow current SuDS guidelines as there is insufficient site-specific infiltration testing to inform surface water drainage calculations and SuDS design across the site. The assumption that the ground conditions identified at one location are consistent across the site is incorrect despite testing having been

undertaken proving otherwise. Additionally, there is concern regarding the design storm values used in this assessment.

- Potential impacts on the water environment arising from the accidental release of pollutants, including failure scenarios (contaminated fire water from the bunker) have not been sufficiently explored. This is of particular significance given that in such a scenario the site could potentially impact on water quality in two separate Principal Aquifers and also nearby groundwater dependent receptors including the River Wey.

3.27 Further technical comment is included as an appendix to this report.

Climate Change

3.28 The Regulation 25 letter issued by HCC on the 12th November 2020 requested an assessment of significance of the impacts of carbon emissions on climate change.

3.29 It is noted that the climate change assessment did not assess the impacts of the proposed ERF against the current environmental baseline as required by Schedule 4(3) of the EIA Regulations, rather the Applicant assessed the impacts of the proposal against an assumption that the waste would otherwise be sent to landfill and electricity would be generated via gas-fired power stations. It is noted that reference to Schedule 4(3) is selectively excluded from the EIA Regulations included in section 8.2 of the ES.

3.30 The Applicant argues that it cannot establish a current baseline in relation to emissions from the site boundary as the proposed development is a new project and there are zero GHG emissions to report. This is not in fact the case, as the site is currently in use as a MRF.

3.31 The IEMA guidance which the Applicant's rely upon suggests that the baseline can be in the form of GHG emissions within the agreed physical and temporal boundary of a project but without the project. This option is ruled out by the Applicant on the basis that the impact of GHG emissions from the development will be worldwide and therefore a physical boundary to their impact cannot be defined. On this line of argument, it would never be possible to assess GHG on a physical and temporal basis as suggested by IEMA. This is not accepted.

3.32 As set out in the report from Air Quality Consultants (included as an appendix to this report), further justification is required for the landfill baseline. There are other baseline scenarios which could be considered such as alternative thermal treatment technologies and other sites with a viable end user for the residual heat. Had these alternatives been assessed they would likely have a material effect on the conclusions of the assessment.

3.33 In summary, the following key areas of concern remain:

- the calculations in the carbon assessment (upon which the climate change ES Chapter relies) are selective in the calculation of lifetime emissions. The lifetime emissions are only presented for the core assessment scenarios and not for all the sensitivity tests (e.g. higher landfill gas capture rate) therefore these sensitivity tests are not adequately reflecting the net carbon effect of the proposal;
- the assessment of significance finds the Development to have a net positive GHG effect, however this is misleading as it does not adequately take into account the effect of adopting alternative baselines such as the current use of the site. A fuller and more

robust consideration of alternative baselines would likely materially alter the conclusions of the climate change ES chapter; and

- the lack of certainty over the ability to provide a heat offtake connection or carbon capture at the site limits the carbon credentials of the proposed AAERF at this location.

3.34 Further technical comment is included as an appendix to this report.

4 Response to Points of Clarification

Site Compound and Operative Facilities

4.1 The construction compound is an integral part of the development as without it, it would not be possible to implement any consent for the ERF. In the absence of the ERF, the adjoining site would not be used as a construction compound. The ERF and the construction compound are dependent on each other and therefore cannot be considered to be standalone projects. For the purposes of EIA it is therefore one project and it is not appropriate to screen the two elements as separate projects.

4.2 As the project is EIA development, under Regulation 3(10) of the General Permitted Development Order 2015, permitted development rights are effectively removed. Regulation 3(12) confirms that paragraph 3(10) does not apply in a limited number of circumstances, none of which would apply to the development proposals. If the Applicant's assertion was correct, then it would follow that Class A of Part 4 of the GPDO would be specifically referenced in Regulation 3(12), which it is not.

4.3 Given that permission has not been sought for the main construction compound on the IGas Holybourne Oil Terminal and it is not within the control of the applicant, it is unclear how the LPA will be able to exercise proper control over its use.

5 Summary and Conclusions

5.1 This report has been prepared in response to the requests for further information issued by HCC. The issues raised in the initial representations still stand and should be considered by the LPA in determining this planning application.

5.2 The applicant fails to include an assessment of the sources of waste that the proposal would handle or to consider the implications of taking waste from other planning areas in terms of compliance with local planning policy contrary to the Regulation 25 request. Without this information, it is not possible to determine whether the facility is in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets.

5.3 The proposed ERF will source waste from outside Hampshire and therefore the reliance on Project Integra to demonstrate that obligations to manage municipal waste in accordance with the waste hierarchy are being met it is not sufficient. Reliance on fiscal incentives to ensure C&I waste is managed in accordance with the waste hierarchy is insufficient as gate fees for merchant facilities can be adjusted in response to market forces.

5.4 The 2020 Review of the Hampshire Minerals and Waste Plan was considered in a report to HCC's Executive Member for Economy, Transport and Environment on the 14th January 2021. The report makes it clear that actual recovery capacity between 2011 and August 2020 was 645,690 tpa against a requirement of 388,000 tpa. If the Alton ERF was permitted, this would take the recovery capacity to 975,690 tpa, two and a half times that required under Policy 27 of the HMWP. To permit a facility of the scale proposed undermines the development plan process and in so doing circumvents the Strategic Environmental Assessment Regulations.

5.5 The clarification report makes it clear that the proposed ERF would only go ahead if the Alton MRF is replaced by a facility elsewhere in Hampshire and that any new MRF would need to be fully operational before the Alton MRF is closed. It is therefore premature to determine an application based on data that will be out of date many years before the development commences.

5.6 It is questionable whether a Grampian condition prohibiting development authorised by the planning permission until a new MRF is consented, built and operational, would be reasonable and enforceable. As an application for the replacement MRF has not yet been submitted, reliance on its approval at this stage could be argued to fetter the discretion of the Waste Planning Authority.

5.7 The failure to consider alternative sites was contrary to the Scoping Opinion and therefore Regulation 18(4)(a) of the EIA Regulations which makes it clear that the ES should be based on the most recent scoping opinion. Whilst the Applicant has now ruled out a number of alternative sites, it clearly did not form part of the decision to locate the ERF on the application site as the ES makes it clear that no material regard was given to alternative sites.

5.8 Alternative sites should have been identified based on a search for suitable sites in the

waste catchment area, i.e. not just limited to sites in Hampshire. Reliance on sites identified by HCC nine years ago is certainly not representative of current availability and is clearly inappropriate. The failure to consider Local Plan allocations for their potential to accommodate an ERF, particularly strategic allocations for planned new communities such as at Whitehill and Borden, is a significant shortcoming. The alternative site assessment is therefore unacceptable.

5.9 The recently published Waste Management Plan for England 2021 emphasises that particular attention should therefore be given to the location of the plant to maximise opportunities for heat use. The heat plan submitted with the planning application confirms that no large heat consumer has been identified within the specified 15km search radius. The proximity to large heat consumers should have been a key consideration in the identification of alternative sites.

5.10 The landscape and visual impact assessment presumes that adverse effects would be mitigated to some degree by the proposed 'living wall'. However, questions remain regarding the likelihood of this proposed feature establishing successfully and achieving its design objectives.

5.11 The assessment of landscape effects continues to be discursive, and over-reliant on published Landscape Character Assessments without any independent, objective study of the landscape at a local level, based on fieldwork.

5.12 The applicant acknowledges that a total of 30 visual receptors would experience potentially significant adverse visual effects as a consequence of the proposed ERF (including seven that are either within or on the boundary of the SDNP). A further seven are beyond the boundary but have a visual relationship with the SDNP which would be interrupted by the proposed ERF. The dismissal of the impact on the SDNP on the basis that it should be considered in relation to the whole of the National Park and its setting significantly underplays the actual impact of the ERF and is not accepted.

5.13 No systematic assessment has been provided in relation to the view from Water Lane. Accordingly, the work undertaken does not adequately respond to the Regulation 25 request.

5.14 The landscape assessment undertaken fails to give proper consideration to whether the proposed development might compromise the statutory purposes of the National Park designation given the high incidence of potential significant adverse effects within or on the boundary of the SDNP.

5.15 The assessment of impacts from air pollution on European sites cannot be relied upon and consequently it cannot be concluded that there will be no adverse effect on Shortheath Common SAC.

5.16 In the absence of any baseline ecological survey, it must be assumed that there is high potential for the construction compound to have significant impacts on protected species.

5.17 The impacts of air quality on locally designated wildlife sites have not been fully addressed in the ES with some potentially significant increases in the pollutant level or load being dismissed with no attempt at mitigation.

5.18 Many of the risks to the water environment from the operation of the incinerator remain of concern. The sensitivity of the local water environment is evident with the River Wey being an example of both a priority Chalk River and the Floating Ranunculus habitat listed on Annex 1 of the EU Habitats Directive.

5.19 Potential impacts of the development on ground water flows and water quality could have catastrophic impacts on this sensitive ecological habitat. The current design for an underground storage bunker containing contaminated waste that is below the water table and in hydrological continuity with this river appears to be inherently unsafe and should not be permitted until the risks have been sufficiently explored.

5.20 The air quality assessment is flawed as it relies heavily on forecast future reductions in NOx concentrations predicted by one (but not all) of the in-combination assessments referred to without any consideration of the concurrent forecast increase to NH_3 concentrations. It is also misleading in that it relies heavily on forecast future reductions in NOx concentrations despite repeated claims that it is not reliant on these forecast trends.

5.21 The assessment claims that in-combination effects from live projects with emissions from non- traffic sources are included in the air quality model when they are not. This part of assessment thus appears not to have been provided.

5.22 There is a continued lack of basic site specific geological and hydrogeological data which is crucial to the development of a robust conceptual site model.

5.23 There remains an absence of detailed risk assessments at this stage, including detailed groundwater impact, dewatering and piling risk assessments. Potential impacts on the water environment arising from the accidental release of pollutants have not been sufficiently explored. This is of particular significance given that the site could potentially impact on water quality in two separate Principal Aquifers and the River Wey.

5.24 The calculations in the carbon assessment are selective in the calculation of lifetime emissions. The lifetime emissions are only presented for the core assessment scenarios and not for all the sensitivity tests.

5.25 The assessment of significance finds the development to have a net positive GHG effect, however this is misleading as it does not adequately take into account the effect of adopting alternative baselines such as the current use of the site.

5.26 The lack of certainty over the ability to provide a heat offtake connection or carbon capture at the site limits the carbon credentials of the proposed AAERF at this location.

5.27 Given that permission has not been sought for the main construction compound on the IGas Holybourne Oil Terminal and it is not within the control of the applicant, it is unclear how the LPA will be able to exercise proper control over its use.

5.28 In conclusion, there is no justification for an ERF in this location and the harm arising from its construction and operation would significantly and demonstrably outweigh any benefits.

Landscape response,

relating to the Regulation 25 response, and associated clarifications

On behalf of the 'No Wey Incinerator' group

Application ref: 33619/007
Description: Development of an Energy Recovery Facility and Associated Infrastructure
Location: Alton Materials Recovery Facility, A31, Alton, GU34 4JD.

1 Introduction

1.1.1 The terra firma Consultancy Ltd. have been appointed by the 'No Wey Incinerator' group (NWI) to undertake an objective critique of the planning application for a new Energy Recovery Facility (ERF) north of Alton, with respect to landscape and visual matters.

1.1.2 Comments were initially written in August 2020 responding to the planning submission documents, including an Environmental Statement (ES). Subsequently the Planning Authority, Hampshire County Council (HCC), have formally requested further information in accordance with Regulation 25 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017.

1.1.3 The following comments are made in relation to the information that has been submitted in response to the Regulation 25 request, alongside the 'clarification' information that has been provided in response to an informal request from HCC. In particular, the documents to which these comments relate include the following:-

- ES Volume 5: Additional Environmental Information (December 2020),

  in particular;

- Chapter 10.0: Landscape and Visual Effects
- Appendix 10.1: Landscape and Visual Effects Technical Report (December 2020) – *referred to hereafter as the 'Further information report'.*
  - All Appendices and Figures associated with the 'Further information report'.
- Landscape and Visual Effects Clarification Report (December 2020) – *referred to hereafter as the 'Clarification report'*
  - All Appendices and Figures associated with the 'Clarification report'.

1.1.4 Our comments are also informed by our own understanding of the site and its landscape context, gathered from various sources of evidence including fieldwork prior to writing our initial comments in August 2020.

1.1.5 The following comments are intended to supplement, rather than supersede our comments dated August 2020.

2 The design proposals

2.1.1 Our previous comments on behalf of NWI noted that the design objectives of the proposed 'living wall' are critical to the success of the measures designed to mitigate adverse landscape and visual effects. Accordingly, if the 'living wall' failed to achieve its design objectives, (to *"mirror the surrounding landform and hanger woodlands"* (ES 5.5.27), *"help reduce the visual prominence of the building in the landscape"* (ES para 4.8.20) and *"reflect seasonal changes in colour in the*

surrounding landscape" (ES para 5.5.27)), the assumptions on mitigation of effects made by the submitted ES would be compromised.

2.1.2 The applicant has provided supplementary information regarding the establishment and ongoing management of the vegetation on the proposed green wall. However, there is no confirmation of the species which would be used in the 'living wall'.

2.1.3 The supplementary information provided relies heavily on the precedent of the 'living wall' at Veolia's ERF site in Leeds. However, we consider that this precedent is not appropriate to the situation at Alton for the following reasons:

- Unlike the situation at Alton, the facility in Leeds is within an urban context. Therefore, its appearance as a large, 2D vertical plane is not wholly out of context, and the ability to emulate the hues and textures of a rural scene is not a necessary measure for mitigating adverse landscape and visual effects.
- The 'living wall' at the Leeds ERF faces south unlike the proposals for the Alton ERF, which also face north, west and east.
- It is not clear how the 'living wall' at the Alton ERF would be accessed for maintenance purposes. Unlike the Leeds precedent, many parts of the 'living wall' at Alton would be at high level, and set-back behind lower-level built-form, for example the office accommodation (which would be 11.5m deep and nearly 26m tall) and the Residus and Reagents building (which would be 16m deep and 22.5m tall). Considering this geometry, it is unlikely that that the 'living walls' above could be accessed from the ground using a Mobile Elevating Work Platform (as illustrated at Leeds in section 2.0 of the 'Clarifications report'). However, the clarification information provided has not described the means of accessing the 'living wall' at Alton in order to facilitate maintenance.

2.1.4 The supplementary information provided by the applicant has not addressed the concerns expressed in our previous comments on behalf of NWI.

3 Landscape effects

3.1 *Review of submitted information*

3.1.1 The submitted 'Further information report' focuses entirely on considering potential visual effects, with the exception of paragraph 2.3.11 which is forms a rebuttal of the South Downs National Park Authority (SDNPA) consultation response, explaining that the original landscape assessment undertaken (as set out in Appendix 5.5 of the ES) had attributed additional weight to landscape character areas within the South Downs National Park (SDNP).

3.1.2 The submitted 'Clarification report' includes sections on 'Landscape Character Assessments and Other Studies'. This narrative is provided to clarify the approach taken to the reasoning for the judgements made within the landscape assessment work previously undertaken.

3.1.3 The 'Clarification report' also includes sections on 'Landscape Designations', and 'Landscape Fabric'. The consideration given to the potential effects on designated landscapes entirely relates to potential visual effects, with no comment on potential landscape effects. The information provided with respect to 'Landscape Fabric' includes: -

- findings from an updated Arboricultural Impact Assessment (and describes the extent to which on-site tree cover would be reduced as a consequence of the proposed development),
- further explanation of the conclusions previously drawn in respect to the physical effects along the grid connection route, and

- confirmation of the previous assumptions relation to the physical effects along the proposed Esso pipeline route, in light of the recent consent granted to that development.

3.1.4 Changes to the landscape fabric as a consequence of the Esso pipeline and on-site vegetation clearance would have implications for the potential visibility of the proposed ERF from surrounding areas. The potential visual effects are discussed at section 4.4 below.

3.1.5 Whilst producing all of the supplementary information, the applicant has not undertaken any further assessment of landscape effects or re-evaluated the landscape assessment previously undertaken.

3.1.6 Accordingly, the concerns expressed in our previous comments on behalf of NWI have not been addressed. In particular:-

- There remains an over-reliance on published Landscape Character Assessments, and an absence of independent, objective study of the landscape at a local level, based on fieldwork, contrary to the industry standard Guidelines to Landscape and Visual Impact Assessment, 3rd edition (GLVIA), specifically paragraphs 5.13, 5.15 and 5.16.
- The systematic assessment set out at ES Volume 3: Appendix 5.5, specifically relating to the 'susceptibility to change' judgements made in relation to the broad Landscape Character Area 3f (the Wey Valley, in which the proposed development site sits) has not taken into account a particularly relevant 'threat' noted in the Hampshire County Integrated Character Assessment which refers to the *"potential of the vulnerability of open uninterrupted skylines to tall vertical structures which break the flow of the landscape and undermine the scale of the valley."* Disregarding this information is contrary to GLVIA, specifically paragraphs 5.18 and 5.40.
- The systematic assessment set out at ES Volume 3: Appendix 5.5 (relating to landscape effects) repeatedly references the degree to which the proposed development would be visible (in contradiction to the dual approach of Landscape and Visual Impact Assessment whereby effects on visual amenity are assessed separately to those on landscape character), and fails to consider the magnitude of landscape effect in relation to:-
  - 'the extent of existing landscape elements that would be lost'
  - 'The degree to which aesthetic or perceptual aspects of the landscape are altered'
  - 'Whether change affects the key characteristics'
    These shortcomings are contrary to GLVIA, specifically paragraph 5.49.

Taking into account all of the above, the landscape assessment undertaken is not *"in accordance with good practice guidance provided within the GLVIA"* (para. 6.4.1 of the applicant's Environmental Scoping Report, dated August 2019, as agreed by HCC in its Scoping Opinion, dated 27th September 2019), and also fails to follow the project specific methodology set out at ES Volume 3: Appendix 5.1.

3.2 *Regulation 25 compliance*

3.2.1 The Regulation 25 notice refers to the shortcomings of the landscape assessment in considering the development's potential effects on the setting of the South Downs National Park.

3.2.2 In this context, the highlighted text in the Regulation 25 notice could be subject to some interpretation. However, it does set out a requirement to *"**update** and inform its assessment… in respect of **landscape** and visual effects upon the South Downs National Park"* (our emphasis).

3.2.3 We consider that the applicant's response, which sets out a defence of the work previously undertaken without any new assessment work, does not adequately respond to the Regulation 25 notice where it refers to landscape effects.

4 Visual effects

4.1 *Incidence of potentially significant adverse visual effects*

4.1.1 The applicant now acknowledges a total of 30 visual receptors which would experience potentially significant visual effects as a consequence of the proposed ERF. 7 of those are either within, or on the boundary of the South Downs National Park.

4.1.2 It is notable that the list of significant visual effects provided within the conclusions section of the 'Further information report' (at para. 7.1.5) omits 2 significant visual effects that are referred to within the section on the South Downs National Park (at paras 2.2.12 and 2.3.9). For convenience, a composite list is provided at Appendix A of this report.

4.1.3 The number of identified potentially significant visual effects has more than doubled since the originally submitted LVIA, which concluded 7 potentially significant visual effects at viewpoints, and a further 5 potentially significant visual effects relating to private properties, as listed at Appendix A of this report.

4.1.4 The notable increase of the number of potentially significant visual effects from 12 to 30 has not been properly represented within the ES Volume 5, Section 10 (Landscape and Visual Effects), which states the *"the further information as identified some additional specific locations which would experience significant effects not described in the original assessment"* (para. 10.1.6). The ES Volume 5, Section 11 (Conclusions) goes on to state that *"these locations typically remain within 1.5km from the site or are from isolated elevated viewpoints beyond this distance. In this respect the overarching conclusions of the LVIA remain broadly similar to that presented in the original ES"* (para. 11.1.8). This claim is repeated in the ES Volume 5, Non-Technical Summary.

4.1.5 There is no acknowledgement within the main body text of ES Volume 5 that the degree to which the proposed development would potentially cause significant adverse visual effects has more than doubled in comparison to the original assessment.

4.1.6 Combining the viewpoints and private views referred to by the original assessment, along with the additional viewpoints and sequential views referred to by the 'Further information report', the applicant's agents have considered a total of 57 visual receptors. Whilst 30 of these were found to have potentially significant visual effects as a consequence of the proposed ERF, the potential effects at 27 visual receptors were not considered to be potentially significant.

4.1.7 It is notable that the applicant's combined visual studies have identified more potentially significant adverse effects than non-significant effects that would be caused by the proposed ERF.

4.2 *Sequential views area of search*

4.2.1 It is also notable that the significant adverse effects identified by the applicant's agent all occur within a 2km radius of the proposed development site. However, the large increase in the number of these effects is directly attributable to the recent consideration of views from public rights of way within 2km. However, 2km is an arbitrary threshold set in direct response to a clarification request appended to the Regulation 25 notice (as explained at 6.1.1 of the 'Further information report').

4.2.2 Considering the high incidence of potentially significant adverse visual effects that have been identified along Public Rights of Way within 2km of the proposed development site, we believe there is reasonable cause to extend the area of search beyond the 2km threshold. Doing so may well have revealed more potentially significant adverse visual effects. For instance, effects from lengths of PROW Froyle 8 (the St. Swithun's Way) near the Anchor Inn on Froyle Road, and PROW Froyle 20, near Saintbury Farm, both of which have theoretical intervisibility with the proposed boiler house as well as the stacks according to the DSM ZTV's provided by the applicant.

4.2.3 Similarly, the evidence provided has exclusively examined sequential views from PROWs and excluded any from local minor roads (with the exception of Yarnham's Lane, north-west of Upper Froyle). For instance, Forty Acres Lane, an unmetalled road north-east of Wick (within the South Downs National Park) has theoretical intervisibility with the proposed boiler house as well as the stacks according to the DSM ZTV's provided by the applicant.

4.3 *Private views area of search*

4.3.1 Considering the high incidence of potentially significant adverse visual effects along PROW's within 2km of the proposed development site, we consider it is likely there would be a corresponding high incidence of potentially significance adverse effects on private views within the same area of search. However, the area of search in respect to private views has been limited to 1km *"based on professional judgement and experience on numerous wind farm appeals"* ('Clarification report' para 10.1.7). We believe this justification is at odds with the high incidence of potentially significant adverse visual effects identified at publicly accessible areas beyond 1km, and accordingly it would be reasonable to extend the area of search with respect to private views.

4.4 *Cumulative visual effect of the Esso Pipeline*

4.4.1 The 'Clarification report' states that 10m wide sections of hedgerow would be removed to facilitate the Esso pipeline, but they would be replaced after construction (para 12.1.2). However, this is at odds with ES Volume 1, Chapter 5, which states that *"a 3m wide easement on either side of the Pipeline would be maintained following construction, where no buildings or tree planting would be permitted"* (para. 5.4.62).

4.4.2 The extract from the pipeline Environmental Statement included on page 18 of the 'Clarification report' shows that the pipeline route cuts through the landscape to the south of West End. Treebelts currently exist within this landscape, perpendicular to, and passing through the pipeline route. Accordingly, it can be assumed that this vegetation would be cleared to facilitate construction of the pipeline, and a 6m easement retained in perpetuity. Any low-level replacement planting would not close the gap, on an alignment between the ERF and the road south of Treloar School. Therefore, the cumulative effect of the Esso pipeline would create intervisibility between the road south of Treloar School and the ERF site.

4.5 *Plume visibility*

4.5.1 The applicant has provided new commentary regarding plume visibility at section 7.0 of the 'Clarification report', along with precedent photographs showing the plume associated with an existing ERF at Four Ashes in Staffordshire, and 'artists impressions' of a plume superimposed onto the 6 winter photomontages produced showing the proposed Alton ERF from viewpoints at the junction of New Lane and St. Swithun's Way (VP8), Hangers Way, East Worldham (VP11), St. Swithun's Way, near Bonham's Farm (VP13), the A31 near the Hen and Chicken pub (VP17), Stowcroft Lane (VP25) and Neatham Down (VP26).

4.5.2 It is not explained why these 6 winter photomontages were selected as the base for superimposing the impression of a plume, and the remaining 14 photomontages produced to accompany the original LVIA were disregarded. This omission does not fully address HCC's clarification request, appended to the Regulation 25 notification, which states (on page 10) that *"the plume could be viewed negatively… from numerous viewpoints… To not detail this pictorially (with or without the exact same technology/facility) with supporting narrative could undermine the overall additional landscape and visual effects information package".*

4.5.3 The visualisations provided are not, as requested, supported with a narrative describing the effects (including landscape effects). The commentary that is provided within section 7.0 of the 'Clarification report' essentially re-states the explanations previously given within the ES Volume 1, Chapter 5, and adds now new information other than *"anecdotal"* accounts of the atmospheric conditions around the Alton EFR site whilst fieldwork was undertaken in December 2019, November 2020 and December 2020 (para. 7.1.4).

4.5.4 It is noted that *"modelling indicates that a visible plume would only be apparent for between 8.8% and 13.5% of the total daylight hours available in a year*" (para 7.1.2). This implies that a plumes would be visible for something like a day per week, or around 40 days per year.

4.5.5 In this context, our original comments on behalf of NWI (from paras 3.7.13 to 3.7.15) still stand. In particular, the systematic assessment of effects on identified visual receptors has still not taken into account the 'worst-case' scenario of plume visibility. Instead, the assessment provides a general commentary in relation to the 'average' visual effects of plume emissions. We consider this does not provide a sufficient depth of enquiry, particularly in relation to the applicant's acceptance at ES Volume 1: Chapter 5, para 5.5.77:-

Where the emissions plume is visible, this would have potential to draw attention to the presence of the Proposed Development from the surrounding area, thereby increasing the influence of the new structures upon the views available.

4.6 *Regulation 25 compliance*

4.6.1 The Regulation 25 notice set-out a requirement for analysis of additional viewpoints, including consideration of construction effects *"using methodologies and analysis methods already employed".*

4.6.2 Photographic records have been provided in relation to all 3 requested viewpoints (Water Lane near West Worldham on Writers' Way (assigned 'SDNP 5'), Lane between Upper Froyle and Stowell Cottage (assigned 'VP 25'), and Neatham Down (assigned as 'VP26')). However, the systematic assessment, including an assessment of construction effects has been provided for VP's 25 and 26 (within the updated appendix 5.6), but no-such assessment work has been provided for view SDNP 5 (from Water Lane near West Worldham).

4.6.3 Accordingly, the supplementary information provided does not fully comply with the requirement to *"use methodologies and analysis methods already employed".*

5 Effects on the South Downs National Park, and its setting

5.1 *Effects within the South Downs National Park*

5.1.1 The 'Further information report' responds to comments from the SDNPA (related within the Regulation 25 notice) with regards to the potential visual effects of the proposed ERF, and newly provided photographic records from viewpoints and

selected PROWs demonstrate a general lack of visibility from within the National Park.

5.1.2 However, it is noted that 1 potentially significant visual effect has been identified within the South Downs National Park (SDNP), and a further 6 potentially significant visual effects have been identified on lanes and footpaths the coincide with the boundary of the designated landscape. Those are listed as follows:-

- Locations along PRoW 'Binsted 21', south of VP10 *(along the SDNP boundary)*
- The western edge of Wyck, coinciding with previously assessed VP6: (footpath, Wyck) *(along the SDNP boundary)*
- Locations along Wyck Lane between East Worldham and Wyck *(along the SDNP boundary)*
- The previously assessed VP10: (footpath north of Malms House) *(along the SDNP boundary)*
- Binsted Road from Lower Neatham Mill Lane to West Court *(along the SDNP boundary)*
- Short sections of Isington Road *(along the SDNP boundary)*
- An isolated location east of South Hay House *(within the SDNP)*

5.1.3 The applicant describes this as *"an extremely small proportion of the overall SDNP"* ('Further information report' para 2.3.9). We assert that it is misleading to measure the visual effects of the proposed ERF in relation to the whole of the SDNP. By this comparison, the visual effects of any development (no matter how big) would be extremely small.

5.2 *Effects within the setting of the South Downs National Park*

5.2.1 It is our view that the applicant's agents have insufficiently addressed the SDNPA's comments regarding the effects (both visual and landscape) on the setting of the SDNP, i.e. the extent to which the proposed ERF would disrupt the relationship between the landscape and visual amenity to the north of the Wey valley, with the high ground (within the SDNP) to the south of the valley.

5.2.2 Discussion with regards to the visual amenity within the setting of the SDNP acknowledge that *"the ridges to the north of the site show a relatively high level of intervisibility, and as such with have views to the SDNP and will form part of its setting"* (para 2.3.5 of the 'Further information report'), and goes on to state that *"from these limited publicly accessible locations, the proposed development would interrupt views to the SDNP and there would be a localised impact on the perceived setting of the park from outside the designated area"* (para 2.3.7).

5.2.3 We disagree with the suggestion that the publicly assessable locations affected would be 'limited', and that the impact would be 'localised'. The following visual receptors, which the applicant acknowledges would all experience significant adverse visual effects as a consequence of the proposed ERF, all have intervisibility with the SDNP:-

- c. 460m of St Swithun's Way (Froyle: 15) as it crosses the open field to the north of the Site and A31.
- c.500m of Public Right of Way (PROW) Froyle: 27 immediately to the north of St Swithun's Way,
- Short sections of PROW Alton: 35 around Bonham's Farm;
- A short elevated and open section of PROW Alton: 32;
- An isolated viewpoint at a field gate on Stowcroft Lane between Froyle and Stowell Cottages;
- c. 650m section of the A31 as it passes to the north of the proposed development site;

- The previously assessed Viewpoint 13 (St Swithun's Way, near Bonham's Farm) in the winter

5.2.4 The 'Further information report' suggests that *"in the context of the SDNP as a whole these impacts would not be significant in terms of the overall setting of the designated area"* (para. 2.3.7). However, we assert that it is misleading to measuring the effects of the proposed ERF in relation to the whole of the SDNP and its setting. By this comparison, it is inconceivable that any development (no matter how big) would be regarded as significant.

5.2.5 As noted at Section 3 above, the applicant has not undertaken any further assessment of landscape effects or re-evaluated the landscape assessment previously undertaken. Paragraph 2.3.11 of the 'Further information report' explains that the original landscape assessment undertaken (as set-out in Appendix 5.5 of the ES) attributed additional weight to landscape character areas within the South Downs National Park (SDNP). Accordingly, the applicant stands by their original landscape assessment work, rebutting comments from the SDNPA, including :-

- *"The Baseline evidence is not comprehensive and fails to generate a meaningful understanding of the landscape and particularly its importance culturally/historically"*
- *"The setting to the National Park has not been defined in the Baseline evidence. The setting to a Protected Landscape can be defined as a landscape setting or visual setting, or a combination of both. The setting is important particularly in defining and contributing to the perceptual qualities and experiences people have within the National Park and particularly close to its boundary".*

5.2.6 In this context, our comments above at 3.1.6 are particularly relevant.

5.3 *The Statutory Purposes of the South Downs National Park*

5.3.1 It is notable that Section 2.0 (South Downs National Park) of the 'Further information report' does not make any reference to the SDNP's Statutory Purposes, yet the last sentence of Section 7.0 (Conclusions) states that *"there would be no material effect on the statutory purposes of the designation"* (a claim repeated at 10.1.10 and 11.1.10 of the ES Volume 5, and 2.1.12 of the 'Non-Technical summary').

5.3.2 We would challenge the validity of this conclusion. Since it is apparent that there has not been any objective examination of the potential effects of the proposed development in relation to the SDNP's Statutory Purposes, the assertion that there would be *"no material effect on the statutory purposes"* is illogical and without basis.

6 Conclusion

6.1.1 We conclude that the supplementary information provided by the applicant is misleading, and insufficiently addresses the issues raised formally and informally within the Regulation 25 notice.

6.1.2 The landscape and visual impact assessment presumes that adverse effects would be mitigated to some degree by the proposed 'living wall'. However, questions remain regarding the likelihood of this proposed feature establishing successfully and achieving its design objectives to *"mirror the surrounding landform and hanger woodlands"*, *"help reduce the visual prominence of the building in the landscape"* and *"reflect seasonal changes in colour in the surrounding landscape".* In particular,

the applicant has not confirmed the species which would be used in the 'living wall', or given any account of how the 'living walls' could be accessed for routine maintenance operations. Moreover, the landform of Hanger woodlands are not features of flat valley bottoms, and accordingly the location of the proposed development site is fundamentally at-odds with the design concept.

6.1.3 The assessment of landscape effects continues to be discursive, and over-reliant on published Landscape Character Assessments without any independent, objective study of the landscape at a local level, based on fieldwork. Its judgements of the Wey Valley's susceptibility to change fails to take into account the documented 'threat' to *"open interrupted skylines"* posed by *"tall vertical structures, which break the flow of the landscape and undermine the scale of the valley".* Its judgements of potential magnitude of effect repeatedly reference the degree to which the proposed development would be visible (fundamentally contracting the dual approach to LVIA, where by effects on visual amenity are assessed separately to those on landscape), and fails to take into account potential changes to the perceived or experiential landscape.

6.1.4 Taking this into account, the landscape assessment undertaken is not *"in accordance with good practice guidance provided within the GLVIA",* and therefore contrary to the applicant's Scoping Report, and the LVIA's own project specific methodology. In not providing any new assessment work, we also believe that the applicant's defence of the work previously undertaken does not adequately respond to the Regulation 25 requirement to *"**update** and inform it's assessment… in respect of **landscape** and visual effects upon the South Downs National Park"* (our emphasis).

6.1.5 The applicant now acknowledges a total of 30 visual receptors which would experience potentially significant adverse visual effects as a consequence of the proposed ERF (including 7 that are either within, or on the boundary or the SDNP). This is a notable increase in the incidence of significant adverse visual effects, compared with the 12 visual receptors previously regarded as-such. The combined visual assessments have now identified more potentially significant adverse effects than non-significant effects that would be caused by the proposed ERF.

6.1.6 In this context, we consider that it is reasonable to question the 2km area of search with regard to interrogating visual effects from PROWs and local minor roads, and the 1km area of search with regard to private views. Applying these arbitrary thresholds may have excluded more visual receptors which may otherwise have been identified as potentially experiencing significant adverse visual effects as a consequence of the proposed ERF. We believe that the cumulative effect of vegetation clearance relating to the Esso Pipeline may further increase the incidence of significant adverse visual effects. Moreover, the potential of the emissions plume to *"draw attention to the presence of the Proposed Development from the surrounding area, thereby increasing the influence of the new structures upon the views available"* may also increase the incidence of significant adverse visual effects, particularly when atmospheric conditions would reveal the 'worst-case' plume visibility.

6.1.7 The Regulation 25 notice required the applicant to *"use the methodologies and analysis methods already employed"* to consider the visual effects from 3 specific additional viewpoints. However, no systematic assessment has been provided in relation to the view from Water Lane near West Worldham, and no explanation has been provided for its exclusion from systematic assessment. Accordingly we believe that the work undertaken does not adequately respond to the Regulation 25 requirement.

6.1.8 The high incidence of potential significant adverse visual effects (including 7 either within or on the boundary of the SDNP), and the inadequacies of the landscape assessment effects are both relevant to considering whether the proposed ERF would have adverse implications for conserving the natural beauty, tranquillity, wildlife and cultural heritage of the SDNP and its setting for the benefit of public understanding and enjoyment. Accordingly, the assessment undertaken fails to give proper consideration to whether the proposed development might compromise the Statutory Purposes of the National Park designation.

Martin Hird, CMLI.

On behalf of the 'No Wey Incinerator' group.

4th February 2021.

APPENDIX A

List of 12 visual receptors which would experience potentially 'significant' visual effects as a consequence of the proposed ERF, as set-out at paras 5.5.39-5.5.44, 5.5.57, 5.5.58, 5.5.61 and 5.5.62 of the ES Volume 1: Chapter 5:-

1. Viewpoint 5: Hawbridge Farm (para 5.5.39)
2. Viewpoint 6: Public footpath, Wyck (para 5.5.41)
3. Viewpoint 9: Froyle Park, Upper Froyle (para 5.5.42)
4. Viewpoint 10: Public footpath, north of Malms House (para 5.5.43)
5. Viewpoint 14: St Swithun's Way, west of Upper Froyle (para 5.5.40)
6. Viewpoint 18: Public footpath, off Clay Lane (para 5.5.44)
7. Viewpoint 24: St Swithun's Way, Round Wood (para 5.5.40)
8. Private view from Bonhams Farm (5.5.57)
9. Private view from West End (5.5.58)
10. Private view from Hawbridge Farm (5.5.61)
11. Private view from Hawbridge Cottages (5.5.61)
12. Private view from Rookery Cottages (5.5.62)

List of 30 visual receptors which would experience potentially 'significant' visual effects as a consequence of the proposed ERF, as set-out at paras 2.3.9 and 7.1.5 of the 'Further information report':-

1. St Swithun's Way (Froyle: 15) as it crosses the open field to the north of the Site and A31.
   N.B. this sequential visual experience coincides with 2 of the previously assessed viewpoints, VP14 (west of Upper Froyle), and VP24 (at Round Wood)
2. c.500m of Public Right of Way (PROW) Froyle: 27 immediately to the north of St Swithun's Way;
3. short sections of PROW Alton: 35;
4. a short elevated and open section of PROW Alton: 32;
5. an isolated viewpoint at a field gate on Stowcroft Lane between Froyle and Stowell Cottages;
   N.B. this coincides with the newly assessed viewpoint VP25 (Stowcroft Lane)
6. c.300m of PROW Froyle:16 as it rises to meet Bamber Lane south of Lower Froyle;
7. locations along the very western edge of Upper Froyle;
   N.B. this sequential visual experience coincides with the previously assessed viewpoint VP9 (Froyle Park, Upper Froyle).
8. c. 650m section of the A31 as it passes to the north of the Proposed Development;
9. c.350m of PROW Binsted:8 to the east of Mill Court;
10. lane from Rookery Cottages to Malms Farm;
11. PROW Binsted: 57 immediately to the south of the site;
12. Binsted Road from Lower Neatham Mill Lane to West Court;
13. short sections of Clay Lane from Binsted Road to Wyck;
14. isolated locations along PROW Binsted:21 south of VP10;
15. PROW Binsted:21 north of VP10;
16. Private view from Bonham's Farm,
17. Private view from West End,
18. Private view from Hawbridge Farm,
19. Private view from Hawbridge Cottages,
20. Private view from Rookery Cottages;
21. c. 850m of PROW Binsted:4 from Clay Lane to Neatham;
    N.B. this sequential visual experience coincides with the previously assessed viewpoint VP18 (Public footpath, off Clay Lane).
22. c. 900m of PROW Binsted:4 from Clay Lane to Wyck;

N.B. this sequential visual experience coincides with the previously assessed viewpoint VP6 (Public footpath, Wyck).

23. The previously assessed Viewpoint 5 (Hawbridge Farm)
24. The previously assessed Viewpoint 10 (Public footpath, north of Malms House)
25. The previously assessed Viewpoint 13 (St Swithun's Way, near Bonham's Farm) in the winter
26. a 100m section of PROW Alton:703 south of Neatham Manor Farm, with intermittent visibility further south;
27. isolated locations along Wyck Lane between East Worldham and Wyck;
28. isolated location along PROW on Neatham Down.
    N.B. this coincides with the newly assessed viewpoint VP26 (Neatham Down)
29. short sections of Isington Road
30. an isolated location east of South Hay House
    N.B. this conincides with the newly considered viewpoint SDNP V1 (Footpath South of Hay House)

List of 27 other visual receptors considered by the original LVIA exercise and the 'further information' gathering exercise:-

Within the South Downs National Park:

1. Sequential view A1 – Alice Holt
2. Sequential view A2 - Binsted to River Hill Farm
3. Sequential view A3 - River Hill Farm to Stubbs Farm (including PROW east of Hay Place, west of Wheatley and between Hoggatts and Stubbs Farm)
   N.B. this sequential visual experience coincides with the newly considered viewpoints SDNP VP1 (Footpath South of Hay House), SDNP VP2a (Footpath South of Hay Farm), and SDNP VP2b (Footpath South of Hay Farm)
4. Sequential view A4 - East Worldham and West Worldham
   N.B. this sequential visual experience coincides with the newly considered viewpoints SDNP VP3 (Footpath near Manor Farm), and SDNP VP4 (Footpath east of West Worldham)
5. Sequential view A5 - PROW between West Worldham and Wick Hill Hanger (including Writers Way)
   N.B. this sequential visual experience coincides with the newly considered viewpoint SDNP VP5 (Writers Way, West Worldham)
6. Sequential view A6 - Noar Hill/High Common, (including Hangers Way)
   N.B. this sequential visual experience coincides with the newly considered viewpoint SDNP VP6 (Noar Hill)
7. Sequential view A7 - Selbourne Common /Hill
   N.B. this sequential visual experience coincides with the newly considered viewpoint SDNP VP7 (Selbourne)
8. Sequential view A8 - PROW between Northfield Hill and Upper Farringdon (including Writers Way)
   N.B. this sequential visual experience coincides with the newly considered viewpoint SDNP VP8 (Footpath above Upper Farringdon)
9. Sequential view A9 - Upper Farringdon and Four Marks (including Writers Way and St Swithun's Way)
10. St Swithun's Way west of Chawton

Outside of the South Downs National Park:

11. Sequential view along PROW 'Alton 31'
    N.B. this sequential visual experience coincides with the previously assessed viewpoint VP19 (Public footpath, off Howard's Lane)
12. Sequential view along PROW 'Alton 503'

13. Sequential view along PROW ‘Alton 501’ and the junction with PROW ‘Alton 505’
    N.B. this sequential visual experience coincides with the previously assessed viewpoint VP8 (Junction of New Lane and St Swithun’s Way)
14. Sequential view along PROW ‘Binsted 3’
15. Sequential view along the lane west of Upper Froyle
16. The previously assessed Viewpoint 1 (Binsted Recreation Ground)
17. The previously assessed Viewpoint 2 (Public footpath, NE of Binsted)
18. Views from St. Swithun’s Way, Bentley, inclusive of previously addressed Viewpoints 3a and 3b.
19. The previously assessed Viewpoint 4 (Froyle Mill Bridge)
20. The previously assessed Viewpoint 7 (Brockham Hill Lane)
21. The previously assessed Viewpoint 11 (Hangers Way, East Worldham)
22. The previously assessed Viewpoint 12 (Public footpath, St Mary’s Church, Newton Valance)

Air Quality CONSULTANTS

Air Quality Review:
Alton Advanced Energy Recovery Facility– Comment on Veolia Regulation 25 Response

January 2021

Experts in air quality management & assessment

Document Control

Client	No Wey Incinerator	**Principal Contact**	Philip Roberts

Job Number	J4173

Report Prepared By:	Dr Ben Marner

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Report No.	Date	Status	Reviewed by
J4173/C/D2	28 January 2021	Draft Report	Penny Wilson (Associate Director)

Air Quality Consultants Ltd
23 Coldharbour Road, Bristol BS6 7JT Tel: 0117 974 1086
12 Airedale Road, London SW12 8SF Tel: 0208 673 4313
aqc@aqconsultants.co.uk

Registered Office: 12 St Oswalds Road, Bristol, BS6 7HT
Companies House Registration No: 2814570

1 Introduction

1.1 In July 2020 Air Quality Consultants Ltd (AQC) reviewed the air quality sections of the Environmental Statement ('ES') for the Veolia Alton Advanced Energy Recovery Facility (the 'Scheme'). This[1] identified many failings with the ES and fed into the air quality representation by the No Wey Incinerator group.

1.2 Separate to AQCs review, Hampshire County Council (HCC) commissioned Atkins to review the air quality sections of the ES[2]. Atkins' review fed into HCC's Regulation 25 letter dated 12 November 2020.

1.3 In December 2020 Veolia responded to HCC's November 2020 Regulation 25 letter, as well as responding directly to the additional points made in both Atkins' and AQC's reviews. The response on air quality is addressed in Environmental Statement Volume 5 – 6.1 (herein referred to as the 'Veolia response'). Additional information from Veolia on ecology was also provided (Regulation 25 Response – Ecology (08/12/2020)).

1.4 This note provides high-level comments on the responses provided by Veolia in respect of air quality. Section 2 addresses points made in the Veolia response, while Section 3 provides a brief comment on the air quality aspects of the revised ecological assessment which was submitted.

[1] AQC's July 2020 Review is AQC Report J4173/A/F1

[2] Atkins' report project no 5201045 Rev 1.0 22/10/2020

2 Comment on Veolia Response

2.1 Table 1 summarises the adequacy of Veolia's response to each of the relevant points made by HCC and Atkins. Table 2 comments on Veolia's responses to previous points made by AQC. The Veolia response accurately lists the key points of concern and so, for ease of reference, Veolia's nomenclature and structure has been used. Taking account of the relative importance of each issue[3], responses to each point have been categorised as:

A) (shaded green) no additional information is required. This is either because adequate additional information has been provided by Veolia, because AQC agrees with Veolia's response to Atkins' comments, or because errors identified by AQC have been acknowledged such that, while material presented elsewhere in the ES remains misleading, the ES and new appendices are appropriate when taken as a whole;

B) (shaded blue) Veolia has addressed the point made but their revised assessment has raised further potential issues;

C) (shaded orange) there are remaining concerns that the information presented in the ES is misleading but the issue is unlikely to affect the conclusions reached in the ES; or

D) (shaded red) the response provided by Veolia is inadequate and concerns remain regarding the findings of the air quality assessment.

2.2 Where a Category D item is identified, further explanation is provided below the table. Further detail on the reasoning for classifications assigned with respect to the other AQC comments are provided in Appendix A1, and the summary in Table 2 should be read in the context of this detail. Similar detail is not required in relation to HCC and Atkins' comments.

[3] For example, issues identified by AQC as 'minor' are, in any event, considered unlikely to affect the conclusions on their own and are thus of less overall concern.

Table 1: Comment on Veolia Response to Regulation 25 Letter and Atkins' Review

Item[a]	Topic	Classification of Response
Regulation 25 Letter		
1	Effect of EHDC local plan on existing pollutant Concentrations.	A
2	Effect of proposals on AQMAs	A
3	DEFRA PCM road links	A
4	Construction emissions	A[b]
5	Construction emissions - decommissioning	A
6	Construction phase HGV emissions	A
7	Operational phase HGV emissions	A
8	Stack height assessment	A
9	Human Health Risk Assessment	A
10	Ecology	B[c]
Atkins Review		
1	Construction emissions	A[b]
2	Human Health Risk Assessment	A

[a] As numbered in the Veolia response. Numbers are reused across different topics but are helpful for navigation.

[b] Recommendations on mitigation made in the Veolia response should be included within the CEMP and adequately enforced.

[c] See Section 3 of this note.

Table 2: Comment on Veolia Response to AQC's July 2020 Review

Item[a]	Topic	Classification of Response
Major Issues [b]		
1	Exclusion of On-site Emissions	D
2	Use of '1%' Screening Criterion	B[c]
3	Failure to Quantitatively Assess 'In-combination'	B[c]
Moderate Issues [b]		
4	Exclusion of Off-site Emissions	A
5	Use of 'Background' as 'Baseline'	A
6	Presentation of Consistent Downward Trends	C
7	Model Grid Resolution	C
8	Stack Height Analysis	C
9	Identification of Relevant Areas of Exposure	C
Minor Issues [b]		
1	Use of Outdated Impact Descriptors	C
2	Presentation of Results for Heavy Metals	C
3	Buildings Sensitivity Test	C
4	Confusion of Nitrogen Dioxide and PAH	A
5	Woodland Deposition Calculations	A
6	Selection of Receptors	A
7	Description of 5 km grid background modelling	A

[a] As numbered in Veolia response. Numbers are reused across different topics but are helpful for navigation.

[b] Descriptors used and defined in AQC's July 2020 review.

[c] See Section 3 of this note.

Exclusion of On-site Emissions

Summary of Issue

2.3 The only emission sources considered in the assessment are the main exhaust stacks. Furthermore, the ES states that there will be no other process emissions. Diesel generators are expected to also be included and will be require regular operation for safety reasons. These emissions have been omitted from the assessment.

Veolia Response

2.4 Veolia refers to Atkins' comment that operation of a backup generator would have no material impact on the conclusions. Furthermore, there are no human sensitive receptors close to the Scheme where the impacts will be greatest.

AQC Comment

2.5 A point which must first be addressed is Atkins' statement that it is not routine practice to consider emissions from backup generators which are designed to be used in case of emergencies. While this may be an internal position within Atkins, it does not reflect industry-wide practice. These emissions are very often included within Environmental Assessments for similar schemes[4] for the reason that they will be operated regularly for safety purposes. It is self-evident that ignoring a potentially-significant on-site emission source cannot be considered best-practice when compared with assessing that source.

2.6 A position statement from the Institute of Air Quality Management (IAQM) in 2017 on "*Assessment of Air Quality Impacts from Combustion Plant with Limited-hours of Operation"* notes that:

"*It is not appropriate to screen out automatically the need for an air quality assessment of these plant in all cases. It may, however, be reasonable to assume that there will not be an adverse impact on air quality without undertaking a detailed assessment provided that the emission rates are considered to be sufficiently low*."

2.7 In this case, even the existence of the plant was explicitly denied within the air quality chapter of the ES and no further information has been provided on the emissions rates upon which to make any informed judgement that they are "sufficiently low".

2.8 It is also noted that the Atkins response comments on the likelihood of triggering issues in relation to the annual mean and 1-hour objectives but not the 24-hour critical level which was highlighted in AQCs review. This critical level relates to the maximum 24-hour concentration which can make it more sensitive to short-term releases.

2.9 Routine operation of the diesel generators *may* have no effect on the conclusions of the ES. However, this has not been assessed and no evidence has been put forward to support this assumption. Further information is required regarding the emissions from these plant and the how these releases will combine with other Scheme-generated emissions to affect annual mean, 1-hour mean, and 24-hour mean concentrations.

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[4] For example:
St Helens P/2018/0675/WEIA;
Sandwell DC/17/61177;
https://www.roltonkilbride.co.uk/sites/default/files/documents/K.0178-%20Planning%20Statement%20Final.pdf;
https://www.stephenson-halliday.com/projects/kingmoor-erf/

3 Comments on Regulation 25 Response on Ecology

3.1 The revised assessment presented in the Regulation 25 Response – Ecology (08/12/2020) takes a different approach to in-combination effects than that presented in the ES. It has collected some information on traffic generation on identified roads, which it has taken from modelling carried out for a selection of Local Plans. Rather than explicitly adding the changes caused by the Veolia Scheme to those from in-combination plans in the manner described by Mr Justice Jay in his judgement relating to Wealden Council[5], the assessment for most of the designated sites instead rests on one of the findings of the assessment of the South Downs National Park Authority (SDNPA) Local Plan. This is that the forecast effects of autonomous measures[6] on NOx emissions predicted by SDNPA will more than offset any negative effects of that Plan. In the case of East Hampshire Hangers SAC only, a similar statement is made in relation to forecasts made in the assessment of the East Hampshire Joint Strategy. The rationale for judging no significant effect for most sites seems to rest entirely on these autonomous NOx forecasts.

3.2 There has been considerable discussion in the UK and Europe as to whether it is possible to rely on forecasts of future autonomous emission reductions as the basis for granting new permissions[7]. Ultimately this is a legal question which AQC is not qualified to answer. It is, however, noted that:

> A) While both background NOx concentrations and traffic-related NOx emissions, are predicted to reduce in the near future, the opposite is the case for ammonia, where background ammonia concentrations are predicted to increase across most of the UK[8] and emissions from road traffic are also expected to increase[9]. Thus, even if it is possible to rely on the forecast reduction in NOx to offset a net increase in NOx concentrations caused by the Scheme (in combination with other plans and projects), the same argument cannot be made for ammonia, where Scheme-generated increases will combine with those from other plans and projects (including but not restricted to emissions from road vehicles) and be added to an <u>increasing</u> background trend. The Regulation 25 Response does not comment on in combination effects in relation to ammonia which appears to be a significant omission.

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5 Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017] EWHC 351 (Admin).

6 i.e. measures which are not related to the plan or project being assessed and are thus autonomous to it.

7 e.g. CJEU Opinion and Judgement on joined cases C-293/17 and C-294/17.

8 Unless additional measures over and above those which are currently agreed are put in place see Paragraph A1.17

9 e.g. https://uk-air.defra.gov.uk/assets/documents/reports/cat09/2007010844_Estimation_of_Changes_in_Air_Pollution_During_COVID-19_outbreak_in_the_UK.pdf, page 14.

B) Chapter 8 of the ES states that, because of uncertainty regarding autonomous forecasts, an assumption of no change over time has been made. This claim is repeated in Appendix 6.1 of the ES (dated December 2020)[10]. Furthermore, Page 41 of the December 2020 Regulation 25 Response on Ecology states that the assessment of effect on site integrity in ES Volume 3 Appendix 6.6 is *"**not reliant on future trends**".* The ES and its appendices are thus extremely contradictory in this respect. Regardless of whether or not the autonomous forecasts can be relied upon in the way that they have, it is clearly misleading to rest decisions on the effects of these forecasts while claiming that the assessment is not reliant on them.

3.3 The assessment presented in the Regulation 25 Response on Ecology focuses on effects in-combination with traffic generated by neighbouring local plans. On page 33 the document notes that that there may also be additional live projects which will generate in-combination emissions from non-transport sources but goes on to state that:

"*any additional proximal sources which could act in combination with the Proposed Development through overlapping effects would have been captured in the dispersion modelling in ES Volume 3 Appendix 8.3*".

It is unclear how the modelling method followed in ES Appendix 8.3 could achieve this. Live projects (i.e. those likely to go ahead but not yet constructed or operational) do not appear to have been considered in ES Volume 3 Appendix 8.3 at all, but the ecology assessment appears to be based on an assumption that they have been.

3.4 In summary, the Regulation 25 Response – Ecology (08/12/2020) provides a new assessment which appears to contain the following errors:

1) The assessment relies heavily on forecast future reductions in NOx concentrations predicted by one (but not all) of the in-combination assessments referred to without any consideration of the concurrent forecast increase to NH_3 concentrations. The assessment is thus flawed.

2) The assessment relies heavily on forecast future reductions in NOx concentrations despite repeated claims that it is not reliant on these forecast trends. The assessment is thus misleading; and

3) The assessment claims that in-combination effects from live projects with emissions from non-traffic sources are included in the air quality model when they are not. This part of assessment thus appears not to have been provided.

[10] in response to HCC's comment that recent air quality monitoring suggests there has only been limited improvement over the last five years.

A1 Explanation of Appraisal of Veolia Response to AQC July 2020 Comments

Major Issues

Use of '1%' Screening Criterion for Impacts on Sensitive Habitats

Summary of Issue

A1.1 The Habitats Directive requires the identification of any potential significant effects of a development in-combination with other plans and projects. This has not been done.

Veolia Response

A1.2 Additional assessment provided by Argus Ecology.

AQC Comment

A1.3 See Section 3 of this note.

Failure to Quantitatively Assess 'In-combination' Effects even Where Scoped In

Summary of Issue

A1.4 As above, the Habitats Directive requires the identification of any potential significant effects of a development in-combination with other plans and projects. This has not been done.

Veolia Response

A1.5 Additional assessment provided by Argus Ecology.

AQC Comment

A1.6 See Section 3 of this note.

Moderate Issues

Exclusion of Off-site Emissions

Summary of Issue

A1.7 Emissions from Scheme-generated traffic should be added to on-site emissions when calculating the total change caused by the Scheme. IAQM guidance has been misused to avoid doing this.

Veolia Response

A1.8 Revised modelling has been provided to correct this issue for those receptors closest to the A31.

AQC Comment

A1.9 Veolia's revised modelling shows that the inclusion of traffic emissions increases the previously-predicted impacts by between 15% and 60% at different receptor locations, which is an appreciable additional impact which has now been quantified.

A1.10 It is best practice to verify model results based on a comparison with local measurements. Very often, such a comparison results in traffic-related concentrations of nitrogen oxides being uplifted to correct for negative bias. Veolia did not carry out a local verification. However, the modelling presented has assumed complete conversion of nitric oxide to nitrogen dioxide and so it is unlikely that there will be any significant residual negative bias in the results.

A1.11 Despite the revised modelled incremental changes being appreciably greater than those predicted in the ES, they do not change the overall outcome in terms of the impact descriptors published by the IAQM[11] which are used in the ES. The correction provided by Veolia is thus considered appropriate.

Use of Spatially-averaged 'Background' Values to Represent Location-specific 'Baseline' Values

Summary of Issue

A1.12 Local effects of emissions from existing vehicles on the A31 have not been considered.

Veolia Response

A1.13 Revised modelling has been provided to correct this issue for those receptors closest to the A31.

AQC Comment

A1.14 Paragraph 8.4.25 of the ES stated, as justification for not including local traffic in the assessment that: "*it is considered highly unlikely that the PEC will approach 75% of the AQAL*". The assessment now provided shows that the PEC at the two receptors beside the A31 are 75% and 82% of the AQAL respectively; much higher than predicted in the ES. It is thus helpful to have this additional modelling. The results provide reassurance that the overall conclusions of the ES, in this respect, were correct.

Presentation of Consistent Downward Trends

Summary of Issue

A1.15 Selective evidence is presented to suggest that pollutant concentrations of relevance to sensitive habitats have been falling consistently and, because of this, will continue to do so. While this assumed trend is not included in the air quality modelling, it forms part of the ecology assessment.

[11] Moorcroft and Barrowcliffe et al., (2017) https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

Veolia Response

A1.16 Refer to Atkins comment and no further response provided.

AQC Comment

A1.17 Despite Atkin's comment, AQC stands by its earlier point. As noted in AQC's 2020 review, the rate of decline in future acid deposition will almost certainly be significantly shallower than the trend presented and described in Appendix 6.6 and Appendix 8.5 of the ES. This was noted in Atkins' own response. For example, and as explained in AQC's 2020 review, one important contributor to acid deposition is ammonia. Recent modelling carried out on behalf of the Joint Nature Conservation Committee[12] has shown that unless additional measures (than already secured) are in place, then NH_3 concentrations are predicted to increase over the majority (88%) of the UK between 2017 and 2030. It is thus clear that the trend in acid deposition in the future is not well described by graphs showing SO_2 concentrations[13]. Furthermore, even if the net trend in acid deposition is downward, fluxes are highly unlikely to see a "*consistent downward trend*" over the next 10 years.

Model Grid Resolution

Summary of Issue

A1.18 ES cites guidance that may not exist. Clarification of source requested in AQC's 2020 review. Using a finer resolution grid is likely to result in higher predicted concentrations.

Veolia Response

A1.19 Refer to Atkins comment and no further response provided.

AQC Comment

A1.20 AQC stands by its earlier point that a reference to the guidance quoted should be provided to allow scrutiny. This has not been done.

A1.21 It is self-evidently correct that a finer grid will, in the majority of instance, result in higher predicted concentrations, meaning that the maxima presented in the ES are lower than would otherwise be the case. However, the scale of difference that this would make is, in and of itself, unlikely to affect the overall conclusions of the assessment.

Stack Height Analysis

Summary of Issue

A1.22 Air quality justification for stack height is inadequate.

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12 https://jncc.gov.uk/our-work/nitrogen-futures/

13 The Regulation 25 Response on Ecology (Pages 39 to 41) responds to the related point made in Atkins' review, but does not adequately justify the use of trends in ambient SO_2 concentrations to describe trends in acid deposition.

Veolia Response

A1.23 Refer to Atkins comment and highlight that stack height is determined by aviation safety, visual impact, and other considerations.

AQC Comment

A1.24 AQC's previous concern was that was Section 5.1 of Appendix 8.3 justified an 80 m stack on the basis that most impacts with this stack height could be described as 'negligible' or 'not significant'. As explained in AQC's 2020 response, other failings with the assessment, notably omission of road traffic emissions and the diesel generators, prevented that assessment being made. Road traffic emissions have now been included in the assessment, but generator emissions still have not. AQC is unable to comment on the aviation, visual impact, etc. grounds cited by Veolia's for determining the stack height.

Identification of Relevant Areas of Exposure

Summary of Issue

A1.25 Relevant receptors have been missed.

Veolia Response

A1.26 Refer to Atkins comment and repeats the ES that even at the point of maximum impact, the change would only be described as 'slight adverse' and thus not significant.

AQC Comment

A1.27 Atkins' comment supports Veolia's assertion that the area encompassing picnic pitch Number 1 at West End Flower Farm is a farmer's field and thus unlikely to represent relevant exposure to the 1-hour objective. Having spoken with West End Flower Farm, AQC refutes this. This objective applies to any outdoor locations where members of the public might reasonably be expected to spend one hour or longer. This includes a defined commercial picnic area.

A1.28 The impacts presented by Veolia in this location are 'slight adverse', but the ES states that for reasons including a: "*low risk of relevant public exposure, the likelihood of a 'slight adverse' magnitude of change occurring in reality is extremely low*". This argument does not seem well founded. However, as correctly noted by Veolia, this point does not change the overall conclusion on significance.

Minor Issues

Use of Outdated Impact Descriptors

Summary of Issue

A1.29 Use of withdrawn guidance when the closest current equivalent guidance results in "*moderate adverse*" impacts.

Veolia Response

A1.30 Withdrawn guidance continues to be appropriate for use since this is a matter for a qualified ecologist.

AQC Comment

A1.31 AQC is not able to comment on matters for a qualified ecologist. However, as members of the Institute of Air Quality Management (IAQM - who issued the guidance being cited), AQC considers it misleading to present an in-house approach which has been developed by Veolia's ecological consultant, as being justified by the IAQM. IAQM's ecological equivalent, CIEEM, also has its own current guidance[14] which does not use these levels.

Presentation of Results for Heavy Metals

A1.32 Choice of presentation focuses on metals with the smallest impacts.

Veolia Response

A1.33 ES chapter focuses on those pollutants not metals not screened out using EA guidance for group 3 metals.

AQC Comment

A1.34 The EA guidance is for group 3 metals only and thus does not cover metals such as mercury and cadmium. This chemical grouping does not provide sound justification for presenting the (more problematic) group 3 metals in the appendices and focusing only on other (less problematic) metals in the main report. This remains, however, a presentational issue.

Buildings Sensitivity Test

Summary of Issue

A1.35 By judging what is worst-case for the entire model domain based on the results for a single location, the assessment risks under-predicting concentrations at other locations.

Veolia Response

A1.36 Assertion of confidence in the results presented.

AQC Comment

A1.37 For the reasons set out in the AQC's 2020 review, Veolia's approach risks under-predicting impacts at some locations. If a 'without buildings' sensitivity test is required at all (as Veolia clearly consider it is) then it makes little sense to base this on a single receptor rather than all receptors. The results of the sensitivity test will be different in different locations.

[14] Air-Quality-advice-note.pdf (cieem.net)

Confusion of Nitrogen Dioxide and PAH impacts

Summary of Issue

A1.38 The two pollutants were mixed up and mislabelled in the ES.

Veolia Response

A1.39 Clarification of what the tables in ES should have been labelled and provision of revised results for PAH.

AQC Comment

A1.40 The corrected PAH results are significantly different than those in the ES and appear to be appropriate and correct.

Woodland Deposition Calculations

Summary of Issue

A1.41 Stated limitation to available methods was incorrect.

Veolia Response

A1.42 Acceptance of error.

AQC Comment

A1.43 No further information required.

Selection of Receptors

Summary of Issue

A1.44 Receptor 15 selected to represent a minimum rather than worst-case. Receptor E6 not within SSSI.

Veolia Response

A1.45 Acceptance of error.

AQC Comment

A1.46 No further information required.

Description of 5 km grid background modelling

Summary of Issue

A1.47 ES highlights that the spatial resolution of the background modelling will make the assessment worst-case when this factor is just as likely to cause the assessment to under-predict.

Veolia Response

A1.48 Acceptance of error.

AQC Comment

A1.49 No further information required.

Ecology Review: Alton Advanced Energy Recovery Facility– Comment on Veolia Regulation 25 Response

Jonathan Cox

Version 2
2nd February 2021

Jonathan Cox Associates
ecological consultancy

Ecology Review: Alton Advanced Energy Recovery Facility– Comment on Veolia Regulation 25 Response

1.0 Introduction

1.1 A review of the ecological aspects of the Environmental Statement (ES) and supporting appendices for the Veolia Alton Advanced Energy Recovery Facility was undertaken by Jonathan Cox in July 2020. This review identified a number of failings in the Environmental statement that formed part of the representation made by No Wey Incinerator to Hampshire County Council.

1.2 Following the submission of the Environmental Statement, the County Council have issued a Regulation 25 Response that requires the applicants to submit further information and evidence. Issues relating to Ecology have been provided in the form of a report by Argus Ecology (Report 18-058/R25-1 08/12/2020).

1.3 This report firstly considers the response to issues raised in the Regulation 25 letters (dated October and November 2020) issued by the County Council. It then summarises those ecological issues that were not raised in the Regulation 25 letters but which we remain concerned are significant short-falls in the Environmental Statement.

2.0 Habitat Regulations Assessment (HRA)

2.1 In our original response, we raised a number of concerns about the HRA, in particular relating to air quality impacts on European Protected Sites. Our concerns related largely to a lack of a proper 'In combination' assessment of impacts.

2.2 The Regulation 25 Response to these concerns has provided significant additional information relating to the combined effects on air quality of a number of plans and projects. However, despite the provision of this additional information, Air Quality Consultants (AQC) have identified a number of errors in the assessment of air quality impacts on sites of nature conservation importance.

2.3 The first concern is regarding predictions of future reductions in overall NOx emissions and hence nitrogen deposition. The degree to which such autonomous reductions can be counted within an HRA are subject to legal dispute and hence there is concern over the legality of this method. Equally of concern is the inconsistency within the ES and associated HRA regarding the way in which such autonomous improvements in air quality have been considered in the assessment. It is clear from the in-combination assessment provided in the Regulation 25 response that such autonomous reductions in pollution levels and loads have been heavily relied upon yet there are also claims elsewhere that the assessment is not reliant on these forecast trends. This inconsistency undermines the reliability that can be placed on the air quality assessment of impacts on European protected sites.

2.4 A second area of concern is the impact of ammonia concentrations on European protected sites. Unlike NOx concentrations, it is predicted that ammonia concentrations are likely to rise in future. The review of the air quality assessment undertaken by AQC identifies this lack reference to ammonia concentrations to be a significant flaw in the in-combination assessment.

2.5 The evidence provided in the Information for Appropriate Assessment (ES Vol 3 Appendix 6.6) identifies predicted increases in ammonia levels in Shortheath Common SAC of 0.39% of the Critical Level and nitrogen deposition increases of 0.8% of Critical Load. The absence of any assessment of the combined effects of ammonia concentrations on these values is a

significant concern, as when combined with the contribution from the proposed development, these additional ammonia levels could result in ecologically damaging impacts on Bog Woodland and other habitats for which this SAC has been designated.

2.6 The third important area of concern is in relation to the treatment of non-traffic sources of emissions from live projects in the in-combination assessment. The assessment claims these been included in the air quality model but according to AQC, they have not. This part of the in-combination assessment is therefore missing and hence it cannot be relied upon to provide a proper assessment of the combined effects of air quality changes on European protected wildlife sites.

2.7 As a consequence of these significant flaws and errors in the assessment it is concluded that the impact of air pollution on sites of European nature conservation importance from the proposed development cannot be relied upon and certainly do not meet the strict levels of certainty needed to conclude that the development will have no adverse effect on Shortheath Common SAC.

2.8 The County Council response refers to mitigation measures proposed by the applicant, in particular it refers to:

"compensatory works of unspecified nature, complexity or timing, with no certainty of delivery for Shortheath Common".

2.9 It is unclear what compensatory works or measures are being referred to by the County Council. If the HRA concludes there is no adverse effect from changes in air quality on Shortheath Common, there is no requirement for mitigation measures to offset this. Furthermore, 'compensatory works' would only be required in relation to an assessment under Habitats Regulations 64 - Considerations of overriding public interest. This is not applicable in this instance. Whereas measures aimed at improving the management of Shortheath Common are welcome, these are unrelated to mitigation or offsetting measures required by the ES.

3.0 Protected Species

3.1 The Regulation 25 letter refers to a number of issues relating to the assessment of impacts of the development on protected species, in particular hazel dormouse and reptiles. The response of Argus Ecology suggests that these issues have been resolved with the County Ecologist and it is not anticipated that there will be any adverse impact on these protected species as a consequence of the proposed development within the application red line boundary.

3.2 However, there remains concern over the impact of the proposed construction compound on protected species. This area is not included in the application site boundary and yet is proposed as a major element of the construction phase of the development. We raised concerns over the impact of this in our original review of the ES in July 2020. This was not referred to by the County Council in their Regulation 25 letter, however, Argus Ecology in their Regulation 25 Response state:

"The site of the construction compound is an area of exposed aggregate and sealed surface hard standing within a working industrial facility. The Applicant is confident that the construction compound can be accommodated within this area, without any effect on surrounding vegetation."

3.3 As this is not part of the application site, there would be no control over the area of land used for the construction compound and associated car parking. Vague assurances that the applicant is 'confident' that the construction compound will not impact on habitats and

species of nature conservation value cannot be relied upon. It is also possible that areas of 'exposed aggregate' provide important habitat for reptiles whilst lighting, noise and activity adjacent to wildlife habitats could cause disturbance to other protected species. In the absence of any baseline ecological survey, it must be assumed that there is high potential for the construction compound to have significant impacts on protected species. This is considered a major shortfall in the application and accompanying ES that we believe must be addressed through appropriate baseline ecological surveys and conditions on future use of this area as a construction compound.

4.0 Biodiversity Net Gain

4.1 The ES proposed that the development would secure at least a 10% Biodiversity Net Gain (BNG) although the method of achieving this was vague. We stated in our July Report that "it is not possible to rely upon the vague intention to secure a 10% net gain in biodiversity value". The County Council agreed with this conclusion and required the applicant to provide additional information on the proposed method of achieving the 10% BNG. This has been provided within the Argus Ecology Response which envisages the creation of new wildlife habitat within a 2 ha area of agriculturally improved grassland on a former landfill site in Eastleigh Borough. Provided this can be secured through the necessary planning conditions or agreements this would appear to provide sufficient BNG to exceed the 10% target.

5.0 Treatment of impacts on locally designated sites

Concern that air quality impacts will delay return to favourable condition

5.1 Whereas impacts on internationally designated wildlife sites have been addressed through the HRA, impacts of air quality on locally designated wildlife sites have only been assessed through the ES. Volume 3 Appendix 8.5 of the ES lists a total of 12 Sites of Importance for Nature Conservation (SINC) that will be subject to a greater than 1% increase in one or more types of air pollution as a result of the proposed development. Most of these are ancient woodlands, although Froyle Mill Meadow is as an area of wildflower rich grassland. The greatest impact is on Quarry Bottom SINC which is predicted to have an increase in ammonia concentration and nitrogen deposition in excess of 5%. This level of increased pollution could significantly interfere with the return of this woodland to favourable condition. However, the Argus Ecology report dismisses this and states that a reasoned conclusion was drawn in the ES.

5.2 The significance of air quality impacts in the ES is considered in the context of Environmental Protection UK (EPUK, 2010) guidance. However, this guidance was published to assess impacts of air quality on human health and has little relevance to ecological impacts. Despite the recent publication of ICEEM/IAQM advice on assessing ecological impact of air quality[1], there is no grading system available to relate levels of air pollution to magnitudes of impact in the way undertaken in the ES. The conclusion that a >5% increase in air pollution would have a 'medium' impact is therefore unfounded and should be ignored.

5.3 Paragraph 5.3 of ES Appendix 8.5 proports to be a reasoned conclusion as to why this impact would not significantly delay a return to favourable condition of Quarry Bottom SINC. This is based on the false assumption that it is unlikely this site will have important lower plants or support sensitive woodland types. In fact, this is an example of a Lower Greensand woodland. These are ecologically exceptional woodlands many of which are included within the East Hampshire Hangers SAC. They often have exposures of the Upper Greensand rock – known locally as Malm Stone. These rocky outcrops support a rich and important bryophyte flora

[1] Air-Quality-advice-note.pdf (cieem.net).

including the rare *Campylostelium saxicola*. Further information needs to be provided on the flora of this wood before it can be dismissed as being unlikely to be affected by the acknowledged increases in level of air pollution.

5.4 The ES also believes that the assessment of impacts on locally designated wildlife sites is 'commensurate with their level of policy protection'. It appears that the only policy context this has been considered in is the National Planning Policy Framework (NPPF). However, policy CP21 of the adopted East Hampshire District Local Plan requires that Development proposals must maintain, enhance and protect the District's biodiversity and its surrounding environment. In particular the policy states:

"New development will be required to: a) maintain, enhance and protect district wide biodiversity, in particular the nature conservation designations (see Map 2). i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar (International); ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves (National); iii) Sites of Importance for Nature Conservation (SINC) (Hampshire) and Local Nature Reserves (LNR)."

5.5 The policy also requires that:

"wildlife enhancements are incorporated into the design to achieve a net gain in biodiversity by designing in wildlife and by ensuring that any adverse impacts are avoided where possible or, if unavoidable, they are appropriately mitigated".

5.6 The impacts of air quality on locally designated wildlife sites have not been fully addressed in the ES with some potentially significant increases in the pollutant level or load being dismissed with no attempt at mitigation.

5.7 The ES remains deficient in its assessment of the potential magnitude of ecological effects on locally designated wildlife sites, is unduly dismissive of the impacts it has identified and proposes no mitigation to offset these.

6.0 Water environment

6.1 Following concerns raised over impacts of the development on the water environment, a Technical Note has been prepared by Smith Grant LLP that seeks to address the issues raised by the No Wey Incinerator.

6.2 The response to this Technical Note has been prepared by Chris Betts for Hydro Geo. This identifies a number of significant gaps in the baseline assessment of the hydro-geological environment of the proposed development that raise major concerns over the reliability of the assessment. In particular the report by Hydro Geo concludes that:

"Potential impacts on the water environment arising from the accidental release of pollutants, including failure scenarios (contaminated fire water from the bunker) have not been sufficiently explored. This is of particular significance given that in such a scenario the site could potentially impact on water quality in two separate Principal Aquifers and also nearby groundwater dependent receptors including the River Wey"

6.3 Given the high sensitivity of the local water environment with the River Wey being an example of both a priority Chalk River and the Floating *Ranunculus* habitat listed on Annex 1 of the EU Habitats Directive.

6.4 Potential impacts of the development on ground water flows and water quality could have catastrophic impacts on this sensitive ecological habitat. Whereas some of these can be controlled through appropriate mitigation measures, the current design for an underground storage bunker containing contaminated waste that is below the water table and in

hydrological continuity with this river appears to be inherently unsafe and should not be permitted.

7.0 Summary of response

Habitats Regulations Assessment

7.1 Further information has been provided to allow a better in-combination assessment of effects of air pollution on European designated wildlife sites. However, way in which the in-combination assessment has been undertaken is flawed in a number of ways. These are described in detail by the review undertaken by AQC. Three principal concerns have been identified relating to the treatment of predicted autonomous reductions in pollutant concentrations and the lack of assessment of predicted increases in the effect of ammonia concentration on European sites. This leads to a conclusion that the assessment of impacts from air pollution on European sites cannot be relied upon and that it cannot be concluded that there will be no adverse effect on Shortheath Common SAC.

Protected species

7.2 No assessment has been undertaken of the potential impact on protected species of the proposed construction compound. This lies outside of the application site boundary, but is a critical element of the project. Assurances that the construction compound can be established without impacting habitats cannot be relied upon as no ecological baseline survey or assessment of this site has been undertaken. In fact, there could be both direct and indirect impacts on protected species from this element of the development that have not been assessed.

Biodiversity Net Gain

7.3 More detailed and specific information on how and where biodiversity net gain will be achieved have been provided. Assuming this can be secured through planning obligations then it is accepted that these proposals would result in a biodiversity net gain for habitats directly affected within the application site boundary.

Locally designated wildlife sites

7.4 The ES has identified a number of potentially damaging impacts of air pollution on locally designated wildlife sites but dismisses these as not be significant due to the level of policy protection such sites receive. It is our contention that the ES is deficient in its assessment of the potential magnitude of ecological effects on locally designated wildlife sites, is unduly dismissive of the impacts it has identified and proposes no mitigation to offset these.

Water environment

7.5 Further information provided on the water environment has been reviewed by Hydro Geo. Their conclusions remain that there are substantial deficiencies in the level of baseline survey information and hence the reliability that can be placed on the assessment of the effects of the development. In particular, there remain very significant concerns over accidental releases of pollutants. This could have catastrophic impacts on the nearby River Wey, a chalk river supporting nationally and internationally important wildlife habitats.

Jonathan Cox

2nd February 2021

Alton Advanced Energy Recovery Facility

Response to additional information

Veolia Depot, Alton, GU34 4JD

On Behalf of

No Wey Incinerator

Quality Management

Prepared by:	Chris Betts MSc, BSc, CGeol, FGS	
Reviewed by:	Mike Willis MSc, BSc, FGS	
Authorised by:	Chris Betts MSc, BSc, CGeol, FGS	
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Hydrogeo Ltd,
Unit 4 Waddington House,
Llanover Business Centre, Llanover,
Abergavenny NP7 9HA
T: 01873 856 813
E: info@hydrogeo.co.uk
W: www.hydrogeo.co.uk

Contents

1 Introduction

1.1 Background

Hydrogeo Limited (Hydrogeo) was commissioned in July 2020 by No Wey Incinerator (the client) to undertake an independent review of the potential surface and groundwater impacts relating to the construction of the proposed Alton Advanced Energy Recovery Facility (ERF). This water environment review is an overview of potential impacts, highlighting the key issues relating to the groundwater and surface water environment.

The proposed ERF is capable of processing up to 330,000 tonnes of waste per annum, with a gross electrical generating capacity of up to 33MWe. The developments main body is 40m above current ground level and two 80m stacks will be present. The site is located 3.4km north-east of Alton town centre.

The July 2020 report undertook a review of the information provided in Chapter 9 of the Environmental Statement (ES), and the supporting appendices. Hydrogeo reviewed the information, assumptions and conclusions presented within these chapters regarding Environmental Designations, and potential impacts of the proposal relating to Hydrogeology and Ground Conditions.

Volume 5 of the Environmental Statement containing additional information was released in December 2020; this document was submitted as a combined response to three Regulation 25 letters requesting further information in relation to the Environmental Statement (ES) pursuant to Regulation 25 of the EIA Regulations.

The October Regulation 25 letter included comments from Hampshire Fire and Rescue Service regarding the potential for “a serious unprecedented fire” occurring and that “the water environment may become polluted with ‘fire water run-off’”.

The November Regulation 25 letter expressed concerns regarding the design storm size and climate change allowance used when addressing pluvial flood risk, including the drainage strategy.

As part of the requests for further information within the three Regulation 25 letters, no further information was requested by the council in relation to ground conditions and hydrogeology presented within Chapter 9.0 of the ES.

The submission of further information to the council included Appendix 7.1 to the ES Ground Conditions and Hydrology Chapter by Smith Grant LLP (SGP) as a response to the previously submitted review by Hydrogeo. Appendix 7.1 was provided in addition to, and separately to, the Regulation 25 response.

1.2 Objectives

The objectives of this study are to review pre-existing information, data and reports relating to the geology, hydrology and hydrogeology in the area surrounding the site with particular attention to clarifications and additional information included within the December 2020 Appendix 7.1 to the ES to identify any potential environmental or hydrogeological issues associated with the potential future development of the site as an Energy Recovery Facility.

The review concludes with our professional opinion on the suitability of the site for an Advanced Energy Recovery Facility, or not, based on the identified potential impacts on groundwater resources, residents, businesses and habitats that are dependent on groundwater near the site, and in particular to the additional information and clarifications within the December 2020 documents.

1.3 Data Sources

The following data sources were submitted as part of the planning application and have reviewed during the production of this report:

- ES Chapter 4: Scheme Description and Construction Methods;
- ES Chapter 4 Appendix 4.1: Drainage Strategy;
- ES Chapter 9: Ground Conditions and Hydrogeology;
- ES Chapter 9 Appendix 9.1: Stage 2 Geoenvironmental Assessment;
- ES Volume 5: Additional Environmental Information, December 2020;
- ES Volume 5 Appendix 7.1: Response to Water Environment and Ground Conditions Peer Review by Hydrogeo;
- ES Volume 5 Appendix 8.2: Response to Climate Change Representations

The following data sources were reviewed independently by Hydrogeo in formulating this report:

- 1:50,000 Geological Map: Alresford, Solid and Drift Geology (BGS 1999);
- 1:50,000 Geological Map: Basingstoke, Solid and Drift Geology (BGS 1981);

- Geology of the Alresford district: a brief explanation of the geological map 300 [Alresford] (BGS 2002);
- 1:100,000 Hydrogeological Map, Hampshire and the Isle of Wight (BGS 1979);
- Engineering geology of British rocks and soils: Gault clay, technical report WN/94/31 (BGS 1995);
- Baseline groundwater chemistry: the Chalk aquifer of Hampshire, technical report OR/09/052 (BGS, 2009);
- The physical properties of major aquifers in England and Wales, technical report WD/97/34 (BGS and EA, 1997).
- The physical properties of minor aquifers in England and Wales, technical report WD/00/4 (BGS and EA, 2000).

1.4 Report Author

The review has been undertaken by Chris Betts (BSc, MSc, CGeol, FGS) a Chartered Geologist with twenty five years' experience as a Professional Hydrogeologist in the UK. Chris's experience as a hydrogeologist is wide-ranging working on hydrogeological investigations and risk assessments for landfill / waste management sites, contaminated land, water resources and mineral extraction projects.

Chris is a Director of Hydrogeo Limited, a specialist scientific environmental consultancy established in 2006 which provides expertise in the water environment, geology and land quality.

2 Appendix 7.1 – Review and Response

The Adams Hendry Consulting Ltd. Report presented the conclusions reached by Hydrogeo (July 2020) in Sections 4.34 to 4.42.

The subsequent response by Smith Grant LLP (SGP. November 2020) was undertaken by dealing with each section in turn as presented within the Adams Hendry Consulting Ltd. Report. For clarity and consistency, this report will make use of the Section numbers as provided by previous documents.

2.1 Section 4.34 – Geological Conceptual Model

The geological conceptual model laid out in the ES chapter and brought forwards to the assessment of impacts is incorrect. It has not been recognised that the Chalk beneath the application site is likely to be thin or absent based upon geological mapping. This invalidates the aquifer property assumptions made in the site conceptual model and source-pathway-receptor linkages presented in the ES.

SGP acknowledge the claim that bedrock beneath the site is likely to be a thin layer of Chalk if present, beneath which the sequence of Upper Greensand Formation can be found.

Hydrogeo accepts that the identification of siltstone could equally indicate the presence of Marly Chalk given the composition (Carbonate-Mudstone) of the West Melbury Marly Chalk Member. SGP further state that BGS mapping of the area describes a characteristically green glauconitic sandstone at the base of the Chalk unit which does not correspond to the borehole descriptions.

It is stated by SGP that without deeper and more detailed borehole information, it is uncertain at this stage whether the Chalk would extend to the base of the proposed bunker construction, whether the bunker would span both the Chalk and Upper Greensand Formation, or would be only within the Greensands.

Based on this accepted uncertainty, it remains the opinion of Hydrogeo that additional site specific information is required in order to characterise the geology of the Site. It is acknowledged that investigation to date does not clarify the bedrock present beneath the site and that deeper and more detailed borehole information is required. The absence of the characteristically green basal glauconitic sandstone may suggest the development could be situated within the Chalk (stratigraphically above the green basal sandstone),

or equally that the development could be situated upon the Upper Greensand (stratigraphically below the green basal sandstone). In addition it is noted that it is uncertain at this stage into which stratigraphy the proposed waste bunker is to be constructed.

The SGP response refers to Malmstone, found locally in the Weald area, to be calcareous very fine sand and silt, and the distinction between this uppermost unit of Greensand and the overlying Marly Chalk may not be obvious. It is further stated that the relative differences in matrix permeability of the Chalk and Upper Greensand units are minimal compared to the difference between fractured and unfractured zones.

The differences in the characterisation of the two principal aquifers is noted with the Chalk aquifer, on which the SGP assessment is based, classed as a highly productive aquifer compared to the Upper Greensands aquifer which is characterised as a moderately productive aquifer.

The Upper Greensand is best developed, as an aquifer, at the western end of the Weald (including Alton) and road cuttings reveal a well fissured, fine grained glauconitic sandstone. The Chalk is a highly permeable, low storage aquifer and is not directly comparable to the highly permeable, high storage Upper Greensand aquifer present in the Alton area.

It is correctly noted that that the Chalk and Upper Greensands are generally considered to be in local hydraulic continuity with one another. It is then further noted that a local study of the Upper Greensands aquifer around Alton found that in no case did the adjacent aquifer respond to pumping, indicating that locally the Upper Greensand was effectively separated from the main Chalk aquifer by a clay-rich basal lower Chalk, as noted by SGP. The SGP response suggests that due to this, the permeability of the Chalk below the site may be lower than other parts of the Lower Chalk Aquifer and more aligned to conditions of the fine-grained Upper Greensand.

The BGS Minor Aquifer Properties Manual, as well as noting the above study and that the separating layer is 20m in thickness, further describes that where licensed abstractions within the confined Upper Greensand are also open to the Lower Chalk that significant quantities can be obtained from the confined Upper Greensand.

If we are to assume (as in the SGP response) that the site is positioned upon the chalk, then the studies described would support the conclusion that the two groundwater aquifers are in fact separate and individually significant in regards to hydraulic

properties. It is possible, especially given the lack of certainty regarding into which rock unit the proposed bunkers will terminate, that construction could form a significant pathway between the Chalk aquifer and the, currently isolated/protected, underlying confined Upper Greensand aquifer. One previous borehole, was drilled through to the Upper Greensand by the oil industry. However, this had such a large artesian flow, that the landowners had it licensed instead as a supply.

2.2 Section 4.35 – Private Water Supplies

Private water supplies have not been considered as a receptor in the assessment, when it is known that at least three are present within 1km of the site.

The SGP response states that a search for water supplies was not included within the Stage 1 assessment as it was not intended to constitute a detailed hydrogeological assessment. It is also stated that details on abstractions are provided within the Envirocheck report and details 4 water abstractions within 1 km of the site.

For clarity, it should be noted that of the 4 private water supplies identified by Hydrogeo, 3 were not included within the Envirocheck report, including 3 supplies within 1km of the site. It is best practice to identify all nearby water dependent users when undertaking even a basic level risk assessment to ensure all potential receptors are clearly identified in a conceptual model. Obtaining data on Private Water Supplies is initially a straightforward email enquiry to the Local Authority.

Given the high vulnerability and sensitivity of the groundwater resources as described within the Stage 1 report, and the importance of the Chalk and Upper Greensand as aquifers in the region, Hydrogeo consider that a detailed hydrogeological risk assessment is required to ensure the protection of the water environment. This assessment should be quantified in order to be considered sufficient for a moderate/high sensitivity groundwater environment.

2.3 Section 4.36 – Parallel Tracking of Applications

Considering the proximity of the application site to the River Wey, and its position on the outcrop of a Principal Aquifer, parallel tracking of both the planning application and the environmental permitting for the proposed ERF should be considered. This would be in line with Hampshire County Council's stance on the approach to ERF planning applications, and would allow for greater scrutiny of the site's permitting controls. This would be especially prudent considering the weight given to permitting as mitigation of impacts in the ES chapter.

The SGP response states that that there is no specific requirement for planning permission and application permit to be produced in tandem. Hydrogeo accepts that it is not the policy for these applications to be done in tandem for every ERF application, only that the case study within the referred document is similar to the current situation and perhaps a similar approach should be adopted due to the apparent precedent and moderate/high sensitivity of the site.

Additionally, due to the sensitive nature of the local groundwater environment, the previously quoted Environment Agency document *Guidance for developments requiring planning permission and environmental permits* should be followed to allow the EA to better "*work with the developer and local planning authority to resolve complex permitting issues at the same time as decision making for the planning process*".

It is also the opinion of Hydrogeo that adopting such a process would provide the local community confidence in the decision when finalised, with communities having assurance that the local authority was fully aware of all impacts (environmental and otherwise) that could be posed by the development and the specific measures proposed to mitigate these issues.

2.4 Section 4.37 – Bunker Construction

It is proposed to construct the waste storage bunker directly into a Principal Aquifer, and the base of the bunker will be beneath the predicted groundwater level. More detail is required on the proposed construction methodology employed to construct the bunker, considering the potential for pollutant release during the bunker construction, and the potential for instability in the saturated Upper Greensands aquifer. Additionally, no mention is made of a piling risk assessment in the ES or appendices.

The SGP response sets out that further investigation and risk assessment would be undertaken by the appointed designers and contractors prior to construction of the proposal. The findings of the site investigation would inform any necessary mitigation measures to be employed.

Concerns regarding the lack of a piling risk assessment are addressed by stating that it will be done later, again, it is the opinion of Hydrogeo that given the potential for the use of piles to open up contamination pathways, completion of such an assessment during the planning and public consultation process would provide the local community confidence in the decision when finalised, with communities having assurance that the

local authority was fully aware of all impacts (environmental and otherwise) that could be posed by the development and the specific measures proposed to mitigate these issues.

Concerns raised regarding the bunker being positioned beneath the predicted groundwater level are addressed in Section 4.41.

2.5 Section 4.38 – Construction Dewatering

Dewatering will be required to construct the bunker. More detail is required on the dewatering methodology, and detailed assessment of its impacts on the water environment are required due the site's close proximity to the River Wey, and the potential for loss of baseflow during dewatering.

Guidance for dewatering methodologies have been produced by CIRIA and outline two predominant methods in groundwater control; SGP state that the details of which are dependent on aquifer properties. It is stated that the proposed methodology for dewatering would be achievable considering the permeability values generally found for shallow Upper Greensand.

We accept the points raised by SGP in their response in this section; we do, however, continue to believe that dewatering as a method of groundwater control should be considered within a wider detailed hydrogeological report including quantification of the volume to be pumped, the impact on groundwater levels and the zone of influence of such dewatering, and mitigation measures to be employed. This is particularly prudent given that it is possible that dewatering of the Lower Greensand may be undertaken (as previously discussed, the strata in which the bunker is to be constructed is unknown), impacting a confined aquifer directly beneath the site, which could potentially directly impact the River Wey (130m to the south).

2.6 Section 4.39 – Aquifer Cross-Section

Due to deficiencies in the ES conceptual model for the site, the amount of aquifer cross section which will be blocked/removed is much greater than originally supposed. More detailed assessment of the potential negative impacts to the base flow feeding the River Wey are required, considering that approximately 10% of the saturated aquifer cross section will be removed.

We appreciate the re-assessment of the cross-sectional area as provided by the SGP response and accept the majority of the points made. We would dispute the aquifer

thickness still given the unknown strata and potential for the Chalk and Upper Greensand to be considered as separate aquifers in the local area.

That being said, even with these disputed unknowns, it is accepted by Hydrogeo that when considering the full length of the cross-sectional area underlying the site that the total aquifer cross-section occupied by the bunker would be negligible.

2.7 Section 4.40 – Drainage Strategy

The drainage calculations presented in the drainage strategy for the site are based upon only one soakaway test. This is insufficient when taking into account the size and position of the proposed infiltration systems. The foul drainage field sizing should also be based upon location specific percolation testing, rather than the soakaway test pit. Additionally, no seasonal groundwater monitoring has been presented to support the infiltration system designs.

It should be noted that in addition to the shortfalls presented within this section (below), Atkins' review of the climate change section of the Environmental Statement found that size of the design storm used for the development of the drainage plan is stated, but is not justified. If this statement is considered credible, then it would appear that both key components in determining storm drainage, namely the volume of water to be expected in a design storm and the design infiltration rate of water into the ground (as presented further within this section), are not justified, calling into question the validity of the drainage strategy as it stands.

Whilst it is understood that at the time of the infiltration tests being undertaken it was not known exactly where the proposed infiltration structures would be positioned, it is not the professional opinion of Hydrogeo that the single successful test result constitutes that further testing is not necessary.

The single value for infiltration recorded is appropriate for use in aiding the design and sizing of the proposed 'infiltration basin'; it is not considered that it is appropriate to use this value for either the 'infiltration tank offline storage attenuation' or 'infiltration tank cellular attenuation' as described in the 'Proposed Drainage Layout' drawing included within the drainage strategy.

The statement that "*the generally consistent ground conditions*" meant "*that further testing was not necessary to inform the design*" is incorrect. Of the two attempts at conducting infiltration tests in the east of the site, only one was successful, with the other (TP1) being found to contain made ground to its base at 3mbgl. It is therefore proven

that ground conditions are in no way consistent across the site given these trial pit results and the knowledge that a large area of the site has previously been infilled.

Additionally, the easternmost soakaway ('Infiltration tank offline cellular attenuation') is located in the immediate vicinity of the failed infiltration test (TP1) and is therefore likely to be positioned as to infiltrate directly into the made ground encountered. It is not usually advised to allow for infiltration directly into made ground, testing including leachability testing should be undertaken to account for the potential for the soakaway to amplify any contamination. Further to this, a separate value for infiltration into this material should be obtained as it is likely that the material exhibits completely different infiltration rates compared with the natural ground tested in TP2.

The westernmost soakaway, labelled 'infiltration tank cellular attenuation', has been designed using no appropriate infiltration test result. The only successful infiltration test is located over 100m to the east of the proposed soakaway location and given the proven variability in ground conditions across the site, further testing should be undertaken in the vicinity of the proposed soakaway to determine the suitability of ground conditions and appropriate sizing.

The argument that the site has been developed for 75+ years and that existing Veolia Depot has been using a soakaway of the same magnitude since 2002-2005 is not a justification for not following current best practice. Guidance and design for SuDS and soakaways has developed greatly over the last decade in response to poor design resulting in increased flooding and water quality impacts.

2.8 Section 4.41 – Potential for Accidental Pollutant Release

As the sub-water table storage of waste in a Principal Aquifer is proposed, a detailed groundwater risk assessment would be appropriate in this sensitive setting. The potential impacts of an accidental pollutant release have not been considered. A detailed risk assessment would include baseline data, monitoring installations, and details on the management of leachate. Such a risk assessment would also consider the impact of failure scenarios, including the requisite monitoring required to detect a failure, defined trigger levels and compliance limits, and procedures in the event of a containment failure.

The SGP response claims that enough information is available at this stage to provide an informed view of the likely significant environmental effects of the development on groundwater and surface water receptors and that a detailed groundwater risk

assessment would be undertaken at a later stage to inform the design of the facility, including the approach adopted to piling and bunker construction.

It is understood that leachate rarely occurs in the bunker, given how it is usually absorbed by the dry waste materials, and if present, would drain to the sump and removed.

It is the opinion of Hydrogeo that given the sensitivity of water environment, and the fact the bunker is effectively storing waste in a sub water table storage bunder in a principal aquifer (no matter how securely), that a detailed/quantitative groundwater risk assessment should be undertaken at this stage to enable an informed decision by the local authority. It is our opinion that adopting such a process would, given the large community response, provide the local community confidence in the decision when finalised, with communities having assurance that the local authority was fully aware of all potential environmental impacts that could be posed by the development and the specific measures proposed to mitigate these issues.

An example of such an accidental release of pollutant is included in Section 4.42.

2.9 Section 4.42 – Impacts of Accidental Fire

The environmental impacts of accidental fire on the water environment have not been considered in the ES, or any of the accompanying appendices. The ES should consider firefighting runoff as a potential pollutant source, and should detail the procedures and containment measures in place to prevent the pollution of surface waters and groundwater via firewater runoff.

It is noted by Hampshire Fire and Rescue Service within the October Regulation 25 letter, stating that "*should a serious unsuppressed fire occur on the premises; the water environment may become polluted with 'fire water run-off premises occupiers have a duty to prevent and mitigate damage to the water environment from 'fire water run off' and other spillages".*

It is acknowledged that the site fire procedures will incorporate regular drills and include measures to retain any firewater onsite by preventing it from leaving via foul sewage and drainage systems. It is also acknowledged that fire is most likely to take hold in the waste bunker and that measures exist to minimise this risk.

It is noted within Section 4.41. of the SGP response that, "*in reality, the likely groundwater gradient will be from aquifer into the bunker".* This may be the case under

normal conditions, which would limit the potential for pollution migration from the bunker to the adjacent (external) groundwater. The concern raised by Hydrogeo is that in a situation where a fire in the bunker is extinguished, the bunker is likely to be saturated with fire water / leachate. This could result in a potential for leakage out of a damaged bunker following a fire under a reversal of hydraulic gradient. Potential impacts due to this failure scenario needs to be addressed by a detailed assessment and should not be simplistically discounted, as the bunker will be sub-water table in a Principal aquifer.

There therefore exists the possibility that in such a scenario of a large, unprecedented fire, that contamination of one or both Principal Aquifers may occur, with a strong likelihood of further impacts upon sensitive surface water features in contact with groundwater such as the River Wey.

3 Conclusions

The SGP technical note provides no additional site-specific data and ultimately concludes that the conceptual model impact assessment in the Ground Conditions and Hydrogeology Chapter essentially remains unchanged.

Hydrogeo would reiterate that additional site-specific information is still required for the scale of the proposed development. Additional data should be presented in order to remove uncertainty and characterise the geological and hydrogeological environment. Further reporting and assessments should report upon any potential Source-Pathway-Receptor linkages that may arise following collation of additional site specific information.

Additionally, given the scale of the development and sensitivity of the water environment, it would be prudent for the detailed assessments required for the continuation of the proposed development including, potentially, those needed as part of the environmental permit to be undertaken / released and included at the public consultation stage. Delaying detailed risk assessments to the permit stage is not best practice considering the moderate to high vulnerability and sensitivity of the local environment.

Summary:

- There is a continued lack of basic site specific geological and hydrogeological data which is crucial to the development of a robust conceptual site model. The current impact assessment is therefore based on insufficient evidence and there remains uncertainty in which geological unit or groundwater bearing strata the bunker construction will be founded.
- There remains an absence of detailed risk assessments at this stage, including detailed groundwater impact, dewatering and piling risk assessments. These assessments may ultimately influence the feasibility of the proposal.
- There is a lack of parallel tracking of both planning and permitting applications. Although not required, both the Local Authority and Environment Agency have released documentation stating the benefits of doing so at an early stage in aiding the decision-making process in environmentally complex and sensitive sites.
- The current drainage strategy does not follow current SuDS guidelines as there is insufficient site-specific infiltration testing to inform surface water drainage calculations and SuDS design across the site. The assumption that the ground

conditions identified at one location are consistent across the site is incorrect despite testing having been undertaken proving otherwise. Additionally, there is concern regarding the design storm values used in this assessment.

- Potential impacts on the water environment arising from the accidental release of pollutants, including failure scenarios (contaminated fire water from the bunker) have not been sufficiently explored. This is of particular significance given that in such a scenario the site could potentially impact on water quality in two separate Principal Aquifers and also nearby groundwater dependent receptors including the River Wey.

Air Quality CONSULTANTS

Climate Change Review: Alton Advanced Energy Recovery Facility – Comment on Veolia Regulation 25 Response

January 2021

Experts in air quality management & assessment

Document Control

Client	No Wey Incinerator	**Principal Contact**	Katie Snowball

Job Number	J4173

Report Prepared By:	Laurence Caird and Dr Graham Earl

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J4173B/2/F1	29 January 2021	Final	Laurence Caird (Associate Director)

Air Quality Consultants Ltd
23 Coldharbour Road, Bristol BS6 7JT Tel: 0117 974 1086
119 Marylebone Road, London NW1 5PU Tel: 020 3873 4780
aqc@aqconsultants.co.uk

Registered Office: 23 Coldharbour Road, Bristol BS6 7JT
Companies House Registration No: 2814570

1 Introduction

1.1 In July 2020 Air Quality Consultants Ltd (AQC) reviewed the carbon assessment submitted in support the Veolia Alton Advanced Energy Recovery Facility (the 'Scheme'). The review identified a large number of failings with the submission and provided 14 recommendations to be taken into account in the submission on carbon and climate change. These recommendations focussed upon the carbon assessment that was submitted. AQCs review (AQC Report J4173B/1/F1) fed into the carbon and climate change representation by the No Wey Incinerator group.

1.2 Separate to AQCs review, Hampshire County Council (HCC) commissioned Atkins to review the carbon assessment submitted with the application, which supported many of AQC's recommendations on the carbon assessment, but also raised additional failings relating to the absence of a carbon or climate change assessment within the Environmental Statement (ES).

1.3 HCC subsequently issued a Regulation 25 request for additional information, which requested information identified in the AQC and Atkins Reviews.

1.4 Veolia responded to these points in December 2020 by submitting an updated carbon assessment, a climate change Chapter with the ES, and a response document addressing each of AQC's recommendations and Atkin's comments. This current note comments on the responses provided by Veolia in relation to the Regulation 25 request.

Regulation 25 Request

1.5 A formal Regulation 25 request was issued by HCC on 12th November 2020 (ref: PLAN/SD/EH141). The Regulation 25 letter contained the following requests in terms of the carbon and climate change:

1. No assessment (and as result no methodology) of the significance of any impact is presented nor is any consideration of UK or local policy of climate change (i.e. UK carbon budgets, net zero targets or affected and proximate Local Authorities' own climate emergency declarations, including Waverley BC's most ambitious target of 2030) is contained within the applicant's submitted Carbon Assessment in Appendix 4.3 of the ES.

2. Further to the above, the impact of the assessment rests fully on the submitted Carbon Assessment's baseline scenario - the use of the landfill baseline. This is a worst case future scenario in terms of the waste hierarchy with no consideration of other waste uses further up the hierarchy, and on a regional and national approach, solely assuming landfill is the only alternative for the lifetime of the facility. It is crucial that it is fully justified and representative of the current and future scenario for the lifetime of the proposed development (i.e. operational life).

3. Further to the above, the Carbon Assessment's baseline scenario does not take into consideration carbon reductions during the proposed operational lifetime (30 years) of the proposed development. The IEMA best practice EIA guidance notes 'that future baseline should be set to include future changes such as UK grid decarbonisation projection and/or the adoption of renewables'.

4. Whilst some mitigation - to reduce greenhouse gas (GHG) emissions - has been included for the construction phase none has been proposed for the operational phase (30 years) of the proposed development, which will be the significant producer. Further details are required to identify how emission will be reduced in association with transport, combustion and other operational processes.

5. The concerns raised by the NWI relative to the applicants' Carbon Assessment are generally agreed with by the conclusions in the Atkins' report (see pages 34 - 38). The concerns made should be factored into the applicant's response to the above bullet points in this section of the Regulation 25 letter.

1.6 The following sections of this note evaluate Veolia's responses to each of the Regulation 25 requests on carbon and climate change and consider the information submitted in terms of assessment of alternatives.

2 Discussion of Responses

Request 1: Assessment of Significance

2.1 Veolia's submission in December 2020 now includes a climate change chapter within the ES which includes an assessment of significance of the impacts of carbon emissions on climate change as required by the Regulation 25 request.

2.2 The assessment provided by Veolia determines the significance of effects by comparing the project to a landfill baseline scenario. This allows the proposed AAERF to be shown to have a slight benefit (but only under parameters that would not be considered to be a likely worse case – see Request 3 below) in terms of carbon emissions compared to the chosen baseline. Under these assumptions the effects are concluded to have a net positive effect in terms of carbon and climate change.

2.3 This assessment is considered to be misleading as it does not recognise that

- the Proposed Development will be a substantial source of carbon emissions in its own right and will therefore contribute to climate change,
- as is discussed in paragraphs 2.9 and 2.10, had the climate change assessment considered the current use of the site as the baseline, or indeed an alternative location for the same facility that the assessment of significance may be materially different, and

- if realistic worst-case assumptions had been adopted any carbon benefit compared to a landfill baseline would likely be removed.

Request 2: Justification for Landfill Baseline

2.4 Veolia's submission in December 2020 includes some discussion to explain the rationale behind the use of an alternative baseline of waste disposal in landfill as required by the Regulation 25 request.

2.5 Although this is a relevant comparison in terms of disposal of residual waste, it is not the only baseline scenario which could be considered and there are other alternatives which require careful consideration.

2.6 Veolia argue that landfill is the appropriate baseline on the presumption that residual waste cannot be avoided, and therefore must be disposed of by one method or another. This assertion is not challenged, however, in terms of the appropriateness of both the site location and the chosen technology for disposal. Therefore, the consideration and evidencing of the baseline remains a failing of the application since alternative sites and alternative thermal treatment technologies are not considered.

2.7 This is important since the choice of baseline is a critical factor that can directly affect the outcome of the assessment.

2.8 In particular, Veolia do not present a viable plan for use of the residual heat that the facility will generate. The updated carbon assessment does include a hypothetical sensitivity test for heat export, which demonstrates a clear benefit in GHG emissions from exporting the heat, but acknowledges that there are no heat export agreements in place for this facility, nor is it clear where residual heat from the facility could be supplied to.

2.9 The location of the site is therefore important since if the Proposed Development were to be located at a site with a viable end user for the residual heat, then there would be a GHG benefit from the use of the heat. Therefore, if such an alternative site were to be considered as the alternative baseline scenario, it would demonstrate a net disbenefit of the AAERF on its proposed site and the significance of effects would likely be materially different.

2.10 In addition, it is a requirement of the EIA Regulations 2017 (under paragraph 3 of Schedule 4 that an ES should contain *"a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development".* This relates to the existing site use, which it would normally be considered as the baseline for a technical assessment within an EIA in accordance with the Regulations. Veolia's assessment should consider the current use of the site as the baseline for the climate change assessment and assess the effects in relation to this. In this case the climate change assessment and significance of effects would likely be materially different, as a net increase in carbon emissions would be demonstrated.

2.11 Veolia's climate change ES chapter acknowledges (at Paragraph 8.2.10) the relevant parts of the NPPF that apply to GHGs and climate change. In particular, Paragraph 150 of the NPPF states that (highlighted for emphasis):

"New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design*.*

2.12 Similarly, Policy 2: Climate change – mitigation and adaptation, of the Hampshire Minerals and Waste Plan (HMWP) states (highlighted for emphasis):

"Minerals and waste development should minimise their impact on the causes of climate change. Where applicable, minerals and waste development should reduce vulnerability and provide resilience to impacts of climate change by:

2.13 a) being located and designed to help reduce greenhouse gas emissions and the more sustainable use of resources."

2.14 Veolia's assessment does not address the role of location in reducing GHG emissions from the facility, but simply asserts that the facility will be beneficial compared to a landfill alternative. It may therefore conflict with Paragraph 150 of the NPPF and Policy 2 of the HMWP.

Request 3: Calculate Lifetime Carbon Emissions

2.15 Veolia's submission in December 2020 includes an assessment of lifetime carbon emissions as required by the Regulation 25 request, however they have been selective in the parameters adopted to represent the lifetime emissions scenario.

2.16 Specifically, following requests from AQC and Atkins, a number of sensitivity tests have been carried out to account for uncertainty associated with assumptions in the assessment, however the majority of these sensitivity tests have only been presented as annual emissions in the opening year and are not considered through the lifetime of the development.

2.17 This is misleading since although the sensitivity tests show lower carbon emissions compared to landfill in the opening year, this will not necessarily be true over the lifetime of the development.

Request 4: Provide Mitigation

2.18 Veolia's submission in December 2020 includes a number of mitigation measures to reduce carbon emissions during the operational lifetime of the Proposed Development.

2.19 The key mitigation measures in terms of carbon and climate change that are mentioned, but which are not committed to are heat recovery and Carbon Capture and Storage (CCS).

2.20 In terms of heat recovery, the assessment states that the development can provide heat to the local community as soon as a heat offtake agreement is in place, but acknowledges that no such agreement is in place. There does not appear to be any evidence on the viability of a heat offtake agreement in this location. In responses, Fitchner make reference to various future developments in the area which may benefit from such an agreement, but there is not a clear pathway to ensure all efforts will be made to utilise excess heat from the facility, nor any certainty of success.

2.21 In terms of Carbon Capture and Storage (CCS) it is acknowledged that the technology is not commercially viable at the present time and Veolia's commitment to keep a retrofit of CCS under review in the future is welcomed. However, paragraph 3.1.16 of the ES update states that, *"The application site totals 2.9Ha. While that is adequate for the Proposed Development the footprint is tight with only approximately 0.2Ha that consists of undeveloped area not required for buildings, circulation space or other operational purposes."*. From this statement it is unclear whether the viability of CCS at this site will be permanently constrained by a lack of space provision. The likely viability of CCS should be carefully considered and justified, taking account of available site space.

2.22 Finally, no mitigation is proposed with respect to carbon emissions from the construction of the facility which is a failing of the assessment.

Request 5: Response to Comments on Behalf of NWI

2.23 A summary of the adequacy of Veolia's responses to AQC's recommendations is presented below in Table 1.

Table 1: Summary of Adequacy of Veolia Responses to AQC Recommendations

AQC Recommendation		Veolia Response Adequate?
1	Report to consider alterative baseline options.	NO
2	Analysis to consider construction CO_2e emissions from AAERF.	NO
3	Landfill CO_2e assessment to consider impact of sequestering biogenic carbon.	YES
4	The assessment should present operational CO_2e emission over the full lifecycle of the AAERF starting in the opening year (2023) and then each subsequent year over its proposed 25-year life until 2048. The cumulative CO_2e emissions	NO

	AQC Recommendation	Veolia Response Adequate?
	over this period should be compared to the landfill baseline to assess the carbon implications of the AAERF.	
5	A comprehensive sensitivity assessment should be provided reflecting uncertainties in the opening year and lifetime of the project.	NO
6	Provide further detail on the assumptions and underlying basis for waste throughput including total carbon and biocarbon content.	YES
7	Calculate CO_2e emissions using government published long run marginal generation grid factors for 2023 and each year to 2048 (end of life).	YES
8	Calculate the cumulative emissions over the lifetime of the facility.	YES
9	Provide further evidence to substantiate assumptions on metals recovery including the amount of metal recovered, and the balance of steel and aluminium recovered.	YES
10	Provide further evidence and justification for the assumptions related to waste transport distances.	YES
11	The assessment should represent the central likely scenario based on recommended LFG recovery figure of 75%.	NO
12	Calculate cumulative GHG emissions from opening year to end of life year to enable comparison to AAERF emissions on a like for like basis.	NO
13	Sensitivity assessment should examine effects of higher LFG recovery rate with time until 2048.	NO
14	Sensitivity assessment should examine effects of lower landfill gas methane content, and/or a landfill gas methane content better evidenced as representative of the waste streams likely to be received by the AAERF.	YES

2.24 The review of Veolia's impact on GHG emissions continues to highlight some inadequacies in the assessment and information provided, as noted in Table 1. Further discussion on these points is provided below.

Alternative Baseline

2.25 This relates to AQC Recommendation 1.

2.26 The inadequacies of the consideration to alternative baseline scenarios has already been discussed in paragraphs 2.4 to 2.17

Scope of Emissions Sources

2.27 This relates to AQC Recommendation 2.

2.28 The assessment continues to exclude emissions from the construction phase. This is not consistent with IEMA guidance and the analysis presented indicates that GHG emissions from construction would not necessary be considered insignificant. Taking the sensitivity case examining long term

marginal grid offset the GHG from construction (using their own estimate) would be 60% of the net benefit.

2.29 The result of excluding this source is that it has also not been explicitly considered in mitigation. No mitigation is therefore offered for what is likely to be a material GHG impact.

2.30 Including construction GHG impact in the assessment is therefore required and would likely affect the overall net effect of the assessment.

Lifetime Analysis and Sensitivity Tests

2.31 This relates to AQC Recommendations 4,5, 11,12 and 13.

2.32 The updated carbon assessment and climate change chapter within the ES provide a lifetime carbon emissions analysis as well as a range of other sensitivity tests. This partly addresses AQC recommendations, and notably the lifetime analysis has only been undertaken for the core scenario and all other sensitivity tests such as landfill gas capture rates have only been tested in the opening year, which is not representative of the lifetime effect of the full range of sensitivity tests.

2.33 Taking the lifecycle emission from 2023 to 2048 should form the core assessment and the basis for examining uncertainties through sensitivities such as landfill gas capture rates for landfill.

2.34 In particular, the assumed landfill gas capture rate is a very important variable in determining the benefit of the development vs landfill over the lifetime of the project. It remains likely that adopting a 75% landfill gas capture rate as a sensitivity that considers 25 years of emissions (e.g. the lifetime of the Proposed Development), falling grid offset emission factors consistent with government guidance, and allowing for construction emissions would generate a net disbenefit for the Proposed Development.

Policy Compliance

2.35 The Proposed Development is presented as being consistent with relevant waste and energy policies however this is largely asserted within the assessment. Further evidence is required to substantiate that alternative waste solutions and locations are not available that better meet policy objectives in particular Paragraph 150 of the NPPF and Policy 2 of the HMWP.

3 Summary

3.1 Following a Regulation 25 request issued by HCC in November 2020, Veolia have submitted additional information in relation to carbon and climate change which attempts to address the requirements of the Regulation 25 request and comments from AQC and Atkins on the originally submitted material.

3.2 In many areas the responses are adequate, but the following key areas of concern remain:

- the calculations in the carbon assessment (upon which the climate change ES Chapter relies) are selective in the calculation of lifetime emissions. The lifetime emissions are only presented for the core assessment scenarios and not for all the sensitivity tests (eg higher landfill gas capture rate) therefore these sensitivity tests are not adequately reflecting the net carbon effect of the proposal;
- the assessment of significance finds the Development to have a net positive GHG effect, however this is misleading as it does not adequately take into account the effect of adopting alternative baselines such as the current use of the site. A fuller and more robust consideration of alternative baselines would likely materially alter the conclusions of the climate change ES chapter; and
- the lack of certainty over the ability to provide a heat offtake connection or carbon capture at the site limits the carbon credentials of the proposed AAERF at this location and may conflict with Paragraph 150 of the National Planning Policy Framework and Policy 2 of the Hampshire Minerals and Waste Plan.

Climate Change Review Addendum:

Alton AAERF

February 2021

Experts in air quality management & assessment

Document Control

Client	No Wey Incinerator	**Principal Contact**	Mike Blanche

Job Number	J4173

Report Prepared By:	Laurence Caird

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Air Quality Consultants Ltd
23 Coldharbour Road, Bristol BS6 7JT Tel: 0117 974 1086
119 Marylebone Road, London NW1 5PU Tel: 020 3873 4780
aqc@aqconsultants.co.uk

Registered Office: 23 Coldharbour Road, Bristol BS6 7JT
Companies House Registration No: 2814570

Introduction

1.1 This note provides an addendum to the recent climate change review of the proposed Veolia Alton Advanced Energy Recovery Facility. The comments in the recent review (report ref: J4173B/2/F1 dated 29th January 2021) remain valid. This addendum address and additional issue pertinent to the carbon calculations and climate change assessment relating to the assumptions regarding the proposed facility's electricity generation.

1.2 The electricity generation is an important factor in the carbon calculations and climate change assessment as the electricity generated by the scheme is used in the calculations as a carbon offset (i.e. benefit). This addendum describes how the electricity generation value used in the applicant's submissions is likely to be overestimated, which will have in turn resulted in an underestimate of the facility's carbon emissions.

Electricity Generation Analysis

1.3 In the carbon assessment, the applicant estimates that the facility will generate 247,500 MWh of electricity per year, which is calculated as the 30 MW capacity of the plant, multiplied by the annual operational hours of the plant, stated as 8,250 per year. This estimate may be significantly too high, by comparing with other data in one of three ways:

1. Typical load factors for Energy Recovery Facilities (ERFs);
2. Typical electricity generated per tonne of waste; or
3. Comparing with Hampshire's own ERF performance.

1.4 The applicant has provided several sensitivity analyses within the assessment, but do not address any potential variability in the amount of electricity exported by the plant relative to their core assumption, that the plant will export 100% of its design generation value for 100% of its operational hours.

1. Typical Load Factors:

1.5 Tolvik Consulting's 2019 data for availability[1] shows that average turbine availability was 81.9% across the fleet of UK EFWs.

1.6 Similarly, work done by Arup for DECC[2] shows a net load factor for EFW of 81% as shown in Figure 1.

[1] UK EFW Statistics 2019 Report - Tolvik Consulting, June 2020

[2] Review of Renewable Energy Generation Cost and Technical Assumptions - DECC/Arup - June 2016

Figure 1: Extract from Arup DECC Report

Table 127 EfW Technical Assumptions

Assumption	Unit	DECC	Arup	Change (%, net)
Net Power	MW	33.00	30.17	-2.83
Net LHV efficiency	%	24%	28%	16.4%
Availability	%	90%	93%	3.4%
Load factor (gross)	%	95%	88%	-7.8%
Load factor (net)	%	86%	81%	-4.7%

1.7 Data from Hampshire's existing EFW plants (see Table A1.1 in Appendix A1) also demonstrates that EFWs electricity generation is typically well below plated capacity. Hampshire's ERFs only reported turbine hours in 2019, but the average turbine availability in 2019 was 79%, supporting Tolvik and DECC/Arup's load factor figure of 81%.

1.8 Recalculating the AAERF's possible electricity output based on 81% load factor results in:

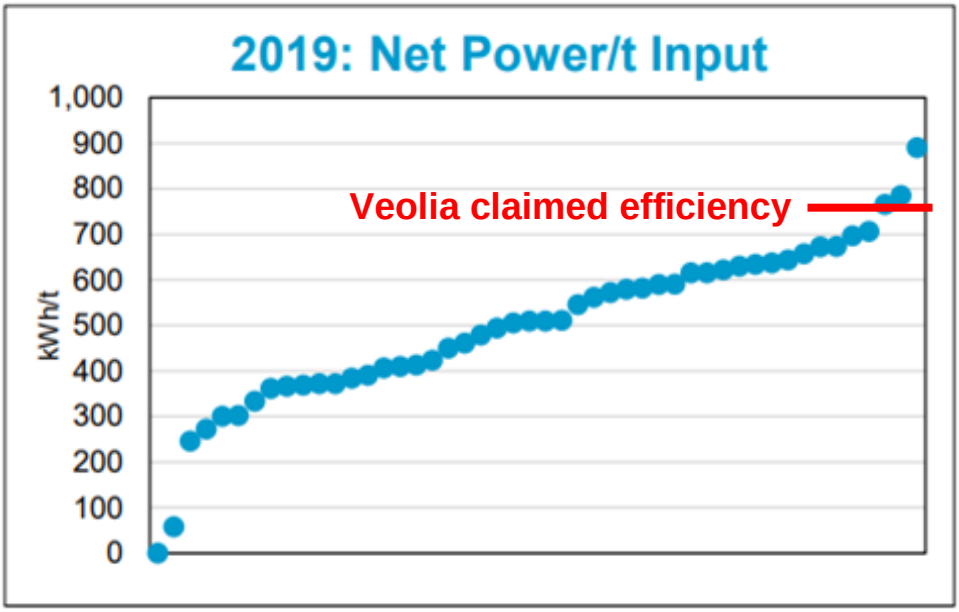
30MW x 8760 hours in a year x 81% load factor

= 212,868 MWh per year of electricity exported, or 14% less than assumed in the carbon assessment.

2. Electricity Generated Per Tonne of Waste

1.9 The applicant assumes 750 kWh/tonne of waste input (330,000 tonnes of waste burnt to generate 247,500 MWh of electricity), which using Tolvik Consulting 2019 figures would make the AAERF the third most efficient EFW plant in the UK. This would include plants that burn specialised Refuse Derived Fuel, and 40% above the UK average, as shown by the graph in Figure 2. No evidence has been provided to justify this.

Figure 2: Extract from Tolvik Analysis



1.10 In comparison, the performance of Hampshire's existing ERFs have a performance in electricity generated per tonne of waste incinerated between 367 and 582 kWh/tonne in 2018 and 2019 (see Appendix A1). The average is 448 kWh/tonne.

1.11 If the UK average generation efficiency of 531 kWh/tonne is used (still above Hampshire's ERFs), the AAERF's electricity generation would be:

531 kWh/tonne x 330,000 tonnes

= 175,230 MWh of electricity generated per annum or 29% less than assumed in the carbon assessment.

3. Electricity Generated at Hampshire ERFs:

1.12 These estimates can be compared with overall electricity exported at Hampshire ERFs in 2018 and 2019, as tabulated in Appendix A1. This ranged between 53% and 90% of theoretical plated capacity multiplied by operating hours, and averaged 69%.

1.13 The applicant has assumed the AAERF will generate 100% of the theoretical plated capacity every operating hour. Hampshire's ERFs in 2018 and 2019 averaged 69%.

1.14 Using the Hampshire ERF historic average electricity generation percentage of 69% from 2018 and 2019:

30MW x 8,250 operating hours x 69%

= 170,775 MWh of electricity generated per annum or 31% less than assumed in the carbon assessment.

Summary

1.15 The carbon assessment provided by the applicant assumes the AAERF will generate 247,500 MWh of electricity per annum, which is used as a carbon offset. The assumption that the AAERF will achieve this level of electricity generation appears to be unrealistic based on the performance of similar plant and the type of waste to be processed by the facility. If realistic assumptions are used for the percentage of the time the plant will be generating electricity, and the efficiency of turning waste into electricity, this could result in an annual electrical generation of between 14% and 31% less electricity than the applicant has assumed in their assessment. This will in turn result in up to 31% less carbon benefit from electricity generation than is stated.

1.16 This reduces the claimed carbon benefit compared to landfill by around half in the first year of operation and thereafter.

A1 Performance of Existing ERFs in Hampshire

Table A1.1: Data for ERF Performance in Hampshire

Facility	Year	Operating Hours	% Operating Hours [1]	Turbine Hours	% Turbine Hours [2]	Waste Processed (tonnes)	Electricity Exported (MWh)	Electricity from Waste (kWh/tonne)	Plated Capacity (MW) [4]	Electricity Exported as % of Plated Capacity x Operating Hours
Portsmouth	2018	8,678	99%			207,468	104,163	502	14	86%
Portsmouth	2019	8,278	94%	6,758	77%	194,576	79,106	407	14	68%
Marchwood	2018	8,209	94%			199,485	81,262 [3]	407	16	62%
Marchwood	2019	8,554	98%	8,608	98%	211,203	122,894	582	16	90%
Chineham	2018	8,125	99%			93,177	39,564	425	8	57%
Chineham	2019	8,081	92%	5,414	62%	94,150	34,512	367	8	53%
Average			**96%**		**79%**			**448**		**69%**

1 Plant availability as % of calendar year

2 Turbine utilisation as % of calendar year

3 This is recorded as “181,262 MWh” however this far exceeds the plated capacity of the plant, therefore it is assumed this is a reporting error. Removing the initial “1” results in figures in line with others from Hampshire. It is possible that the true figure is somewhere between these.

4 From Veolia’s website.