Objection to Calder Valley Skip Hire application number S13/006. for an Environmental Permit.

28 March 2024.

I object to this application for a number of reasons.

Firstly this application is not a fresh application, it is a resubmission of application report dated 5 August 2020 submitted by RPS on behalf of CVSH That was refused at appeal on 5 July 2023 by John Woolcock on behalf of the Secretary of State. The new application report dated 26 Jan 2024 submitted by RPS on behalf of CVSH states in 1.5.4 That the decision by John Woolcock is "perverse" and "procedurally unfair". If CVSH objected to the inspectors decision then it was open to them to take it to Judicial Revue.

See "Environmental Permit- guidance on the appeals procedure" www.gov.uk/government/publications/environmental-permit-appeal-form/environmental-permitguidance-on-the-appeal-procedure

Section 4.5. 4.5.1 States that the decision is Final, and section 4.5.2 States that the decision can only be challenged by judicial revue within 3 months of the decision. CVSH say in 1.5.4 of the 26 Jan 2024 application report that they chose not to do this because they were afraid another Inspector may come to the same conclusion. In other words they chose not to go to judicial revue because they thought they would lose and it is now too late, therefore the appeal is lost, and the application refused. If anyone is being perverse and procedurally unfair it is CVSH submitting what they admit is basically the same application, see 1.5.5 in the new application report. This is approaching "abuse of process" by asking the same question over and over until they hope to get the answer that they want from Calderdale Metropolitan Borough Council who they hope will not scrutinise it or have the resources to refuse it instead of taking on the Secretary of State in Judicial Revue

CVSH state that the reason for the refusal was solely down to the treatment of trees. This is not the case in his judgement paras 43 and 44 John Woolcock states:-

Operator competence

43. Paragraph 13 of Schedule 5 EPR 2016 provides that the regulator must refuse an application for the grant of an environmental permit if it considers that, if the permit is granted, the following will not be satisfied; (a) the applicant must be the operator of the regulated facility, and (b) would operate the regulated facility in accordance with the environmental permit. However, this applies if the permit is granted. Given that I am dismissing the appeal and the deemed refusal will stand, it is not necessary for me to consider the application of paragraph 13 of Schedule 5 EPR 2016.

Other considerations

44. Similarly, as the deemed refusal will stand it is not necessary for me to rule on the technical objections raised by third parties. However, it is necessary to comment on the objectors' concern that CMBC has shown only limited understanding of the regulatory processes and that there is no evidence that CMBC has the technical expertise to regulate this facility. CMBC is the regulator for the proposed SWIP and has statutory responsibilities in this regard. Planning decisions should assume that the pollution control regime will operate effectively. It seems to me that the same assumption should apply to the monitoring and regulation of environmental permits. Local reservations about CMBC's ability to properly regulate the SWIP are no part of my decision to dismiss the appeal.

This means he has not made a judgement on either "Operator competence" or "Other considerations" so both operator competence and third party technical objections have not been considered as he found the air quality issues sufficient to refuse. This does not mean that these technical objections are not valid objections. He also states "CMBC is the regulator for the proposed SWIP and has <u>"Statutory responsibilities in this regard.</u>" CMBC must ensure that they have employed resources that can fulfil this obligation.

Further in para 42 John Woolcock states :-

42. Taking all the above into account, I consider that the appeal should be dismissed because I am not satisfied on the evidence adduced that the proposal complies with IED Article 46 1., which requires that waste gases from waste incineration plants and waste co-incineration plants shall be discharged in a controlled way by means of a stack the height of which is calculated in such a way as to safeguard human health and the environment. Furthermore, I am unable to find that the necessary measures have been taken to ensure that waste management would be carried out without endangering human health, without harming the environment and, in particular without risk to air, in compliance with Article 13 of the Waste Framework Directive 2008/98/EC.

This statement covers more than just the stack height and includes the waste management as an issue.

The final conclusion John Woolcock states :-

Conclusions

46. I have taken into account all other matters raised in the evidence but have found nothing to outweigh the main considerations that lead to my conclusions. I am unable to find that granting an environmental permit for the SWIP would not have an unacceptable adverse effect on human health and the environment.

47. In accordance with Regulation 31(6) EPR 2016 the appeal is dismissed and the deemed refusal stands. This appeal decision, including the above reasons, comprises the determination for the purposes of paragraph 6 of Schedule 6 EPR 2016.

This states that John Woolcock has taken account of other matters raised not just the air modelling.

The Governments Environmental permitting guidance

https://assets.publishing.service.gov.uk/media/5a7c07d2ed915d4147622550/pb-13570-wid-guidance-201003.pdf

For the application, section 5.4 States:- " Applicants should provide the following information as a minimum.

(a) Demonstration that the plant is designed, equipped and operated to meet the requirements of the WID taking account of the categories of waste to be incinerated."

Apart from all the other "minimum" requirements listed under section 5 of The Government Environmental Permitting Guidance, item 5.4 (a) states that providing the **plant design** and therefore equipment specification, layout, interconnection and certification must be a prerequisit for the application for an Environmental Permit. This objection demonstrates that this has not been done adequately. The new RPS report of 26th Jan 2024 is essentially the same as the original submission dated 5th Aug 2020, which was refused by John Woolcock apart from some of the following points.

1.2.3 This states that the SWIP is not in a DEFRA air quality management area, however Sowerby Bridge is in an AQMA and is only 670 metres away <u>downwind</u> of the proposed SWIP . So for all practical purposes the proposed SWIP is in the AQMA as that is the direction of the prevailing wind, (SW) taking the plume straight into Sowerby Bridge, a densely populated area with a number of schools.

1.5.2 The planning permission is subject to 22 conditions including the following, in summary. Before first operation the **plans and technical details must be signed off by CMBC.** The actual installation must be checked and signed off by CMBC. CMBC will be responsible for monitoring its operation, including waste management, emissions and permitted hours. Does CMBC have the expertise and resources to do this?

1.5.6 States that an independent revue was done by CERC (Cambridge Environmental Research Consultants) to verify the treatment of trees within the air quality assessment by RPS. This was not an independent review. CERC are the producers of the ADMS air modelling software that RPS were using for this job. CERC have a vested interest in not showing up problems with their software or upsetting their customers (CVSH). This paragraph also states :-

"In their report they (CERC) confirmed that the approach adopted within the air dispersion modelling is considered appropriate and there would are no other suitable models/software available which would more accurately model the effect of trees."

This is indeed incorrect and in the report from CERC, in task 8, CERC states:-

"The sensitivity studies we have undertaken have shown that the sensitive receptors are all sufficiently far from the source, that pollutant concentrations calculated at these receptors are insensitive to the treatment of trees/surface roughness, or to the fact that the discharge height of the stack is lower than most of the trees. In view of this, it is highly unlikely that the use of more complex modelling approaches, such as a Computational Fluid Dynamics model which might have the capability to treat the trees in more detail, would lead to different conclusions."

This statement actually says that they believe their software to be adequate. NOT that there is no alternative. CERC also states there ARE alternatives such as Computational Fluid Dynamics modeling but that would be more complex and by implication more expensive.

I would also suggest that the reason very similar results that CERC achieves compared to RPS is simply because they are using the same software and using the same parameters and nothing to do with whether it is correct or not. I would also suggest that the similarity of results when varying the surface roughness demonstrates that the software is not sensitive to roughness not that roughness is irrelevant to the calculations, or to real life.

A more accurate model would have been to use Computational Fluid Dynamics as suggested as a possibility by CERC in Task 8. Furthermore I would suggest that the air quality modelling is further compromised by using Meteorological data taken from Leeds Bradford Airport (24Km from Sowerby Bridge 207 m above sea level) and Bingley (12 Km from Sowerby Bridge 262 m above sea level) and both situated on the top of flat topped hills, but the incinerator will be situated in the bottom of a steep sided valley at 90m above sea level surrounded by hills of 200 to 400 metres above sea level.

The paper :-

Realistic Forests and the Modeling of Forest-Atmosphere Exchange E. J. Bannister1,2, A. R. MacKenzie1,2, and X.-M. Cai2

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Indicates the complexities of wind and forest exchanges, it may be downloaded from :-

https://pure-oai.bham.ac.uk/ws/files/161494974/

Reviews_of_Geophysics_2022_Bannister_Realistic_Forests_and_the_Modeling_of_Forest_Atmos phere_Exchange.pdf

This paper is an open access document copyright 2022, and has been written by a prestigious university department of Birmingham University. In the section titled "Plain Language Summary" it indicates that there is complex set of exchanges of gases between atmosphere and forest or trees, particularly where the forest is patchy due to man's intervention. I would suggest that this area around the proposed SWIP perfectly represents that with the roads, buildings and clearings within the trees along the valley bottom and the incinerator stack. The paper then goes on to address some of these complexities and the problems with using "idealised" forests in mathematical models to represent the real life situation. This is a highly academic paper, 47 pages long, I use it to demonstrate that the modelling of the situation compared to real life is not black and white as implied by the reports submitted by CVSH in their application and that there is room for a significant amount of doubt and variation as stated by John Woolcock in his judgement.

A further paper on computer modelling using Computational Fluid Dynamics which is regarded as more accurate but more complex than the model used by the ADMS software, see CERCs report Task 8 above, is presented here:-

Air Pollution Dispersion Modelling in Urban Environment Using CFD: A Systematic Review

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A copy of this paper may be downloaded from :- <u>https://www.mdpi.com/2073-4433/13/10/1640</u>

This paper is about the computer modelling of Air Pollution Dispersion using one of the methods that the RPC report states is unavailable or unsuitable. This paper was written for the technical journal "Atmosphere" and was published on 9 Oct 2022. It is another open source document. It is also very academic however it is presented here to show that the subject of computer modelling gas and vapour behaviour is complex and open to debate.

In the above paper Para 3.9 "A note on Verification, Validation and Predictive Capability Estimation." acknowledges that computer modelling while being very valuable as a tool, saving time and costs, it also states "However models are are only approximations of reality and are always built on assumptions." The section goes on later to say "The level of model reliability must instead be demonstrated by critically comparing predictions with experimental data."

I would suggest that we have already done that experiment with the results of the CVSH fire of 4 Jan 2017. Many photographs of the smoke lying in the valleys and streets of Sowerby Bridge for several days exist. The only difference with the effluent from the stack would be that it will be

largely transparent, and thus invisible, meaning people would be subject to the residual toxins, many persistant (ie become embedded in the environment and can accumulate without decomposing) without knowing it. The fire was an experiment that would never have been officially sanctioned, however because it was accidental does not make the results any less valid, and they are well documented. As residents we all know that this was not a one off, mist regularly lies in the valley bottom and that will trap effluent with it and hold it there.

The above shows that irrespective of the computer modelling and discussions of validity or otherwise of parameters used, real life experiments irrefutably show that smoke and effluent from the CVSH site will often sit in the valley bottom and drift over the town of Sowerby Bridge, affecting health in an already polluted area, that is already an AQMA, if this permit is granted.

The fact that CVSH could not prove otherwise to his satisfaction, was the main reason for the refusal of the appeal for an Environmental Permit by John Woolcock. The current application is no different in substance from the one refused by John Woolcock.

3.2 CVSH have provided some more detail on proposed storage and sorting of waste.

3.3 New section on proposed waste handling procedures.

3.8 Revised information on Ash handling.

3.11.2 to 3.11.7 Further comments on air assessments. I have dealt with this above.

4.2 Additional information about heat recovery. 4.2.2 RPS state that the ORC is not part of the machinery. If it is not part of the machinery, then how does the Machine as a whole comply with R1? Without including the ORC there is no generation of electricity or export of energy from the SWIP.

5.5.4 This paragraph exists on the August 2020 application but not on the January 2024 application. It states **" CMBC may request copies of the site diary and site inspection records relating to SWIP operations at any time."**

Why has this been removed? I object strongly to that paragraph and requirement being removed. It removes a significant amount of CMBCs ability to monitor the SWIP compliance.

There are no appendices and no drawings in the spaces for them at the end of the report.

Dealing with the documents supplied by CVSH. Many are a bit of a rehash of previous documents.

The brochures supplied for the inciner8 are flyers of the type handed out at trade shows and don't give any real technical detail, just a general concept. Likewise the brochure for the ORC. These brochures or similar have been submitted before.

The dryer location drawing No 9677/17/03 dated Nov 16 has been submitted before.

The flow simulation by Solid Solutions is dated 8/2/22 has been submitted before. Note that this test is done with a loading of 1 ton per hour and the permit is for 2 tons oer hour. This means that the test does not meet regulations for the permit applied for as the application is for double the throughput tested

The process flow diagram by RPS is undated but not contentious.

The Electrical Condition Report covers the electrical installation and distribution within the building and has nothing to do with the SWIP except that I note that in the Schedule 2.2 there is no provision for a generating set for operation in parallel with a public supply. This would be required for the ORC and no information is given for installation of this provision. I also note that this certificate is dated 29/6/2016. This out of date as the recommended period of inspection for industrial properties is 5 years maximum and 3 years in harsh conditions in order to comply with Health and Safety at Work 1974 act and Electricity at Work Regulations 1989 and is probably a requirement of the Insurers. I would suggest that the Belmont site would be defined as harsh. I am a member of the IET who write the regulations. This certificate has been submitted before.

To summarise as stated by RPS "This application is submitted on the same basis as before" in other words it is the same application that John Woolcock refused except a bit more information has been added which is of doubtful value. The removal of para 5.5.4 from the new application is concerning as it removes a useful tool for monitoring CVSH compliance. Why would that be removed unless there was something to hide?

In addition to the above, because the new application has been made on the same basis as the original, I reiterate my objections to the original application that was refused by John Woolcock. Note that John Woolcock did not rule on third party Technical Objections. I include that objection here:-

This objection is to the permit to operate a SWIP that does not appear to be properly installed or certified.

A lot of assumptions have been made about the emissions and operation of this incinerator without documentary evidence. The single engineering drawing (APPENDIX 1.2 DRAWING 9677 32A INTERNAL LAYOUT) has very little information. It gives the manufacturer of the waste heat powered generator, (Triogen ORC engine) but not it's model or version. There is poor information in the form of leaflets for the incinerator and filter system submitted. While the filter system appears to be made by inciner8 this can only be inferred by the inclusion of the leaflets under Technical documents appendix D. Which of the 3 filter systems on the leaflet is specified to be used here, and where is the documentation for the model put forward but not specified?

There seems to be no provision for the storage of the fuel oil required to fire this SWIP. This must be in a suitable tank and it must be appropriately bunded in case of leaks, especially as it is close to the river and liable to flooding.

As this is an assembly of essentially 4 units to make a single unit, the Incinerator (Inciner8or model 18-100), the heat exchanger, the flue gas filter (implied to be Inciner8 but not specified), and the Triogenic ORC engine. (Arguably the Dryer is also part of this machine as it is integral to the operation of the SWIP) Under HSE guidance this becomes "In situ manufacture or assembly of equipment and plant" (<u>https://www.hse.gov.uk/work-equipment-machinery/manufacturer-insitu.htm</u>). This means that the whole assembly and installation must comply with the <u>Supply of Machinery (Safety) Regulations 2008</u>. The whole assembly must also comply with the machinery directive.

Looking at the layout I believe that there are significant problems with access for maintenance, The ORC is very close to the side walls and the flue filter preventing good access to either. There does

not appear to be enough safe access to remove hot ash from the end of the incinerator, with a risk of the operator being trapped between the hot chamber and the Heat exchanger. Very little room between the building walls and the incinerator for maintenance. Personnel working on hot equipment must have adequate space to escape from hot surfaces (machinery directive). Has the manufacture's recommendations for access space and installation been followed? (no information available) If not the equipment will not comply with the manufacturers standard certification. It is normal for a manufacturer of something this large and complex to insist that it is installed by themselves or an approved contractor in order for them to guarantee any performance specifications. Has this been done? If not then none of the quoted emission specifications are guaranteed and all the air quality calculation are only assumptions. The flow calculations provided by Solid Solutions states that assumptions are made because access was too limited to take measurements. Why did the manufacturer not supply these flow calculations or the detailed drawing with all dimensions for the application? I would suggest that the machine is too big for the shed to give adequate clearances.

No permit to operate should be given until the above has been satisfied and a reputable approved body given written certification that the machine is installed safely and complies with all relevant directives. Until it is assessed as a complete assembly by a recognised competent body, (eg Inciner8 the manufacturer) no guarantees can be given with respect to emissions, safety or performance, all of which form part of the permit to operate. <u>As regulator CMBC will be responsible for the final sign off.</u>

The efficiency of the plant is also part of the permit and the plant must comply with the existing planning for a SWIP Planning Condition 8. In order to achieve this, a calculation was done based on 1 ton per hour of RDF (refuse derived waste) as fuel. See **RPS Report Planning condition 8-R1 Scheme.** This would be 6,250 tons per year absolute maximum not 10,000 tons per year based on 24 hours per day 5 days per week and 52 weeks per year, The actual figure would be significantly less when downtime , start and shutdown time and holidays are taken into account. This was the calculation approved by the Secretary of State see document **DELEGATED REPORTSubmission of details to comply with condition 8 on application 17/00113/WAM Reference17/00113/DISC4**.

This is because the ORC is running at maximum output at 1 ton per hour, so no extra electricity is generated if extra fuel is burnt. Using the approved calculation at 2 tons per hour R1 would be 0.34, about half the R1 permitted by the planning conditions. In addition the Incinerate leaflet specifies that the burn rate is 1 ton per hour so increasing the loading will probably overload the emission control system (seconary temperature, residence time filters etc.) causing excessive toxic emission from poorly burnt fuel. <u>As regulator CMBC will be responsible for monitoring this loading and monitoring what RFD is going into the SWIP.</u>

To Summarise. This whole installation seems to be an assembly of equipment squeezed into an existing shed. There seems to be no manufacturers approvals for the installation or approval by any other competent body to guarantee performance or safety. There is no provision for the oil fuel supply which forms part of the installation so it must fall within the permit area. All technical information contained in the specification for the equipment in the application is provided as bald statements without any reference to proper manufacturers detailed specifications, therefore all

calculations, models and conclusions with respect to this application are based on uncertified information and assumptions provided by CVSH. <u>As regulator CMBC will be responsible for checking this and signing it off according to regulations before it can be operated.</u>

Condition 6 of the planning states that the SWIP is not to be run when the dryer is unavailable. The dryer is unavailable during the night. The cooling air from the heat exchanger that is ducted to the dryer must run at all times that the SWIP is running or else the uncooled flue gas will overheat the filter system. (max temperature 300 degC) This is wasted energy.

In this new application there are no material changes to the machinery or buildings or layout, or the position, or the weather, or the topography of the valley bottom from the application refused by John Woolcock. There is even less technical information provided for the layout and specification of the machinery. What is provided is inconsistant and contradictory. CMBC must take a lead from the Secretary of States representative and refuse this application outright as it is the same as that which has already been refused by John Woolcock on behalf of the Secretary of State. CVSH have missed their opportunity to disagree with him and appeal which they had to do within 3 months of the judgement by law. See the first paragraph of this objection.

Summary:-

The modeling of plume dispersion is not robust, and results are open to discussion, Empirical evidence of the CVSH fire which left smoke in the valley for over 2 days, and regular mist in the valley proves dispersion is often very poor.

Installation of the machinery is suspect and very poorly documented and certification nonexistent.

The calculation of R1 is confused and the approved method under planning condition 8 only allows circa 6,000 tons per annum not the 10,000 applied for on the permit.

Running the incinerator at 2 tons per hour applied for, is twice the loading for the modeling done by Solid Works, and twice the specified loading of the i8-1000 General Incinerator (see leaflet provided Under Technical Documents (Appendix D)). This <u>will</u> adversly affect the residence time and possibly the temperature in the secondary chamber requiring diesel to be burnt to maintain it, and therefore invalidates the Inciner8 specifications for organic emissions which are specified at the cappacity of 1ton per hour. Stack emissions of <u>highly toxic and persistant</u> organic toxins such as dioxins, PCBs and Furans all of which can produce complex health issues such as cancer, reproductive, developmental and birth defects will occur if secondary chamber temperature drops below 850degC and residence time is not more than 2 secs.

According to the planning condition 6 the plant must be shut down each evening when the dryer is unavailable to use.

Note that the IED (Industrial Emissions Directive) Under "Law" states "The IED ensures that the public has a right to participate in the decision-making process, and to be informed of its consequences, by having access to permit applications, permits and the results of the monitoring of releases." CMBC must therefore make all the monitoring data publicaly accessable should they pass this permit.

This Incinerator is the wrong machine poorly specified, badly installed and in the wrong location in a steep sided valley bottom with inadequate plume dispersion. The throughput of 2 tons per hour, asked for in the application, is beyond the machines safe capacity. It has already been refused by a Government Inspector on appeal because of doubts about the safety of the health of people in Sowerby Bridge.

Calderdale Metropolitan Borough Council must stand up for the health and safety of the people of Sowerby Bridge by taking the decision to refuse this permit because there is significant liklyhood that this installation will adversely affect the health of the people of Sowerby Bridge. The presumption must be to protect health and the environment.

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