

From: [Chris Johnston](#)
To: [Planning Comments \(SMDC\)](#)
Subject: FW: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087
Date: 21 October 2024 12:22:57

Env Health comments

From: Christopher Humphreys
Sent: 18 October 2024 12:36
To: Chris Johnston
Subject: RE: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087

Hi Chris,

The assessment methodology used needs to be demonstrated that it is validated for use for the size installation that is proposed. The model was originally designed for use with large scale combustion plant (20-50MW) and validated using emissions data from power stations. It has subsequently been updated to capture smaller plant, >1MW, but we have no evidence it is validated for use for the smaller ones. This is the aspect I have been looking into and have now managed to liaise with someone who is digging deeper for me. Unfortunately it is not tool that appears to be familiar amongst local authority officers so not had much luck elsewhere on this.

If response is positive and can be used, then it could be a case of recommending conditions to restrict the number of appliances that can be lit and be in use at any one time (limited to two, one 210 and one 295) as well as a limit on operating hours (max 5328 hours per year) as this is what has been assessed, although not sure yet how this can be practically secured by a condition that can be enforced unless the appliances have a function to record this each year. There will also need to be boundary conditions for smoke and odour to protect the amenity of the residential receptors due to the proximity of the appliances.

If it has not been validated for use the applicant will need to provide evidence of this, or if conditions are not considered able to be tested/ enforced, likely dispersion modelling will be required. The latter will hopefully address number of appliances/ operating hours as well.

Kind regards,

Christopher Humphreys
Pollution and Environment Officer
Environmental Heath
High Peak Borough Council and Staffordshire Moorlands District Council

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From: Chris Johnston
Sent: 18 October 2024 11:05
To: Christopher Humphreys

Subject: FW: [Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087](#)

Morning Chris

Can you please copy me in to any future correspondence.

I have read the emails below but can you just quickly update me on what happens next i.e. what is now required to try to demonstrate that emissions would be acceptable.

Thanks
Chris

From: Andrew Martin
Sent: 16 October 2024 20:10
To: 'Amanda Owen'; [Christopher Humphreys](#)

Cc: 'Mark Gellatly'; [Chris Johnston](#)
; ['gary bentley'](#)

Subject: RE: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087

Why have we had to wait over a month for this negative response. I find this completely unacceptable and unprofessional from SMDC....

Andrew Martin

ANDREW MARTIN ASSOCIATES

From: Amanda Owen
Sent: 16 October 2024 18:12
To: Christopher Humphreys
Cc: Mark Gellatly [Andrew Martin](#)
Subject: RE: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087

Gentlemen,

This from Christopher Humphreys.

I'm afraid I cannot offer to start to pick up any modelling that may now be required until w/c 28th October at the earliest, and, due to other commitments, it may take me a couple of weeks or so from that point, to deliver.

I'm aware that you were considering getting Councillor Bentley involved. I cannot see Mr Humphreys changing his position without either a modelling assessment or intervention from the Councillor, and he is taking such a long time to respond / advise, I assume that you will want to be proactive with this one way or another.

Please advise how you wish to proceed.

Kind regards,

Amanda.

Dr Amanda Owen
Environmental Consultant

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2, Stratford Court,
Stratford Road,
Stroud,
Gloucestershire,
GL5 4AQ.

From: Christopher Humphreys

Sent: 16 October 2024 16:43

To: Amanda Owen

Subject: RE: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087

Afternoon Amanda,

Just by way of an update on the current position.

Where stacks have been combined, by increasing the stack diameter, to assess impacts, the results are not accepted using this methodology at this time unless further support/ guidance is provided for undertaking the assessments in this way.

With regards to the use of SCAIL, this remains under consideration. It appears to be a tool that is not familiar with Local Authority officers. As it was designed for IED installations and those falling under MCP Regulations, I am querying if it is validated for use for the biomass boilers being applied for. Unless you can provide support for the use of the tool for installations of the size under assessment, we may not be able to accept the conclusions using this tool.

Given the proximity to residential premises it may be prudent that dispersion modelling is undertaken unless the above can be addressed. In either case, should this Department recommend no objections, conditions relating to smoke and odour will be required to protect the amenity of the nearby residential receptors.

Kind regards,

Christopher Humphreys
Pollution and Environment Officer
Environmental Heath

High Peak Borough Council and Staffordshire Moorlands District Council

From: Amanda Owen

Sent: 11 September 2024 12:58

To: Christopher Humphreys

Subject: RE: Air Quality Impact Assessment of Boiler Operations at Cheadle SMD/2024/0087

Dear Christopher,

Thank-you for taking the time to join our internet meeting yesterday to discuss the air quality impact assessment of the proposed boiler operations at Cheadle (planning application reference: SMD/2024/0087).

It was good to get a feel for your concerns regarding the proximity of the local receptors to the development, and your experiences of some other biomass units that can give rise to smoke and odour. I note that, having spoken again to UK Renewable Energy since our conversation yesterday, they are confident that, with the application of the correct fuel and operational practices, this should not be an issue for their boilers, and they do not experience any significant issues at their other sites.

As discussed, I provide a brief summary below of our discussion and our agreed course of action. The numbered headline points relate to your e-mail to Chris Johnston of Tuesday, July 30, 2024 2:54 PM.

1. Appropriateness of RHI Certificate to the models proposed for installation:

As discussed, the use of RHI certificates is standard in such circumstances where the certificate references any given model as is the case here. I confirmed that I have never had this queried before, nor do I know of this having been queried elsewhere. Whilst I appreciate that the emissions testing was not undertaken on either of the specific models to be installed, we have no further information on the discharges from these units (until installed) and this is precisely the sort of issue that the RHI certification scheme was designed to address. You explained that some acknowledgement of the uncertainty associated with this (whilst not quantifiable) would still be welcome, and I agreed that I can provide a statement to that effect.

2. Use of Actual Stack Height in the Industrial Emissions Screening Tool:

I explained that the methodology states to apply the actual height above ground level. This appears to be contrary to guidance that you have seen elsewhere. However, you offered to review that guidance and advise, which you have now done. I note that the LAQM Technical Guidance that you have directed me to (para. 7.44) states that: "When using the Industrial Emissions Screening Tool, **an effective stack height is calculated where necessary. Manual calculation of the effective stack height should therefore not be required when using the tool,** although for transparency the associated calculation method is provided in Box 7-1" (highlight added). That is, the screening tool calculates the effective stack height from the actual height input by the user, as was the case in the submissions made. As such, I would consider that this query is closed out.

3. Background data sets:

You explained that you have not seen the use of the SCAIL tool for a planning application before, and have concerns regarding the differences in the background values applied in the Industrial Emissions Screening Tool and the SCAIL assessment. You plan to meet with colleagues in the coming week and will consider the information provided and any further requirements with them, before advising as to the next steps.

The introductory page specifies that: *'SCAIL COMBUSTION is a screening tool that uses the atmospheric dispersion model AERMOD to model SO₂ and NO_x emissions from small to medium sized combustion sources. The model estimates the impacts of nitrogen oxides (NO_x: NO and NO₂) and sulphur dioxide (SO₂) emissions on sensitive habitat sites. User can enter details of their habitat, source and stack parameters to calculate an estimate of*

NOx and SO2, acid and nitrogen deposition at the habitat. The model uses wind data from the nearest meteorological station data, of which there are around 109 meteorological stations in the system.' SCAIL was developed by the UK Centre for Ecology and Hydrology, Jacobs, and Westlakes Consulting and is supported by the EA, NRW, SEPA, NIEA, JNCC, Sniffer and the Scottish Government. As mentioned during our meeting, the background data applied by SCAIL is location specific and hence is more detailed than the UK-AIR data, considering a receptor's specific position. I also mentioned that (from memory) the backgrounds are drawn from APIS (the UK Air Pollution Information System). I can confirm that this is correct, and that this information is updated much more frequently than the UK-AIR mapping. Indeed, a message on the current SCAIL site confirms: *'June 11th, 2024: SCAIL background pollution maps for the UK have been updated to the years 2020-2022 in line with current APIS'*. As such, the background within the SCAIL assessment is more accurate than the 1 km x 1 km gridded UK-AIR data and, whilst the latter is suitable and sufficient for a generalised background value for a wider area, where the location of receptors is known, the use of the site-specific backgrounds from APIS / SCAIL would be appropriate. I also note that, while there are differences in the background values stated, these are not significant such that they might raise a query as to the appropriateness of applying either the SCAIL backgrounds, or the UK-AIR background data.

With regard to the process contribution of pollutants not necessarily screening as insignificant, albeit with process contributions and predicted environmental concentrations remaining well within the Air Quality Standards, you will advise as to whether you consider that there is a requirement for detailed dispersion modelling to be provided.

4. The calculation and combination of stacks:

We discussed the methodology now applied and I confirmed that the intention is only to fire up to 2 of the new boilers, plus the existing boiler at any one time, with the two remaining new boilers included for resilience. Similarly to items 5 (smoke) and 6 (operating hours) you are concerned as to how these requirements may be enforced and regulated, as the development does not require a Permit to operate. We discussed your concerns, and the solution may lie in the provision of a management plan that details the controls in place and acceptable conditions during start-up and shut-down etc. Such requirement could be included as a condition to the planning consent, and can be provided to and agreed with the EHO team. Also, having now spoken with UK Renewable Energy, they would welcome you or your colleagues visiting the site once the boilers are operational to see the plant in action and to review their management plans and processes for the boilers.

With thanks again for your time. We will look forward to hearing from you again in due course. In the meantime, please do not hesitate to contact me should you have any queries or interim comments.

Kind regards,

Amanda.

Dr Amanda Owen
Environmental Consultant

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