

White Rose Carbon Capture and Storage (CCS) Project
PINS Ref: EN10048

Examining Authority’s Second Written questions

4.0		NOISE
4.2	Applicant	<p>Can the applicant confirm what progress has been made towards agreeing the necessary requirements to adequately protect noise sensitive receptors in the vicinity of the proposal?</p> <p>SDC Answer: Since the Issue Specific Hearing into the Environmental Impact Matters Selby District Council have had no further communication from the applicant.</p>
4.3	Applicant	<p>i. What other methods of mitigating noise impact have been considered e.g. bunds and screens as means of mitigation?</p> <p>SDC Answer: Section 5 of the ES Volume 2 Chapter B – Noise and Vibration Technical Report gives details of the mitigation measures incorporated into the predication data. In section 5.2.1 it states “The effect of providing screening around the boundary of the site was tested and found to have no significant effect due to the height of the noise sources on site. The effects of a barrier at receptor locations was also tested, but given the height limitations and minimum separation requirements that must apply to a barrier these options were found to be ineffective.”</p> <p>This section also points out that “However as the Project is still in an early stage of the FEED process the exact mitigation measures to be employed by the EPC contractor may vary as the plant configuration / attenuation is further refined. Nonetheless the overall sound power levels considered in this report and therefore the effects predicted at receptors represent a worst case scenario and the continuing FEED process will meet or ideally better these levels (e.g. lower).” This was reiterated in a memo from ERM to SDC dated 6 February 2015 when the applicant stated “The EPC contractor may be able during the detailed design process to further reduce sound power levels from the plant but we cannot confirm this until the detailed design is undertaken; as such the ES predictions are a reasonable worst case scenario.”</p>

		<p>To date the applicant has not provided any additional information to detail any reduction in noise due to the development of the FEED and would ask if they are able to determine how extensive an impact this may have on noise attenuation. Without this level of detail the impact cannot be quantified without assuming that there will be no improvement on the levels predicted.</p> <p>The ES chapter section 5 goes onto describe the main sound emitting equipment and any mitigation to be incorporated. The noise levels associated with most equipment is not specified and neither is the reduction due to mitigation but it does indicate where mitigation has been considered.</p> <p>In order to determine if further mitigation would be effective in reducing the overall noise levels it is necessary to first identify the dominant noise source or sources which will affect any individual receptor. Where this noise source is enclosed it may be possible to increase the mitigation by providing acoustic cladding or increasing the specification of the cladding to the inside of the enclosures.</p>
4.4	Applicant	<p>The Environmental Statement (ES) assumed no audible tones. Is this matter still under consideration, as set out in para 1.2.3 of the SDC document and would it be possible to mitigate to reduce audible tone?</p> <p>SDC Answer: As referred to in the SDC document in 1.7 Draft Requirement for Operational Noise SDC have amended subsections (5) and (6). No additional information has been provided by the applicant since the Issue Specific Hearing into the Environmental Impact Matters.</p>
4.5	Applicant	<p>The SDC document suggests that actual noise levels, rather than 30dB, should be used in the noise assessment in para 1.2.4.</p> <p>i) Comment on the effects that this would have and whether the applicant has adopted a worst-case evaluation of the impact on receptors like Old Lodge and any other receptors that would move into the worst case category.</p> <p>SDC Answer: The properties where the night time background noise level has been amended to 30 dBA are Foreman’s Cottage, Barlow, Long Drax and Old Lodge. Only one property, Old Lodge, will move categories from the +5 to the +10. The noise level on Landing Lane and the properties affected are not presented in the ES Volume 2 Chapter B. The paragraph below Table 3.1 in this chapter indicates with respect to the measurements on Landing Lane taken in 2014 that “the measurements were limited to</p>

		<p>checks in the evening and night to confirm that noise levels were below the lower threshold, and are not therefore, presented in the full table of results.” It is, therefore, assumed that the night time levels are below 30dB_A but to what extent and which category of effect they would fall is not known.</p> <p>ii. Set out the number of affected receptors in the +10dB and +5dB categories and any mitigation proposed.</p> <p>SDC Answer: Properties in +10dB category: Foreman’s Cottage and Drax Abbey Farm for both day and night time periods, the village of Barlow and Old Lodge during the night. Possibly Landing Lane, Hemingbrough.</p> <p>Properties in the +5dB category: in addition to those above Old Lodge and Landing Lane Hemingbrough during the day and night periods, Long Drax and possibly Barlow (depending on the background day time level used in the assessment) during the night time period.</p> <p>Again it should be noted that the impact on Landing Lane is not quantified. SDC cannot determine, therefore, the true extent of the increase in noise level and hence the impact.</p> <p>SDC do not have sufficient information to determine how many residential properties in the villages of Barlow, Hemingbrough and Long Drax will be affected by the increase in levels quoted by in the Table 4.2 reproduced in the document Operational Noise – Note on Technical Issues.</p>
4.8	Selby District Council	<p>Comment on and justify the target level ratings which should be applied in R23 and their achievability.</p> <p>SDC Answer: SDC have amended Requirement 23 as below to represent the wording and levels which SDC would find acceptable. The rating levels during the day and night time are based on the measured background levels and allowing an increase of up to 5dB_A. This level of increase was agreed with the applicant in July 2014 as an appropriate level of increase under BS4142:1997 as an increase of up to 5dB was described as “of marginal significance” and has been the level accepted by SDC in relation to planning applications. As BS4142:2014 sees an increase of +5dB as an “indication of an adverse impact” SDC is to reconsider its position in respect to acceptable noise levels increase due to planning development.</p>

The British Standard BS4142:2014 Method for Rating and Assessing Industrial and Commercial Sound is designed for use in this type of assessment and in Section 11 indicates that the initial estimate of the impact can be obtained by subtracting the background level from the specific sound and that typically the greater this difference, the greater the magnitude of impact. As previously stated a difference of +10dB or more is likely to be an indication of “significant adverse impact” and +5dB “adverse impact”. The results of this assessment may then be considered in relation to the context as referred to in this section and SDC have previously presented their views on this issue in Section 1.2.5 of SDCs Comment on Operational Noise – Note on Technical Issues.

Whilst the Planning Policy Guidance and the Noise Policy Statement for England refer to noise assessment in terms of “Observed Adverse Effect” and “Significant Observed Adverse Effect” the guidance also points out that the management of noise associated with particular development are also considered in National Policy Statements including the Overarching National Policy Statement for Energy (EN-1). In section 5.11.5 of this document under Applicants Assessment it states that operational noise should be considered using the principles of the relevant British Standard. SDC have previously stated that the appropriate British Standard in this case is BS4142 as referred to in Section 1.2.5 of Comment on Operational Noise – Note on Technical Issues

With respect to the achievability of the levels in the table below SDC would advise you that the applicant has stated that “no further mitigation possible at this point in time for the external areas.” (Memo dated 6 February 2015 from Roderick Ellison of ERM to SDC). As discussed above this document also points out that further attenuation may be identified during the development of the FEED but it is not known how extensive this attenuation will be and if the levels below could be achieved. At the current predicted levels at the receptors the limits given in version of Requirement 2 given below will not be achievable for the following properties:

[REDACTED]

An additional obligation has been added to 23(3) to require mitigation to be carried out where the monitoring carried out is found to breach the levels in table in 23(2). However if all possible mitigation has been carried out hence further mitigation is not possible this section again cannot be complied with.

It is SDCs understanding that where a condition/requirement cannot be complied with it will not meet the six tests referred to in the National Planning Policy Framework Paragraph 206 as it would not be “reasonable”. It would, therefore, be necessary to determine if the levels are achievable before imposing this requirement.

Proposed Requirement 23

Operational noise

23.(1) The authorised development may not be brought into commercial use until an operational noise monitoring and mitigation scheme has been submitted to and approved by the relevant planning authority.

(2) The scheme submitted pursuant to sub-paragraph (1) must be based on the requirement that the level of noise emitted from the authorised development following commissioning shall not exceed the free-field noise levels listed in the fourth and fifth columns of the following table, except in the case of an emergency, or unless otherwise agreed with the relevant planning authority:

Receptor number	Receptor at which noise level is measured	Background noise levels (Daytime)	Day time noise rating levels (0700 to 2300) (as per BS4142:2014)	Night time noise rating levels (2300 to 0700) (as per BS412:2014)
		$dB_{L_{A90}}(T)$ where T is the daytime period.	$dB_{L_{Aeq}}(1 \text{ hour})$	$dB_{L_{Aeq}}(8 \text{ hour})$
1	Foreman's	35	Background +5dB	33

			Cottage			
	2	Wren Hall	35	Background +5dB	40	
	3	Camblesforth	43	Background +5dB	40	
	4	Barlow	35	Background +5dB	29	
	5	Drax Abbey Farm	36	Background +5dB	31	
	6	Long Drax	32	Background +5dB	31	
	7	Old Lodge	32	Background +5dB	32	
	8	Landing Lane	32	Background +5dB		Unable to provide an acceptable level until the applicant provides details of the background level during the night time period.
		<p>(3) The scheme submitted pursuant to sub-paragraph (1) must include:</p> <p>(a) a programme for the monitoring of noise generated by the operation of the authorised development;</p> <p>(b) the locations at which operational noise will be monitored;</p> <p>(c) the method of noise measurement;</p> <p>(d) the reporting of noise measurements (including those required by sub-paragraph (5)) to the relevant planning authority;</p> <p>(e) where it is found that the measured noise levels exceed the limits laid down in sub-paragraph (2) the report shall include a scheme of mitigation demonstrating how the limits will be achieved. The mitigation shall be agreed by the relevant planning authority and implemented within agreed timescales. Following the completion of the mitigation measures retesting as agreed with the relevant planning authority shall be</p>				

		<p>undertaken; and</p> <p>(f) the noise mitigation measures and acoustic ventilation to be implemented at receptor number 1 (Foreman's Cottage) and receptor number 5 (Drax Abbey Farm), including a programme for their implementation, with the aim to achieve an acceptable noise level inside bedrooms between the hours of 2300 and 0700, consistent with World Health Organisation guidelines and British Standard 8233 (30 dB $L_{Aeq, 2300 \text{ and } 0700}$).</p> <p>(4) The approved noise monitoring and mitigation scheme must be implemented in accordance with the programme it contains, and the noise levels in sub-paragraph (2) must be adhered to at all times during normal operation of the authorised development, except in an emergency, or unless otherwise approved by the relevant planning authority.</p> <p>(5) Overall sound at residential properties from the operation of the authorised development must not exhibit any acoustic features including audible tonal noise, prominent impulses or specific features (which are not tonal nor impulsive though otherwise are readily distinctive against the residual acoustic environment,) as defined using the objective method for assessing audibility of tones in Annex D of British Standard 4142:2014 and such that the measured tonal correction (K_t) should equal zero decibels.</p> <p>(6) Mitigation must be applied during the procurement and commissioning of the authorised development in order to demonstrate that sub-paragraph (5) can be complied with and, if any acoustic features including audible tonal noise, prominent impulses or specific features (which are not tonal nor impulsive though otherwise are readily distinctive against the residual acoustic environment,) are observed during commissioning of the authorised development, it must be analysed to identify the cause and corrective measures must be applied so as to comply with sub-paragraph (5).</p>
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