

SUMMARY PROOF OF EVIDENCE  
OF  
SIMON STEPHENSON  
ON BEHALF OF CORNWALL COUNCIL

APPEAL REFERENCE: APP/DO840/A/09/2113075  
(PLANNING AUTHORITY REFERENCE 08/00761)

In respect of the Planning Appeal by SITA Cornwall Ltd

Relating to the decision by the former Cornwall County Council (now Cornwall Council) to refuse planning permission for the Cornwall Energy Recovery Centre (CERC) and associated development on land at Rostowrack Farm, Wheal Remfry, Goonvean and Parkandillick Dryers St Dennis St Austell Cornwall.



## **1 Introduction and Scope of Evidence**

- 1.1 My name is Simon Stephenson. I am a Principal Consultant in the Acoustics and Vibration group of Bureau Veritas. I hold a Bachelor of Science (Honours) degree in Physics and I am a member of the Institute of Acoustics and a Chartered Engineer.
- 1.2 This Inquiry is being held into an appeal against Cornwall County Council's refusal of SITA Cornwall Limited's planning application to develop an energy from waste plant and ancillary development at Rostowrack Farm, St. Dennis, near St. Austell, Cornwall.
- 1.3 I was first instructed by Cornwall County Council to provide assistance in reviewing the Environmental Statement (ES) for the Cornwall Energy Recovery Centre (CERC) in April 2008. My evidence addresses the noise issues associated with the environmental and community impact of construction works and the operation of the proposed development.

## **2 Site and Scheme Description**

- 2.1 The proposal is to be located at land in and around Rostowrack Farm at St. Dennis, near St. Austell, Cornwall. There are several residential properties that will be affected by noise from the development as well as various footpaths in the vicinity of the proposal site and site access routes.
- 2.2 The current noise environment in the area is mainly influenced by noise from a clay processing plant and china clay workings as well as noise from traffic on the local roads. At night, the current noise environment is principally influenced by noise from the clay processing plant.
- 2.3 The development proposal is for a twin steam energy recovery facility with a single steam turbine generator designed to utilise the heat generated by combustion of waste. The CERC is estimated to generate a total of 350 vehicle movements per day.

## **3 Introduction to Noise Indices**

- 3.1 Noise is defined as unwanted sound and is measured on a logarithmic scale of 'decibels', abbreviated to dB. Because it is a logarithmic measure, normal arithmetic processes do not apply in a simple manner.

## 4 Review of Policy and Guidance

- 4.1 Government guidance is provided primarily through Planning Policy Guidance (PPG) 24 (Planning and Noise). The document gives guidance to local authorities in England on the use of their planning powers to minimise the adverse impact of noise.
- 4.2 PPG24 provides clear guidance on how to assess noise from industrial and commercial developments. The document suggests that BS 4142 can be used to assess industrial noise where appropriate and states that “*the character of the noise should be taken into account as well as its level.*”
- 4.3 In addition to PPG 24, I have determined that the relevant development plan policies are:
- i. Policies 3 and 6 of the Cornwall Structure Plan;
  - ii. Policy C1 of the Cornwall Waste Local Plan;
  - iii. Policy 37 of the Restormel Borough Council Local Plan.

## 5 Methodology for Assessing Noise Impact

- 5.1 A person’s response to a noise depends on many different factors. Consequently, the impact of operational noise associated with the proposed development should be assessed by considering:
1. the noise level difference;
  2. the noise change; and
  3. the final absolute level.
- 5.2 In other words, it is appropriate to undertake:
1. a BS 4142 assessment;
  2. to assess the noise change in terms of ambient noise and diurnal levels, as well as changes in other parameters such as the number and level of  $L_{Amax}$  events and the underlying background  $L_{A90}$ ; and
  3. to compare absolute levels against the criteria set out in BS8233 and World Health Organisation (WHO) guidance.
- 5.3 For long-term construction activity, I believe that it is relevant to adopt the approach suggested in Minerals Policy Statement (MPS) 2 by assessing the noise level due to construction activities

at the exterior of any residential properties, relative to the existing background noise level during the daytime (subject to a maximum free-field level of 55 dB  $L_{Aeq,1h}$ ). For short-duration activities, such as earth bund construction, I believe that a temporary higher daytime limit of 70 dB  $L_{Aeq,1h}$  would be appropriate.

5.4 My suggested criteria are summarised in Table 5.1:

**Table 5.1: Criteria for Assessing Noise**

Type of Receptor	Type of Noise	Type of Assessment	Relevant Guidance / Standards
Residential (operational phase)	All-encompassing ambient noise	Absolute noise level assessment	BS 8233 / WHO Guidance
	All-encompassing noise	Noise change	IEMA/IOA Draft Guidelines for noise impact assessments / Design Manual for Roads and Bridges (DMRB)
	Noise from industrial premises	Level difference	BS 4142
Residential (construction phase)	All-encompassing construction noise	Absolute noise level assessment	BS 5228 / MPS 2 / Advisory Leaflet 72
	All-encompassing construction noise	Noise change	BS 5228
Rights of Way (operational / construction phase)	Specific (intruding) noise	Level difference	WHO Guidance
	All-encompassing noise	Noise change	IEMA/IOA Draft Guidelines for noise impact assessments BS5228 5dB method (for construction noise)
	All-encompassing ambient noise	Absolute noise level assessment	WHO / Minerals Planning Guidance (MPG) 11

## 6 Analysis of the ES and Noise Addendum Report

6.1 I have undertaken a review of the Environmental Statement relating to this application and have undertaken my own assessment of the impact due to the development.

6.2 The criteria adopted in the ES attempt to combine an assessment of the level difference and absolute level of the noise into one set of impact criteria. However, there are several problems in the way that this has been undertaken.

6.3 Firstly, the ES classifies a situation where, according to BS4142, complaints are likely, as being only a 'moderate' impact. There is also a problem with the way that the absolute noise levels are used in the significance criteria tables because they erroneously compare specific

noise from fixed plant against absolute level criteria for ambient (i.e. “all encompassing”) noise. By attempting to “separate out” the impact from HGV noise, the ES ignores the cumulative impact due to all noise sources combined. If the criteria suggested in the ES are used, it is only when noise levels exceed the WHO limit for onset of serious annoyance by more than 11 dBA that an effect of “major” significance has been judged to occur.

6.4 In addition, the ES does not assess the noise change, even though is one of the primary factors that influence the way people react to noise.

6.5 Consequently, it is concluded that the significance criteria used in the ES fail to properly identify the impact due to noise and, in particular, fail to properly assess the cumulative impact and change in noise climate.

## **7 Assessment of Operational Impact on Residential Properties**

7.1 I have assessed the potential impact of the proposed development in several different ways using the various impact assessment methods that are available.

7.2 The BS 4142 assessment shows that **complaints are likely** at some properties or of **marginal significance** at others. Complaints are likely at all of the assessed locations during the peak hour.

7.3 The absolute noise level assessment shows that Hawthorns and dwellings in western Treviscoe will move from being below the level for onset of **moderate annoyance** to above that value and the rear gardens to the properties at La Mount will move from a situation where the noise level slightly exceeds the level for onset of moderate annoyance to being **well above the threshold for serious annoyance**.

7.4 The noise change assessment shows that there will be a **significant negative impact** due to cumulative operational noise from the development, particularly in Treviscoe, La Mount and Hawthorns

7.5 The results of the DMRB style assessment shows that there will be a **major** impact at Hawthorns and Treviscoe, a **moderate** impact at La Mount and Bodella Farm and a **minor** impact at Rostowrack Farm due to operational traffic.

## **8 Impact due to Operational Noise on Public Rights of Way**

- 8.1 The assessment shows that the **difference** between the noise due to the development and the background noise level cannot realistically be classified as “low”. The change in ambient noise level will range from +6 to +26 dBA and will result in a **significant change** in the noise character of the area, particularly on the footpaths adjacent to the access routes.
- 8.2 According to the **absolute** noise level assessment, noise levels on public footpaths will exceed the WHO criterion for **onset of serious community annoyance** by some 5 – 14 dBA (and the old MPG11 noise limit for public spaces will be exceeded during the peak hours).

## **9 Assessment of Impact due to Construction Noise on Residential Properties**

- 9.1 The results of the **noise change** assessment show that there will be **significant changes** in the ambient noise environment at all of the locations assessed for some periods of the construction programme.
- 9.2 The **absolute** noise level assessment shows that noise from construction activities will **exceed the guideline noise limit** of 70 dBA at the façade of residential properties contained in Advisory Leaflet 72 for some of the construction period. The absolute noise limit contained in MPS2 will also be exceeded for much of the time.
- 9.3 With respect to the **level difference** assessment, it is concluded that the MPS2 guideline relative noise limits (i.e. taking the background noise into account) will be **exceeded** throughout much of the construction programme.

9.4 The high levels of noise predicted for the construction phase for this development demonstrate that there is a possibility of significant disruption during construction of the CERC and haul road. Consequently, it is proposed that planning conditions should be imposed limiting construction noise, making allowances for temporary noisy activities where necessary.

## **10 Assessment of Impact due to Construction Noise on Rights of Way**

10.1 The assessment shows that there will be a large **difference** between the construction related noise and the background noise level on many public footpaths in the vicinity of the site and haul routes. Noise from construction activities will be intrusive in nature and out of character with the existing “soundscape”.

10.2 According to the **absolute** noise level assessment, noise levels on public footpaths will exceed the WHO criterion for onset of **serious community annoyance** (and the old MPG11 noise limit for public spaces will be exceeded at some locations).

10.3 The change in ambient noise level will range between +6 to +34 dBA and will result in a **significant change** in the noise character of the area, particularly on the footpaths adjacent to the access routes during construction of those routes.

## **11 Policy Compliance**

11.1 Table 11.1 shows an analysis of the noise impact from the development in line with the Development Plan Policies.

**Table 11.1: Development Plan Policy Compliance Table**

Policy Plan	Policy No.	Policy Requirement	Comment	Compliance?
Cornwall Structure Plan	3	Development should <u>avoid</u> , directly or indirectly, risk of <u>significant levels</u> of pollution or contamination to air, land, soil or water, including <u>noise</u> and light pollution	The impact of both operational and construction noise will be significant.	No
	6	Development should be compatible with... the <u>protection</u> of the environment and <u>local amenity</u> from <u>significant adverse effects</u> of waste management facilities	Noise will result in a significant adverse effect during both construction and operational phases. Both construction and operational noise will result in a loss of amenity to local residents and users of public footpaths.	No
Cornwall Waste Local Plan	C1	Proposals for waste management facilities will be carefully evaluated for potentially damaging effects and will not be permitted unless it can be satisfactorily demonstrated that :		
	a)	the development includes appropriate <u>measures to prevent a significant risk of pollution</u> ;...	Measures to minimise the effect of noise from the development were dismissed by the appellant as not required during the application	No
	c)	proposed site management measures can be ensured to <u>protect local amenity</u> through minimising emissions of noise, dust and odour, fumes and control, litter and vermin and birds;...	Both construction and operational noise will result in a loss of amenity to local residents and users of public footpaths.	No
	e)	the <u>traffic</u> to and from the development would not <u>prejudice amenity</u> or highway safety and that there is adequate highway capacity;...	The traffic to and from the development will result in a loss of amenity to local residents and users of public footpaths, as demonstrated by the DMRB assessment as well as the absolute level, noise change and level difference assessments	No
	h)	the <u>cumulative impact</u> of individual effects will not cause <u>unacceptable detriment to local amenity</u> or the natural and historic environment...	The cumulative noise impact due to all of the sources associated with the development will result in a loss of amenity to local residents and users of public footpaths.	No
Restormel Borough Council Local Plan	Policy 37	Development proposals will not be permitted that cause harm from noise	The BS 4142 assessment shows that complaints are likely, primarily due to noise from HGVs. Absolute ambient noise level will in some cases move to above level for onset of serious annoyance.	No

## **12 Response to Appellant's Proposals for Mitigation**

- 12.1 Prior to submitting my main proof of evidence, I had not had sight of full and detailed proposals for mitigation.
- 12.2 I will provide my own detailed analysis of these measures in my rebuttal proof of evidence, once I have reviewed the detailed proposals and the appellant's predicted residual noise impact.

## **13 Planning Conditions**

- 13.1 Various conditions relating to noise have been proposed in the Statement of Common Ground (conditions 12, 13, 21, 24, 30, 33 and 34). However, no noise limits have been proposed, even though the appellant proposed a night-time noise limit of 42 dBA in the original application.
- 13.2 Once proofs of evidence have been exchanged, I will give further consideration to any additional planning conditions that might be proposed, in addition to those already contained in the Statement of Common Ground.

## **14 Conclusions**

- 14.1 A person's response to a noise depends on factors including the margin by which it exceeds the background noise level, its absolute level, the time of day, the change in the noise environment etc., as well as local attitudes to the premises and the nature of the neighbourhood. In other words, it is not sufficient to rely on only one method of assessing a noise source but, if a holistic approach is to be taken, it is necessary to consider all of these factors
- 14.2 With this in mind, I consider that the criteria adopted in the ES for assessing the impact due to noise from the proposed development are inadequate.
- 14.3 When assessing the level difference (i.e. undertaking a BS 4142 assessment), I have concluded that the likelihood of complaints ranges from being "marginal" to well above the "complaints likely" threshold.
- 14.4 Many locations will move from being below the level for onset of moderate annoyance to above that value. Of particular concern, however, the properties at La Mount will move from a

situation where the noise level already exceeds the level for onset of moderate annoyance to being well above the threshold for serious annoyance.

- 14.5 With respect to changes in ambient noise, I have concluded that the development will result in a significant increase in noise levels resulting in a significant negative impact, particularly at the properties in the western extent of Treviscoe.
- 14.6 Taking into account the relevant guidance documents, I have concluded that the development will result in an unacceptable noise impact, contrary to the provisions of the development plan policies.