

Cornwall Energy Recovery Centre (CERC), Rostowrack Farm, St. Dennis, Cornwall

In respect of the Planning Appeal by SITA Cornwall Ltd

Cornwall Council Reference: CC4/1

Planning Inspectorate Reference: APP/D0840/A/09/2113075/NWF

Summary of Proof of Evidence of

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Ecology

1.0 INTRODUCTION

- 1.1 My name is Kevin Webb and I am the Principal Ecologist for Bureau Veritas UK Ltd.

- 1.2 I was appointed to act for Cornwall Council (previously Cornwall County Council) in May 2008 and undertook a technical review of the Ecological Assessments submitted by the applicant in support of the planning application.

2.0 QUALIFICATIONS

- 2.1 I am a full member of the Institute of Ecology & Environmental Management (IEEM), and hold a BSc (Hons) in Zoology (Animal Ecology) and an MSc in Soil Science both awarded by the University of Aberdeen.

3.0 SCOPE OF EVIDENCE

3.1 Two sites of ecological importance are considered.

- Breney Common, Goss and Tregoss Moors Special Area of Conservation (SAC); and,
- St Austell Clay Pits SAC.

3.2 Both sites are designated as SAC's under the EC Habitats Directive.

3.3 Breney Common and Goss and Tregoss Moors SAC is designated for three Annex I habitat types and St Austell Clay Pits SAC supports a population of one Annex II species.

3.4 The Regulations require competent authorities to consider or review planning permission, applied for or granted, affecting a European site, and to restrict or revoke permission where the integrity of the site would be adversely affected. Cornwall Council instructed Bureau Veritas to produce a scientific report to inform 'shadow' Appropriate Assessment to inform the Public Inquiry.

3.5 The conclusions of that report were that for Breney Common and Goss and Tregoss Moors SAC, in respect of all designated features it cannot be ascertained that the CERC would not have an adverse effect upon the integrity of the site either alone or in combination with other projects.

3.6 Further, it was concluded that for St Austell Clay Pits SAC, it cannot be ascertained that the CERC would not have an adverse effect upon the integrity of this site either alone or in combination with other projects.

4.0 DESCRIPTION OF THE SCHEME

- 4.1 The project will contribute to the deposition of nutrient Nitrogen (kg N/ha/yr) and the deposition of Acid (keq H⁺/ha/yr) along with a number of other airborne pollutants.

5.0 PLANNING POLICY AND LEGISLATION

5.1 Planning Policy most relevant to the application is summarised below.

- PPS9 on Biodiversity and Geological Conservation;
- PPS9 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System;
- Policy L6 (Cornwall Local Waste Plan); and,
- Non-Statutory Policies (UK Biodiversity Action Plan).

5.2 The legislation most relevant to this application is *The Conservation (Natural Habitats & c.) Regulations 1994 (as amended 2000)*¹.

¹ www.hmso.gov.uk/si/si2000/20000192.htm

6.0 DESIGNATED FEATURES OF BRENEY COMMON AND GOSS AND TREGOSS MOORS SAC

- 6.1 Breney Common and Goss and Tregoss Moors SAC is designated for the presence of three Annex I habitat types (transition mire and quaking bog, European dry heath and Northern Atlantic wet heaths with *Erica tetralix*) and one Annex II species the marsh fritillary (*Euphydryas aurinia*) butterfly.
- 6.2 European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. Nearly all dry heath is semi-natural, being derived from woodland through a long history of grazing and burning.
- 6.3 Northern Atlantic wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage. Wet heath is an important habitat for supporting a range of vascular plant and bryophyte species.
- 6.4 The term 'transition mire' relates to vegetation is transitional between acid bog and alkaline fens. They are wetland habitats that form across the surface of shallow ponds, characterized by slow groundwater flow, causing the pond water to be acidic and low in dissolved oxygen. The roots and rhizomes of invading wetland plants form floating mats across the pond, which creates an unstable, "quaking" surface.
- 6.5 Marsh fritillaries are essentially grassland butterflies in the UK, and although populations may occur occasionally on wet heath, bog margins and woodland clearings (of more than 1 hectare in size), most colonies are found in damp acidic or dry calcareous grasslands.
- 6.6 The butterfly requires extensive habitat networks in order to survive (probably comprising many tens of hectares). In regions where habitat loss has been severe, habitat restoration should be given a high priority.

- 6.7 In Britain the marsh fritillary has become extinct over a large part of its former range, having declined by over 62% in the last 150 years with colonies estimated to be disappearing at a rate of well over 10% per decade.

Condition Assessments

- 6.8 Breney Common and Goss and Tregoss Moors SAC is split into 19 distinct units of which 18 units are currently in 'unfavourable' condition with only one unit classified as favourable.

7.0 DESIGNATED FEATURE OF ST AUSTELL CLAY PITS SAC

- 7.1 St Austell Clay Pits SAC is designated for the presence of one Annex II species Western rustwort (*Marsupella profunda*), which is a liverwort and the only Annex II priority species which currently occurs in the UK. Its status in Europe is Vulnerable and it is known in the UK from only ten sites in Cornwall which support a large proportion of the known global population.

Conservation Objectives

- 7.2 The Natural England Conservation Objectives (2008) for Western rustwort at St Austell Clay Pits SAC is to maintain the habitat of the active china clay quarries and spoil tips within the site in favourable condition, or to restore these features to favourable condition if they are judged to be unfavourable.
- 7.3 The latest condition assessment compiled in November 2009, has classified 100% of the site area of St Austell Clay Pits as 'unfavourable declining' condition.

8.0 ASSESSMENT OF ECOLOGICAL EFFECTS UPON BRENEY COMMON AND GOSS AND TREGOSS MOORS SAC

- 8.1 The project will contribute to the deposition of nutrient Nitrogen (kg N/ha/yr) and the deposition of Acid (keq H⁺/ha/yr) on the Breney Common and Goss and Tregoss Moors SAC. These effects will be primarily associated with the operational phase of the development, when stack emissions and emissions from road traffic are acting together.
- 8.2 Both Breney Common and Goss and Tregoss Moors SAC and St Austell Clay Pits SAC are currently classified as being in unfavourable condition during the most recent condition assessments undertaken by Natural England. Both sites are currently experiencing significant exceedances of critical load for both Nitrogen and acid. The CERC will add further Nitrogen and acid deposition to both sites and when assessing the in-combination contribution of Penare Farm and the headroom at the Peak Power Plant this contribution is significantly greater.

Effect on designated habitats

- 8.3 Background levels of nitrogen deposition averaged across the Site (as provided by APIS) is 17.8kg N/ha/yr which translates to an exceedance of the minimum Nitrogen Critical Load (10kg/ha/yr) of 176%. The SAC is becoming overgrown and traditional open habitats are being replaced by woody species and grasses are becoming more predominant. Any further deposition of Nitrogen and hence nutrient enrichment, is therefore likely to contribute to this trend.
- 8.4 Quaking bogs are very sensitive to acid deposition (quoted as 0.66keq/ha/yr a critical load exceedance of 244% from the applicants' supplementary submission) as they do not have a source of soil or bedrock which can potentially neutralise acidic ions. Increased acidification can cause direct plant mortality but also alter the species composition.
- 8.5 In view of the current Conservation Objectives for the SAC and the unfavourable condition assessment completed by Natural England in 2009 it

is clear that allowing further deposition will contribute to the deterioration of habitats across the SAC.

Effects on Marsh Fritillary Butterfly

- 8.6 The process contribution from the CERC (maximum of 0.00517 keq H+/ha/yr or 1.1% of current critical load) will clearly increase the current deposition levels across the SAC. Background levels (Table 8.3) of 1.61keq/ha/yr for acid deposition already exceed the advised critical load for habitats supporting marsh fritillary butterfly by 343%.
- 8.7 It is likely that any deterioration of this habitat will lead to a decline of the butterfly populations, especially as the Site is currently in unfavourable condition.

9.0 ASSESSMENT OF ECOLOGICAL EFFECTS UPON ST AUSTELL CLAY PITS SAC

- 9.1 100% of the site area of St Austell Clay Pits is defined as being in 'unfavourable declining' condition. Population size has declined from a total coverage of 6,400 cm² in 1999, to 2,520 cm² in 2003. This is mainly due to increased shading from woody species, competition from mosses and other liverworts and some large-scale tipping of china clay waste (Holyoak, 2003).
- 9.2 The production of nitrogen oxides (NO_x) from the CERC can have a detrimental effect upon the designated plant communities of the St Austell Clay Pits SAC by altering the vegetation communities through increasing the available nutrients.
- 9.3 It is already apparent that competition from vascular plants is having an adverse effect on Western rustwort populations, and that current management operations carried out by Natural England are not sufficient to prevent loss of suitable habitat.

10.0 CONCLUSION

Breney Common and Goss and Tregoss Moors SAC

- 10.1 In respect of the Annex II species, marsh fritillary butterfly, I cannot ascertain that the CERC would not have an adverse effect upon the integrity of this designated feature alone or in combination with other projects through changes in nitrogen and acid deposition.
- 10.2 In respect of all three Annex I habitats I cannot ascertain that the CERC would not have an adverse effect upon the integrity of this designated feature alone or in combination with other projects through changes in nitrogen and acid deposition.

St Austell Clay Pits SAC

- 10.3 In respect of the Annex II species, Western rustwort, I cannot ascertain that the CERC would not have an adverse effect upon the integrity of this designated feature alone or in combination with other projects through changes in nitrogen deposition.