APP/SMO/3

BILSTHORPE ENERGY CENTRE

PUBLIC INQUIRY UNDER SECTION 77 OF THE TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED) INTO THE PROPOSED DEVELOPMENT OF AN ENERGY FROM WASTE FACILITY ON LAND AT BILSTHORPE BUSINESS PARK, BILSTHORPE, NOTTINGHAMSHIRE

PINS REFERENCE: APP/L3055/V/14/3007886
LPA REFERENCE: ES/2950

Summary Proof of Evidence of Stephen Othen
On
Air Quality and R1 Recovery Status

November 2015

TABLE OF CONTENTS

TABLE OF CONTENTS 1
1 Introduction 2
2 Recovery Definition 3
3 Air Quality and Health Impact 4
4 Response to Other Parties 5
5 Conclusions 7

1 Introduction

1.1 I am the Technical Director of Fichtner Consulting Engineers Ltd. I hold a Master of Engineering degree in Chemical Engineering from the University of Cambridge and I am a Chartered Chemical Engineer and Member of the Institute of Chemical Engineers.

1.2 I have worked at Fichtner Consulting Engineers Ltd since 1998 and I have worked for a variety of clients in a number of industries, but my main focus has been the waste industry. I have explained my experience in my main proof.

1.3 I have been working on the BEC proposal specifically since early 2013.

1.4 My evidence addresses the following points raised by the Inspector in the pre-Inquiry meeting:

a) "whether the facility would comprises a waste disposal or recovery operation"; and

b) "source emissions".

1.5 My evidence is also provided to respond to a number of concerns raised by Dr Chow relating to health impacts, and a number of points raised by interested parties, where these are not covered by the main matters above.

2 Recovery Definition

2.1 I have demonstrated that the BEC will be a Recovery Operation under the Waste Framework Directive. This is because the energy efficiency factor, calculated according to the Environment Agency's methodology, would be 0.674 if the plant only generated electricity, or slightly higher if the plant exports heat as well. This factor is above the threshold value of 0.65 for being defined as Recovery.

2.2 I have explained in my main proof that it was not possible to make an application for R1 status at the time of the planning application. Therefore, the Applicant proposed, and the waste planning authority accepted, that a planning condition could be imposed to require the Applicant to obtain provisional R1 status prior to starting operations.

2.3 While I still consider that it should not be necessary for a developer to obtain design R1 status before applying for planning consent, and that a planning condition provides sufficient reassurance, it is now possible for the Applicant to apply for design stage R1 status. Therefore, an application has been made and this can be found in CD75.

2.4 While the application is based on a single operational case, I have considered a further seven cases in my proof and demonstrated that the BEC continues to be classified as a recovery facility in all of these cases.

3 Air Quality and Health Impact

3.1 None of the statutory authorities have raised concerns about the actual impact of the Appeal Proposal on air quality or health, but this is a concern of local people and the Inspector has asked to be informed about “source emissions”, which I consider to be referring, primarily, to emissions to atmosphere. Therefore, in my main proof I have summarised the results of the air quality and human health risk assessments which were submitted as part of the Environmental Statement, and stated that these assessments demonstrated that the impact of the BEC on local air quality would be negligible and that emissions from the facility were highly unlikely to have an adverse impact on human health.

3.2 I have also applied the latest guidance for air quality assessments and confirmed that these conclusions do not change.

4 Response to Other Parties

4.1 I have responded to three points made by Dr Chow.

4.2 He has suggested that the statement by Public Health England (previously the HPA) on incineration plants is not applicable to the BEC. I acknowledge that the HPA study only focuses on emissions to atmosphere (paragraph 5), on the basis that emissions via solid ash residues and cooling water are adequately controlled. However, this is also the case for the BEC. For emissions to air, the BEC would be required to meet the same emission standards as a conventional incineration plant. The syngas which is produced would be fully combusted in the gas engines. This means that the HPA study, which draws on studies into emissions from incinerators, is entirely applicable to the BEC.

4.3 He has suggested that the effluent produced by washing the syngas will contain multiple pollutants and that these pollutants would be released into the local aquifer. I do not accept either of these points. The effluent would be passed through an effluent treatment plant on site before being discharged to sewer for further treatment in a sewage treatment works off site. The effluent discharged to sewer would be regulated by the Environment Agency and Severn Trent Water. This means that the effluent would not be released into the local groundwater and Dr Chow's concerns are groundless.

4.4 He has suggested that there is a health risk from the release of micro-particles from steam generated by slag processing which is released to atmosphere through the cooling towers. However, this is based on a misunderstanding of the process. The slag handling system does not produce steam, as sufficient cold water is used to avoid this, and all of the slag handling equipment is contained within the building so that, even if some steam is formed occasionally, this will not be released to atmosphere. Also, the cooling towers are unrelated to the slag quenching – they are used to support the syngas cooling circuit. Hence, Dr Chow does not need to be concerned about the release of small particulates from the cooling tower exhaust.

4.5 I have responded to a number of points raised by UKWIN and other third parties in my main proof. In particular,

a) I have explained the use of different waste compositions when assessing the benefits of the BEC, showing that the BEC has a carbon benefit in all cases and that the adjustments suggested by UKWIN actually improve this benefit;

b) I have explained that the technology is not experimental and that, while the use of the technology may present a commercial risk to the Applicant, it does not present an environmental risk; and

c) I have pointed out that the Lock Street scheme, which UKWIN has suggested is equivalent to the BEC, is in fact very different as it was a disposal facility, rather than recovery.

5 Conclusions

5.1 In my evidence, I have demonstrated that the proposal would be defined as a Recovery Operation under the revised Waste Framework Directive, because the R1 Formula gives a result of 0.6756, which is greater than the threshold of 0.65, and this would increase when heat users are connected.

5.2 I have explained the assessment which I and my team carried out on air quality and health effects and confirmed that adverse impacts are highly unlikely. I have demonstrated that Dr Chow's concerns about other health impacts are without substance.

5.3 Finally, I have responded to concerns raised by UKWIN and other interested parties.