

Description Wressle development – CNG reverse gas compressors
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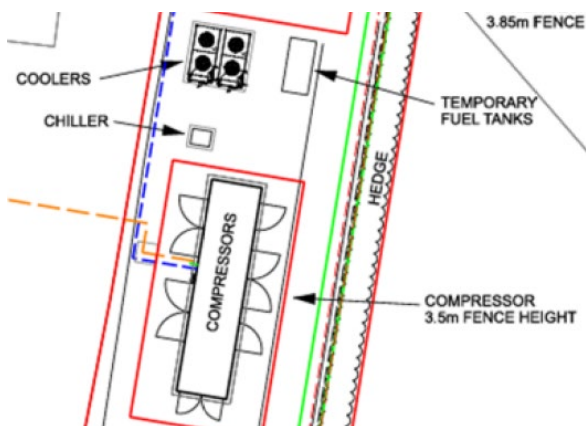
1. INTRODUCTION

Spectrum Acoustic Consultants are supporting Egdon Resources UK Limited in their planning and permit applications for further expansion at the Wressle oilfield site. Zetland Group are coordinating the application to the Environment Agency (EA) for a variation to the existing environmental permit.

Spectrum has prepared a Noise Impact Assessment (NIA) to support the application to the EA, and measured existing operating noise from the site and considered noise from new process and mechanical equipment sources that will be added to the development. In line with the requirements of the EA regarding noise mitigation, some measures have been recommended in the report for existing and new sources. Any other new equipment that might be being considered for this site would need to incorporate effective noise mitigation measures.

In the Wressle NIA, the total noise output from existing and new equipment was evaluated as being LwA 96dB which results in a sound pressure level of $L_{Aeq,T}$ of just 26dB at the nearest receptor NSR 1 over 500m away.

We are advised that additional compression equipment is being considered in the development and a potential vendor, CGN services, advises in a report¹ that sound pressure levels from their 2-compressor packaged acoustic enclosure is L_{pA} 64dB at 1m. Levels from the associated cooler are a little lower at L_{pA} 57 dB at 1m. The equipment size is indicated in the same report is as below:



The corrections for equipment size which would apply to the compressor enclosure would be 23dB and for the smaller cooler unit, 19dB. The sound power level of the compressor enclosure would therefore be LwA 87dB and the cooler LwA 76dB.

The logarithmically added total for the CGN Services equipment would be LwA 87dB, which when compared with the LwA 96dB assumed for the expanded Wressle plant, is not significant. The additional equipment might increase

¹ CNG Reverse Compression Project – High Bickington – Noise Impact Assessment EEC/EC2041-2 1/2/24

the total from LwA 96 dB by up to 1dB, which would mean an increase at Wressle receptor NSR 1 from $L_{Aeq,T}$ 26dB to 27dB. This remains far below both the LOAEL of $L_{Aeq,T}$ 40 dB and the background level at night of $L_{A90,T}$ 34dB advised within the NIA.

So, there will be no impact when adding in this equipment should it be required. The key point that the EA will take most note of is that the compressors are housed in a fully acoustically treated enclosure fitted with intake and discharge air silencer, and the accompanying coolers clearly have low speed intrinsically quiet fans.

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