NYM / 2012 / 0828 / FL

Our ref: 119211/DN/ADD1v1

06 December 2012

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Dear Adam

RE: Doves Nest – Potash/Polyhalite Drilling Noise Assessment - Addendum

Further to our recent correspondence, it is understood that, following the granting of planning permission for the potash/polyhalite drilling operations currently being undertaken at the site known as "Doves Nest", construction work has necessitated the excavation of a large amount of spoil at the site to create a stable platform for the drilling rig. This has resulted in a large spoil heap being created on the land immediately to the south of the platform area.

Consequently, permission is being sought to extend the boundary of the site to reflect this situation. As a noise assessment was previously produced to form part of the now determined planning application (WSP Acoustics Document ref. 19211 *Doves Nest – Potash/Polyhalite Drilling Noise Assessment* dated 21 May 2012), it is considered appropriate that a statement on the impact of noise as a result of the changes is produced.

Description of changes to site

It is proposed that the site boundary be extended further south than previously assessed. A site visit had been undertaken to make observations regarding the current situation.

The majority of the spoil that has had to be excavated has been used to form a large heap to the south of the previously permitted site boundary and is approximately 6 metres in height. There are also smaller spoil heaps around the perimeter of the current drilling site of around 1 to 2 metres in height.

Noise Assessment

In paragraph 2.2.2 of the previous noise assessment report, local noise-sensitive receptors were identified as being located in most directions from the site. The assessment approach was to use source noise data for the drilling rig similar to that proposed and construct a computer noise model of the local area. The identified noise-sensitive receptors were incorporated into the noise model as receptor points, source noise data was incorporated as a point noise source ate the drilling location and Ordinance Survey 10 metre ground contour data was included to model the propagation path of the noise from source to receiver, allowing for any acoustic attenuation that may be provided by topographical features.

Within paragraph 5.1.1 of the noise assessment report, it is stated that no perimeter noise bunding was incorporated around the drilling site boundary, although that in practice such bunding will be created when stripped top soil is stored on site.

Table 4 of the noise assessment report shows that, for even the most stringent adopted assessment criteria (in this case the night-time criteria), noise criteria are predicted to be

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comfortably met at both of the closest receptors to the proposed drilling site, when assuming no perimeter bunding.

Paragraph 6.1.3 of the noise assessment report states that noise attenuation can be afforded by the formation of earth bunds around the perimeter of the drilling site, for example where stripped soil has to be stored. To ensure the acoustic integrity of such bunds, they should be continuous and fully screen the line of sight between the receptors and the noise sources within the drilling site.

Minerals Policy Statement 2: Controlling and mitigating the environmental effects of mineral extraction In England - Annex 2: Noise (MPS 2) stated that reductions of between 5 and 10dB can be achieved by bunds close to the source, depending on whether the noise is partially or completely screened from the measurement point (e.g. the receptor). The National Planning Policy Framework (NPPF) which has superseded MPS 2 does not provide any guidance on how to determine the noise attenuation that can be afforded by noise barriers. However, the performance values presented within MPS 2 are also supported by the noise barrier attenuation calculation methodology detailed within BS5228: 2009: *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise* (BS5228-1). Accordingly the barrier performance values detailed within MPS2 remain valid and appropriate for use.

This shows that, in terms of noise propagation, the incorporation of acoustic screening such as bunding, particularly close to a noise source, can have the beneficial effect of attenuating noise for a given noise-sensitive receptor. It is therefore likely that the spoil heap will provide some noise attenuation to many of the identified noise-sensitive properties south of the site, or at the very least will result in noise levels at receptors no higher than previously predicted.

Conclusion

In summary, this document has identified that the noise levels predicted to be generated by the approved proposed drilling works were considered acceptable and meet appropriate daytime, evening and night-time assessment criteria determined in accordance with a stringent interpretation of applicable national guidance, including the NPPF and MPS 2 (which the NPPF has superseded). It has been identified that the results of the previous assessment remain valid, that the spoil heap will lead to noise levels of no worse than previously predicted, and in many cases will be of acoustic benefit to local noise-sensitive receptors to the south of the site.

In summary, it is concluded that the incorporation of the boundary extension does not affect the result of the previous noise assessment report.

If you have any questions regarding the above statement please do not hesitate to contact me and I will be pleased to assist.

Yours sincerely

Mike Barrett
Senior Acoustic Consultant