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consulting engineers

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3 August 2015

Dear John

Proposed Night-time Deliveries to Ringstead Quarry

Introduction

Mick George Limited are seeking to amend the current planning consent at Ringstead Quarry (NCC Application Ref. 12/00016/MIN) to enable night-time deliveries to the site. During the night-time periods there would be up to 5 vehicles per hour entering the quarry and tipping, no other plant or operations would be carried out outside the current permitted working hours.

To minimise any potential disturbance to the residents of Ringstead, it is proposed to create a specific tipping area, located close to the site entrance and weighbridge, at a distance of at least 700 metres from any residential property. To provide further protection, bunding would be constructed around the tipping area to ensure that all tipping operations were fully screened.

Careful management of the vehicles on site would be undertaken, to ensure that the site speed limit is maintained, to minimise any potential body slap from empty departing vehicles and to ensure that the tippers are lowered slowly, with the vehicle remaining stationary until the tipper has been fully lowered onto the body to minimise the tailgate banging.

This letter report presents an assessment of the noise levels associated with the proposed night-time operations.

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Applicable Standards and Guidelines

National Planning Policy Framework

The principal planning guidance in the UK was updated in March 2012 and is now contained within the National Planning Policy Framework[1]. At the heart of the NPPF is a presumption in favour of sustainable development, although environmental criteria should be set out to ensure that the permitted operations do not have unacceptable adverse impacts, with appropriate noise limits adopted to control noise.

The current technical guidance attached to the NPPF relating to noise was updated in March 2014[2], which covers mineral extraction and related processes, including aggregate recycling and the disposal of construction waste, provides guidance and advises upon acceptable levels of noise from minerals operations.

In relation to night-time noise, the guidance advises a night-time a limit of 42 dB $L_{Aeq,\ 1\ hour}$ should be adopted to minimise any potential adverse impacts.

World Health Organisation Guidelines

The World Health Organisation (WHO) have produced guidance specifically in relation to night-time noise[3].

The guidance is presented in terms of external and internal recommendations to minimise any potential adverse effects. Externally, the guidance advises that a level of 40 dB $L_{Aeq,\ 8\ hour}$ is equivalent to the lowest observed adverse effect level and advises this guideline value is recommended for the protection of public health from night-noise.

The guidance advises that an external night-time noise level of 30 $L_{Aeq,\ 8\ hour}$ would be equivalent to a level which would ensure that there were no adverse effects, as their research indicated that there were no detectable effects within properties below a level of 32 dB L_{Amax} (equivalent to an external level of 42 – 47 dB $L_{Amax,F}$ assuming an open window) with no physical awakenings identified below a level of 42 L_{Amax} internally (equivalent to an external level of 52 – 57 dB $L_{Amax,F}$ assuming an open window).

[1] Department for Communities and Local Government. The National Planning Policy Framework. March 2012.
[2] Department for Communities and Local Government. Planning Practice Guidance. Assessing Environmental Impacts from Minerals Extraction. 6 March 2014.
[3] World Health Organisation. Night Noise Guidelines for Europe. 2009.

Calculation and Assessment of Noise Levels

As indicated previously, to ensure any potential disturbance associated with the night-time operations was minimised, it is proposed to create a reception area close to the weighbridge, at least 700 metres from any residential properties, where the deliveries would be made. Bunding would be provided around the area to a height of approximately 3 metres, to further screen the operations from the surrounding properties.

Calculations of the noise levels associated with the HGV movements and tipping have been made on the basis of source term noise levels obtained from similar operations, using the methodology contained in BS 5228[4]. The calculations have been made upon the basis of 5 deliveries per hour overnight. The calculation details are attached to this letter.

The results of the calculations are summarised below:

- 14 dB $L_{Aeq,\ 1\ hour}$; and
- 39 dB $L_{Amax,F}$.

Considering the ambient (L_{Aeq}) noise levels, the calculations indicate very low levels of noise, 28 dB(A) below the acceptable night-time limit for minerals operations. Furthermore, the calculated levels are over 10 dB(A) below the WHO recommended limit of 30 dB L_{Aeq}, which seeks to ensure that there are no potential adverse impacts.

Consideration has also been given to the maximum noise levels associated with the vehicle movements and tipping operations, as high instantaneous levels can also be a potential source of disturbance. The calculations indicate a level of 39 dB $L_{Amax,F}$ associated with a tipping vehicle (principally attributable to the tailgate closing). This operation may just be audible outside the properties when noise from other surrounding sources, principally the main road, are very low. Internally, however, it is unlikely that the activities would be audible. The calculated maximum noise levels are at least 3 dB(A) below a level which the WHO determined would not cause any noticeable effects to sleep, and substantially below a level which would have any potential for awakenings.

On the basis that both ambient (L_{Aeq}) and maximum ($L_{Amax,F}$) noise are substantially below appropriate night-time limits, which seek to minimise potential adverse effects at night, the proposed operations would not give rise to any adverse effects upon the residents of Ringstead and would therefore be acceptable.

[4] British Standards Institute. Code of Practice for Noise and Vibration Control on Construction and Open Sites. Part 1:Noise. BS 5228-1+A1. 2014.

John Gough 4.
Mick George Limited 3 August 2015

Summary

Mick George Limited are seeking to amend the current planning consent at Ringstead Quarry (NCC Application Ref. 12/00016/MIN) to enable night-time deliveries to the site. During the night-time periods there would be up to 5 vehicles per hour entering the quarry and tipping, no other plant or operations would be carried out outside the current permitted working hours.

To ensure any potential disturbance to the occupants of Ringstead is minimised, it is proposed to create a new reception area close to the weighbridge, at least 700 metres from any dwellings, where the night-time deliveries would be made. To provide further protection, bunding would be provided around the reception area to ensure all tipping operations were fully screened.

Calculations and an assessment of the noise levels has been made, which indicated very low levels of noise within the village, substantially below a level which would have any potential to generate disturbance and adverse noise effects.

I trust that this is sufficient for your requirements. Please do not hesitate to contact me should you wish to discuss the matter further.

Yours sincerely

Les Jephson

Mick George Ltd - Ringstead Quarry - Proposed Night-time Deliveries

Calculated Noise Levels from Site Operations

03-Aug-2015

Receptor: Ringstead Village Uses BS5228
Height 50 m

Predicted Freefield Noise Levels

	Ref Level @10m		Ref Dist (m)	No. (/hr)	% On Time	Source Ht	Dist S-R	Barrier Ht	Dist S-B	Distance Attenuation Hard	Distance Attenuation Soft	CRTN Barrier Attenuation	Max Attenuation	**Activity LAeq [dB]**	**Overall LAeq [dB]**
HGV Arrival (Laden)	77.8	SEL	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**2.4**	
HGV Tipping	88.7	SEL	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**13.3**	
HGV Departing (Unladen)	78.1	SEL	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**2.7**	**14.0**
														Activity LAmax,F	
HGV Arrival (Laden)	71.2	LAmax,F	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**24.4**	
HGV Tipping	86.0	LAmax,F	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**39.2**	
HGV Departing (Unladen)	79.2	LAmax,F	10.0	5	-	60	700	62	20	-36.9	-44.1	-9.9	-46.8	**32.4**	

John Gough
Mick George Limited

3 August 2015