



## **Wickwar Quarry**

Review of Noise Issues in  
Connection with Planning  
Applications PT07/0577/RVC  
and PT07/058/RVC

October 2007

# Wickwar Quarry

## Review of Noise Issues in Connection with Planning Applications PT07/0577/RVC and PT07/058/RVC

JOB NUMBER: 5059805			DOCUMENT REF: 2007/Sept/13			
3	Additional Information	AL	MSW	MSW	AL	Oct 07
2	Minor Revisions	AL	MSW	MSW	AL	Sept 07
1	Issue	AL	MSW	MSW	AL	Sept 07
		Originated	Checked	Reviewed	Authorised	Date
Revision	Purpose Description	<b>ATKINS</b>				

## CONTENTS

<b>1.</b>	<b>INTRODUCTION</b>	<b>1-1</b>
<b>2.</b>	<b>STANDARDS AND GUIDELINES</b>	<b>2-1</b>
	Planning Policy Guidance Note 24	2-1
	Minerals Policy Statement 2	2-1
	British Standard BS4142	2-2
<b>3.</b>	<b>DOCUMENTS REVIEWED</b>	<b>3-1</b>
<b>4.</b>	<b>PLANNING APPLICATION PT07/0578/RVC</b>	<b>4-1</b>
	Supporting Documentation	4-1
	Development Control (West) Committee	4-2
	Report to DC West Committee 11.10.07	4-3
	Observations	4-4
<b>5.</b>	<b>PLANNING APPLICATION PT07/0577/RVC</b>	<b>5-1</b>
	Supporting Documentation	5-1
	Development Control (West) Committee	5-2
	Report to DC West Committee 11.10.07	5-4
	Observations	5-5
<b>6.</b>	<b>CONCLUSIONS</b>	<b>6-1</b>

## 1. INTRODUCTION

- 1.1 Atkins Acoustics Noise and Vibration have been appointed by Wickwar, Westend and Churchend Residents to review a number of documents as listed in the Appendix relating to three related planning applications recently made by CEMEX in connection with their quarry at Wickwar, South Gloucestershire. This report only covers the aspects relating to noise and vibration.
- 1.2 This report considers the following planning applications PT07/0577/RVC in connection with the extension of operating hours for the cement crushing plant, and PT07/058/RVC in connection with the extension of operating hours for the coating plant. It does not cover planning application PT07/0573/F in connection with an extension to the quarry.
- 1.3 This report only considers documents supplied by the residents and that are publicly available on the South Gloucestershire planning web site in connection with these planning applications.

## 2. STANDARDS AND GUIDELINES

### PLANNING POLICY GUIDANCE NOTE 24

- 2.1 Government policies relating to noise issues for planning applications are detailed in Planning Policy Guidance Note 24 (PPG24). Annex 3 of PPG24 describes detailed guidance on the assessment of noise from different sources.
- 2.2 Annex 3 identifies that complaints about noise from industrial and commercial developments is assessed using BS4142 (Method for rating industrial noise affecting mixed residential and industrial areas), and for mineral workings it identifies that additional relevant guidance can be found in MPG11, Minerals Planning Guidance note 11: The control of noise at surface mineral workings, which has recently been superseded by Minerals Policy Statement 2.

### MINERALS POLICY STATEMENT 2

- 2.3 The relevant planning guideline for noise from minerals extraction is Minerals Policy Statement 2: Controlling and Mitigating the Environmental Effects of Minerals Extraction in England – MPS2. Within MPS2, the noise issues are dealt with in Annex 2.
- 2.4 MPS2 Annex 2 identifies in paragraph 2.9 that emissions assessments should identify all sources of noise. “The level and character of the existing noise environment and the location of noise-sensitive properties will enable the necessary noise level goal to be incorporated in the design of the proposed operations.”
- 2.5 MPS2 Annex 2 identifies that noise limits should be set such that the background noise levels are not exceeded by more than 10dB(A), subject to a maximum of 55dB L<sub>Aeq</sub>, 1hour (free-field).
- 2.6 The day is split into three periods as follows:
- Day – 07:00 to 19:00
  - Evening – 19:00 to 22:00

- Night – 22:00 to 07:00
- 2.7 For the day period, absolute limits of 55dB  $L_{Aeq}$ , 1hour (free-field) are set as described in paragraph 2.19 of PPS 2, recognising that limiting levels to no more than 10dB(A) above background may place unreasonable burdens on the operator. However, it also indicates that ‘MPA’s should aim to establish a noise limit at the noise-sensitive property that does not exceed the background level by more than 10dB(A)’.
- 2.8 For the night time period an absolute limit of 42dB  $L_{Aeq}$ , 1hour (free-field) is set. The guidance suggests that at all times noise limits should not exceed the background level by more than 10dB(A).
- 2.9 For the evening period noise limits should be set which do not exceed the background by more than 10dB(A), subject to a maximum of 55dB  $L_{Aeq}$ , 1hour (free-field).
- 2.10 MPS2 paragraph 2.19 also indicates that ‘when tonal noise contributes significantly to the total site noise, it may be appropriate to set specific limits for this element. Peak or impulsive noise, which may include some reversing beepers, may also require separate limits that are independent of background noise – e.g.  $L_{max}$  in specific octave or third octave bands – and should not be allowed to occur regularly at night.’
- 2.11 MPS2 paragraph 2.21 also indicates that “Conditions on planning permissions should identify the noise-sensitive properties at which the noise limits are set, including the relative sensitivity to noise, which may result in different limits for different types of property”.

#### **BRITISH STANDARD BS4142**

- 2.12 British Standard BS4142 – Method for Rating industrial noise affecting mixed residential and industrial areas (1997) “describes a method for determining, at the outside of a building: (a) noise levels from factories, or industrial premises, or fixed installations, or sources of an industrial nature in commercial premises; and (b) background noise levels.”
- 2.13 This standard also “describes a method for assessing whether the noise referred to in (a) is likely to give rise to complaints from people residing in the building.”
- 2.14 During the day, the standard requires the assessment to be undertaken over a 1 hour time period, but over the night period the assessment should be undertaken over a shorter 5 minute time period. The night and day periods are not specified but “the

choice of day and night periods will depend on local circumstances. It is intended that the night period should cover the times when the general adult population are preparing for sleep or are actually sleeping.”

2.15 The method considers the  $L_{Aeq}$  of the noise in question and compares it with the background  $L_{A90}$  noise levels. The noise in question can have a 5dB acoustic correction, which should be added if:

- “the noise contains a distinguishable, discrete, continuous note (whine, hiss, screech, hum etc.);
- the noise contains distinct impulses (bangs, clicks clatters or thumps;
- the noise is irregular enough to attract attention.”

2.16 The noise level of the source plus the 5dB correction, when applied, is called the “Rating Level”

2.17 The assessment of complaints is undertaken “by subtracting the measured background noise levels from the rating level”. “The greater the difference the greater the likelihood of complaints.

- A difference of around +10dB or more indicates that complaints are likely.
- A difference of around +5dB is of marginal significance.
- If the rating level is more than 10dB below the measured background level then this is a positive indication that complaints are unlikely”.

### 3. DOCUMENTS REVIEWED

- 3.1 The following is a list of the documents reviewed in the preparation of this report. All of the documents have been downloaded from the South Gloucestershire Council planning applications web site.

Title/Reference	Author	Date	Comments
Wickwar East Quarry, Proposed development of a Preferred Area for progressive extraction of limestone with additional early perimeter planting and restoration to a landscaped lake. Planning Application, Written Statement with Plans and Environmental Statement	Alliance Environment & Planning Ltd	January 2007	Includes noise assessment by Walker Beak Mason. Published date on SGC web site is 22 <sup>nd</sup> Feb 2007. Same document for both planning applications,
Development Control (West) Committee	Committee Report.	13 <sup>th</sup> Sept 2007	Refers to application PT07/0577/RVC Published date on SGC web site is 7th September 2007
Development Control (West) Committee	Committee Report.	13 <sup>th</sup> Sept2007	Refers to application PT07/0578/RVC Published date on SGC web site is 7th September 2007
Wickwar Quarry Report to DC West Committee	Environmental Health	11 <sup>th</sup> Oct 2007	Refers to both applications. Includes subjective and objective reports appended to the report. Published date on SGC web site is 28 <sup>th</sup> September 2007

## 4. PLANNING APPLICATION PT07/0578/RVC

- 4.1 This planning application seeks to vary planning condition No.17 of planning permission N8670 dated 27<sup>th</sup> June 1983 so as to allow the roadstone coating plant to operate 24 hours a day 7 days a week. This plant is currently permitted to operate from 03:30 to 19:00 Mondays to Fridays, 03:30 to 12:00 on Saturdays, with no operations allowed on Sundays or Bank Holidays.
- 4.2 CEMEX have acknowledged they currently in breach of this planning condition by operating this plant outside the permitted hours. This is reported in the Development Committee report.

### SUPPORTING DOCUMENTATION

#### Alliance Report

- 4.3 This planning application is supported by the report titled “Wickwar East Quarry, Proposed development of a Preferred Area for progressive extraction of limestone with additional early perimeter planting and restoration to a landscaped lake. Planning Application, Written Statement with Plans and Environmental Statement”, dated January 2007. This report has been prepared by Alliance Environment & Planning Ltd, and is referred as the “Alliance Report” in the rest of this report.
- 4.4 Volume 1 of the Alliance Report contains an Environmental Statement. Section 6 of Part 2(B) of the Environmental Statement which refers to Volume 2 Appendix 5.
- 4.5 The Environmental Statement noise section has been prepared by Walker Beak Mason, and makes the following statements relevant to this application:
- “The proposals would not alter the present traffic flow on the local road network and consequently there would be no increase in road traffic noise.” (Para 6.8)
  - “In terms of the existing processing plant operations it is considered that there are no improvements required to assist in meeting the suggested site noise limits.” (Para 6.13)

- 4.6 Volume 2 of the Alliance Report contains technical appendices. Appendix 5 is referred from the Environmental Statement. Paragraph 1.6 of Appendix 5 states that “This report does not consider the operation of the asphalt coating plant during the night time period.” This statement is repeated in paragraph 9.2 of the conclusions.

#### **DEVELOPMENT CONTROL (WEST) COMMITTEE**

- 4.7 A South Gloucestershire Council Development Control (West) Committee report dated 13<sup>th</sup> September 2007 describes that additional noise measurements that have been undertaken with CEMEX’s noise consultant to ensure that the findings of the noise assessment represents worst case scenarios. These results do not appear from the available documents to have been reported in detail or describe the conditions that were occurring when they were taken.
- 4.8 This report considers the residential/local amenity, accepting that key issue is likely to be noise. It states that inaudibility is not a viable option, and refers to the stated limits in MPS2 to define the acceptable criteria. It does not make any reference to the advice on aims and other appropriate actions in MPS2 paragraph 2.19.
- 4.9 A table is presented in the report which describes “readings at noise sensitive properties” as follows:

Time of Day	Reading of Overall Noise Levels
Day (07:00-19:00)	42 dB(A)
Evening (19:00-22:00)	26 dB(A)
Night (22:00-07:00)	24 dB(A)

- 4.10 No information is given on the location of the measurements, the noise index reported, the measurement period, the weather conditions or the activities present during the measurements.

#### **Recommendations**

- 4.11 The Development Control Report recommends that the application is approved subject to one condition: “The level of noise emitted from the quarry shall not, at the nearest noise sensitive properties, exceed:
- a) 55dB(A) during daytime hours (07:00-19:00)
  - b) 10dB(A) over background levels during evening hours (19:00-22:00)
  - c) 42dB(A) during night-time hours (22:00-07:00).

- 4.12 For the purposes of clarification, this consent does not incorporate the use of the primary crusher for the activities specified.”

#### **REPORT TO DC WEST COMMITTEE 11.10.07**

- 4.13 An additional report to the DC West Committee has been prepared to provide more detail in the preparation of the previous report (detailed above)
- 4.14 The report describes that the role of the Environmental Protection Specialist Officer (EHO) is to examine the Environmental Statement to ensure appropriate methodology and analysis. The role of the EHO is not to replicate any survey.
- 4.15 The report notes that the night time operation of the coating plant had not been considered, and that a separate written confirmation had been sought and received.
- 4.16 Further detail is provided on the noise measurements undertaken and reported previously. It is identified that the noise levels measured are lower than those reported in the ES because these measurements were intended to capture the noise from the quarry only, and to exclude other noise sources by pausing the noise measurements during other noise sources.

Measurement Time	Location	L <sub>Aeq</sub>
Day (15:00-16:00 15/5/07)	The Old Rectory	42 dB
Evening (21:00-22:00 8/6/07)	West End Grove	26 dB
Night (23:30-00:30 21/5/07)	West End Grove	24 dB

- 4.17 During the night period the cement coating plant was operating, and this noise source was included in the noise measurements. It has been identified that CEMEXs noise consultant was present at the coating plant undertaking a 1/3 octave band frequency analysis.
- 4.18 It is observed that the measured L<sub>Aeq</sub> is “at or below the background noise level”, and that the L<sub>Aeq</sub> values are similar to the prevailing L<sub>A90</sub> levels in the area.
- 4.19 Additional evening and night time noise measurements were taken at The Old Rectory and West End Grove on the 18<sup>th</sup> September 2007, without pausing the sound level meter. An L<sub>Aeq</sub> of around 35dB is reported.
- 4.20 A range of subjective observations have been taken. These have been primarily undertaken at West End. It is commented that traffic on Downs Road would mask the noise from the coating plant. It is commented that in the afternoon, at West End,

noise from the quarry was “just audible”, and the “characteristic sound of the coating plant was just evident”.

- 4.21 In the evening of the 21<sup>st</sup> June 2007, under still wind conditions, the coating plant was heard to start up, and is described as a “steady background hum” which is “just audible”.
- 4.22 Additional observations at four locations were made in the late evening and night time on the 5<sup>th</sup> and 10<sup>th</sup> July and the 15<sup>th</sup> August 2007. On each occasion noise from the quarry was “just audible”.
- 4.23 The officers conclusions are that the noise levels from the quarry at each of the properties, on each visit, are below the maximum limits imposed by MPS2 and that no objection could be made on noise grounds.

#### **OBSERVATIONS**

- 4.24 The report supporting the application does not include the activities being considered. Separate subsequent correspondence between the applicant and the officer has taken place, but this has not been seen.
- 4.25 The officers first report indicates that the environmental statement has been considered to check methodology and for verification of findings. The officers first report does not identify that the environmental statement has not considered the activity subject to the planning application, but this is identified in the officers second report.
- 4.26 In the officers second report locations on Downs Road are excluded from the measurements because of traffic noise on Downs Road. Noise from traffic is intermittent, and it would be expected that there would be few vehicles on this road to mask noise from the coating plant during the night time period.
- 4.27 The recommended noise condition from Development Control does not define the noise index used for the conditions. For the condition to be in accordance with MPS2 the index should be  $L_{Aeq, 1 \text{ hour}}$  (free-field).
- 4.28 The recommended condition uses the maximum levels allowed by MPS2. MPS2 requires that noise limits should not exceed background levels by more than 10dB(A), although some exceedances can be allowed above this during the day period. MPS2 also allows separate conditions to be set for tonal, peak or impulsive noises.

- 4.29 Whilst it is acknowledged that the process is currently permitted to operate during the night time period, no evidence is presented by the applicant to demonstrate that the process meets the criteria, or the noise levels expected at the noise sensitive locations arising from the process.
- 4.30 The night time noise measurements undertaken by the EHO at West End Grove identify that the noise levels from the quarry, including the operation of the coating plant, are around 24dB  $L_{Aeq}$ . No weather conditions were given for these measurements, and no indication of the actual measurement time (excluding pauses) is given.
- 4.31 Background noise levels in the area at night are shown to be 20-25dB  $L_{A90}$  from the Environmental Statement. MPS2 states that noise from quarries should be no more than 10dB(A) above background levels.
- 4.32 The background noise levels during the night should be established at each of the noise sensitive locations, and the planning condition should be set to allow noise to be no higher than 10dB above background.
- 4.33 The roadstone coating plant is used to produce coated roadstone for use on the highways, which is understood to be transported by HGVs to the required locations on manufacture. The assessment has not considered noise and vibration generated by any additional heavy vehicle movements that might be generated during the longer operational hours. It is understood from the justification of the planning application that that these additional vehicle movements would be during the night when noise from individual heavy vehicles passing close to properties have the greatest potential for sleep disturbance.
- 4.34 There is no planning condition limiting the volume of coated roadstone produced. The Development Committee report identifies that it is not intended to increase the production. The extension to the operating hours could allow the production rate to increase and generate more traffic.
- 4.35 The roadstone coating plant does not require the quarrying activities to be taking place at the same time. It could be argued that the roadstone coating plant is a fixed installation, and that a BS4142 assessment may be more appropriate for night time operations.
- 4.36 The data from the EHO shows that noise levels are higher than those where complaints are unlikely. The coating plant is noted as having a distinctive "hum", and it is possible that a BS4142 noise assessment may be of marginal significance.

## 5. PLANNING APPLICATION PT07/0577/RVC

- 5.1 This planning application seeks to vary planning condition No.16 of planning permission N8670 dated 27<sup>th</sup> June 1983 to allow the crushing and screening plant to run from 05:30 to 22:00 Mondays to Fridays, 05:30 to 12:00 on Saturdays, with no operations allowed on Sundays or Bank Holidays. This plant is currently permitted to run from 06:30 to 19:00 Mondays to Fridays, 06:30 to 12:00 on Saturdays, with no operations allowed on Sundays or Bank Holidays.
- 5.2 CEMEX have acknowledged that they are currently in breach of this planning condition by operating this plant outside the permitted hours. This is reported in the Development Committee report.

### SUPPORTING DOCUMENTATION

#### Alliance Report

- 5.3 This planning application is supported by the report titled "Wickwar East Quarry, Proposed development of a Preferred Area for progressive extraction of limestone with additional early perimeter planting and restoration to a landscaped lake. Planning Application, Written Statement with Plans and Environmental Statement", dated January 2007. This report has been prepared by Alliance Environment & Planning Ltd, and is referred as the "Alliance Report" in the rest of this report.
- 5.4 Volume 1 of this report contains an Environmental Statement. Section 6 of Part 2(B) of the Environmental Statement which refers to Volume 2 of the report, Appendix 5.
- 5.5 The Environmental Statement noise section has been prepared by Walker Beak Mason, and makes the following statements relevant to this application:
- "The proposals would not alter the present traffic flow on the local road network and consequently there would be no increase in road traffic noise." (Para 6.8)

- “In terms of the existing processing plant operations it is considered that there are no improvements required to assist in meeting the suggested site noise limits”. (Para 6.13)
- 5.6 Volume 2 of the Alliance Report contains technical appendices. Appendix 5 is referred from the Environmental Statement. This report makes the following statements relevant to this application:
- This report does not address the noise arising from HGV movements on the local road network since it is understood that the output of the quarry will be similar to the current output with no significant change in quarry related HGV traffic. (Para 5.9)
- 5.7 Section 8 of this report deals with noise from the existing plant, following concerns from local residents. The primary crusher and the concrete block manufacturing plant were identified as the key noise sources (paras 8.2 and 8.3). Calculations of noise levels are presented in Appendix 9 of the report (Appendix 9 of the noise report is contained along with the rest of the noise report within Appendix 5 of the Alliance Report). Appendix 12 of the noise report contains results of the noise measurements taken on site.

Plant	Measured L <sub>Aeq</sub> at 10m
Primary Crusher and Extraction Plant	84 dB
Coating Plant, Secondary and Tertiary Crushers	79 dB
Concrete Block Plant Vibrating Hopper	72 dB

- 5.8 Appendices 3 to 6 of the noise report contain the results of the noise surveys. It is noted that the manned noise measurements are reported as being “up to 15 minutes” in duration.
- 5.9 No weather data is given for the unattended noise monitoring. MPS2 requires that where wind conditions are not calm or blowing from the noise source to the microphone the impact of the weather conditions should be considered. For the unattended monitoring this cannot have been adequately considered and the data may be flawed as a result.

#### **DEVELOPMENT CONTROL (WEST) COMMITTEE**

- 5.10 A South Gloucestershire Council Development Control (West) Committee report dated 13<sup>th</sup> September 2007 describes that additional noise measurements have been undertaken with CEMEX’s noise consultant to ensure that the findings of the noise

assessment represents worst case scenarios. These results do not appear from the available documents to have been reported in detail or describe the conditions that were occurring when they were taken.

- 5.11 This report considers the residential/local amenity, accepting that key issue is likely to be noise. It states that inaudibility is not a viable option, and refers to the stated limits in MPS2 to define the acceptable criteria. It does not make any reference to the advice on aims and other appropriate actions in MPS2 paragraph 2.19.
- 5.12 A table is presented in the report which describes “readings at noise sensitive properties” as follows:

Time of Day	Reading of Overall Noise Levels
Day (07:00-19:00)	42 dB(A)
Evening (19:00-22:00)	26 dB(A)
Night (22:00-07:00)	24 dB(A)

- 5.13 No information is given on the location of the measurements, the noise index reported, the measurement period, weather conditions or the activities present during the measurements. Again, the affect of these may hide possible flaws in the results.

### Recommendations

- 5.14 The Development Control Report recommends that the application is approved subject to two conditions: “The crushing and screening of rock and the production of ready mix concrete shall not take place on site other than:
- a) Between 05:30 and 22:00, Mondays to Fridays
  - b) Between 05:30 and 12:00 on Saturdays
  - c) At no time on Sundays or Bank Holidays.
- 5.15 For the purposes of clarification, this consent does not incorporate the use of the primary crusher for the activities specified.”
- 5.16 “The level of noise emitted from the quarry shall not, at the nearest noise sensitive properties, exceed:
- a) 55dB(A) during daytime hours (07:00-19:00)
  - b) 10dB(A) over background levels during evening hours (19:00-22:00)

- c) 42dBA() during night-time hours (22:00-07:00).”

#### REPORT TO DC WEST COMMITTEE 11.10.07

- 5.17 An additional report to the DC West Committee has been prepared to provide more detail in the preparation of the previous report (detailed above)
- 5.18 The report describes that the role of the Environmental Protection Specialist Officer (EHO) is to examine the Environmental Statement to ensure appropriate methodology and analysis. The role of the EHO is not to replicate any survey.
- 5.19 Further detail is provided on the noise measurements undertaken and reported previously. It is identified that the noise levels measured are lower than those reported in the ES because these measurements were intended to capture the noise from the quarry only, and to exclude other noise sources by pausing the noise measurements during other noise sources.

Measurement Time	Location	L <sub>Aeq</sub>
Day (15:00-16:00 15/5/07)	The Old Rectory	42 dB
Evening (21:00-22:00 8/6/07)	West End Grove	26 dB
Night (23:30-00:30 21/5/07)	West End Grove	24 dB

- 5.20 It is identified in the report that for the day time and evening measurements that “both” plant in the quarry was operating.
- 5.21 It is observed that the measured L<sub>Aeq</sub> is “at or below the background noise level”, and that the L<sub>Aeq</sub> values are similar to the prevailing L<sub>A90</sub> levels in the area.
- 5.22 Additional evening and night time noise measurements were taken at The Old Rectory and West End Grove on the 18<sup>th</sup> September 2007, without pausing the sound level meter. An L<sub>Aeq</sub> of around 35dB is reported.
- 5.23 A range of subjective observations have been taken. These have been primarily undertaken at West End. It is commented that traffic on Downs Road would mask the noise from the batching plant. It is commented that in the afternoon, at West End, noise from the quarry was “just audible”.
- 5.24 Additional observations at four locations were made in the late evening and night time on the 5<sup>th</sup> and 10<sup>th</sup> July and the 15<sup>th</sup> August 2007. On each occasion noise from the quarry was just audible.

- 5.25 The officers report refers to an “early morning” noise criteria which is at variance with MPS2 and the recommendations made in the first report.
- 5.26 The officers conclusions are that the noise levels from the quarry at each of the properties, on each visit, are below the maximum limits imposed by MPS2 and that no objection could be made on noise grounds.

### **OBSERVATIONS**

- 5.27 The report supporting the application includes the activity being considered, but noise predictions for this activity, or activities in combination, are not reported explicitly. A number of noise measurements made subsequently to the production of the report have been undertaken.
- 5.28 The recommended noise condition does not define the noise index used for the conditions. For the condition to be in accordance with MPS2 the index should be  $L_{Aeq, 1 \text{ hour}}$  (free-field).
- 5.29 The recommended condition uses the maximum levels allowed by MPS2. MPS2 requires that noise limits should not exceed background levels by more than 10dB(A), although some exceedances can be allowed above this during the day period. MPS2 also allows separate conditions to be set for tonal, peak or impulsive noises.
- 5.30 It is acknowledged that the process is currently permitted to operate for the last half an hour of the night time period, but no evidence has been seen in the information made available to demonstrate that the process meets the night time criteria, or would meet the evening criteria.
- 5.31 It is understood that the outputs from the cement crushing and screening plant in the extended operating hours would be used on the highways. This would be transported by HGV to the required location. The assessment has not considered noise and vibration generated by any additional heavy vehicle movements that may occur. It is possible that these additional vehicle movements would be during the evening and night when noise from individual heavy vehicles passing close to properties have the greatest potential for sleep disturbance.
- 5.32 By reference to the supporting documentation the evening background noise levels are given for some noise sensitive properties (noise section Appendices 3 to 6), and the noise from the plant under consideration (noise section Appendix 9) can be compared.

Location	Evening Background $L_{A90, T}$	Noise from Plant Within Quarry $L_{Aeq}$ , 1 hour (free field)	Excess over background
Church Farm	39 - 41	41	0 to +2
Newhouse Farm	33 - 41	45	+4 to +12
Southwood Farm	29 - 36	45	+9 to +16
The Old Rectory	30 - 37	37	0 to +7
Rock House	-	38	-

- 5.33 This shows that the noise from the quarry may have the potential to be more than 10dB(A) above the background levels at some locations. It appears that no effort has been made to establish the background noise levels when the quarry is operating in compliance with its current planning conditions.
- 5.34 It should also be noted that at two of the locations the plant noise is shown to exceed the 42dB(A) night time criterion for activities occurring prior to 07:00.
- 5.35 These figures do not accord with the measurements undertaken by the officer at West End Grove, near to Rock House, which reports an evening  $L_{Aeq}$  of 26dB. This may suggest that the measurements do not include the plant under consideration for this application, or that meteorological conditions have affected the noise measurements.
- 5.36 In the officers second report locations on Downs Road are excluded from the measurements because of traffic noise on Downs Road. Noise from traffic is intermittent, and it would be expected that there would be few vehicles on this road to mask noise from the coating plant during the evening and night time periods.
- 5.37 There is no planning condition limiting the volume of ready mixed concrete produced. The Development Committee report identifies that it is not intended to increase the production. The extension to the operating hours could allow production rate to increase and generate more traffic.
- 5.38 The crushing, screening and ready mixed concrete plant do not require the quarrying activities to be taking place at the same time. It could be argued that these processes are fixed installations, and a BS4142 assessment may be more appropriate for evening and night time operations.

- 5.39 The data from the Environmental Statement shows that at some locations complaints about noise would be likely, even without considering a 5dB acoustic correction factor.

## 6. CONCLUSIONS

- 6.1 The applicant does not appear to have specifically identified the noise implications of the two proposed planning applications, and the evidence in the supporting documentation is not clearly presented.
- 6.2 The supporting documentation specifically excludes noise from heavy vehicle movements on the road network and the running of the asphalt coating plant during the night period. Subsequent correspondence is known to have taken place, but this has not been seen.
- 6.3 The recommendations to approve the planning applications do not indicate the units of the noise index in the conditions.
- 6.4 The recommendations do not consider noise conditions other than the maximum allowed by MPS2. Conditions should aim for noise limits not to exceed background levels by more than 10dB(A) at all times. MPS2 also allows separate conditions to be set for tonal, peak or impulsive noises.
- 6.5 These planning applications are being put forward on the basis that the production volumes would not increase, however this is not limited by a condition.
- 6.6 Calculated noise levels from the processes being considered under these applications at the nearest noise sensitive properties do not appear to have been presented, although it is understood that detailed noise measurements at source for the processes have been taken.
- 6.7 The background noise in the evening at the nearest residential properties does not appear to have been established with the quarry operating within its current permissions.
- 6.8 With source noise levels of the processes available it would be straightforward for CEMEXs noise consultant to predict the noise levels of the two processes separately at all nearby noise sensitive locations, and compare these predictions with background noise levels measured when the quarry is operating within its current planning conditions.

- 6.9 From the data which is presented it is possible that the running of the crushing and screening plant may be in exceedence of the MPS2 evening and night levels.
- 6.10 To be in accordace with MPS2, noise measurements should be of one hour duration, and include a record of weather conditions. Most of the data presented is deficient in one or both of these requirements.
- 6.11 Both planning applications refer to processes which do not require the quarrying activities to take place simultaneously. These could be argued to be fixed installations, and therefore a BS4142 assessment considered. The available data shows noise levels higher than those where complaints are unlikely, and shows that complaints are likely for some processes at some locations.

Atkins is an international Design, Engineering & Management Consultancy. Our clients choose Atkins to plan, design and enable their major projects across a wide range of disciplines both in the UK and overseas.

We are the largest engineering consultancy in the UK and the largest multi-disciplinary consultancy in Europe. Our unrivalled reputation rests on the skills of the 15,000 specialists within the organisation.

Our clients are varied and include governments, local and regional authorities, funding agencies and commercial and industrial enterprises. We help our clients to realise their objectives by developing and delivering practical solutions, adding value to their businesses through the application of our experience, innovative thinking and state-of-the-art technology.

**Atkins Acoustics, Noise and Vibration**

260 Aztec West  
Park Avenue  
Almondsbury  
Bristol BS32 4SY

**Telephone number:** +44 (0) 1454 288674

**Fax number:** +44 (0) 1454 288000

**Email:** [adam.lawrence@atkinsglobal.com](mailto:adam.lawrence@atkinsglobal.com)

**Web address:** [www.atkinsglobal.com](http://www.atkinsglobal.com)

**ATKINS**