PLANNING APPLICATION TO VARY CONDITION 25 RELATING TO THE EXTENSION OF TIME OF THE END DATE, CONDITION 5 RELATING TO PLANT LOCATION AND CONDITION 23 IN RELATION TO RESTORATION

HARLESTONE QUARRY, HARLESTONE ROAD, HARLESTONE, NORTHAMPTONSHIRE, NN6 7QA

BARTON PLANT LIMITED
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1 OVERVIEW

1.1 Introduction

1.1.1 This Planning Statement is submitted to Northamptonshire County Council (NCC) on behalf of Barton Plant Ltd and relates to development at Harlestone Quarry, Harlestone Road, Lower Harlestone, Northamptonshire, NN7 4EJ. The planning application has been submitted to vary a number of conditions relating to planning permission 15/00014/MINVOC. This planning application seeks to vary the following conditions:

- The Scope of Planning Permission (Condition 2)
- Plant Location (Condition 5)
- Restoration (Condition 23 and 24)
- End Date (Condition 25)

1.1.2 Planning permission 15/00014/MINVOC required that the crusher, due to perceived noise impacts, was located permanently in the recycling area to the south of the extraction void. Subsequent operations at the quarry have found that the arrangement is restrictive as it leads to double handling of material. The Applicant therefore requires that the permitted arrangement is varied to remove the current restriction.

1.1.3 Condition 25 of planning permission 15/00014/MINVOC sets an end date for the development which requires the restoration of the quarry by the 31st December 2016. The operator seeks to extend the end date for the development by a period of 5 years in order to continue the extraction of building stone and aggregate operations along with the landfill operations. The required extension is reflective of market conditions experienced since the beginning of the recession in 2008 which has seen a downturn in sales.

1.1.4 Further information is submitted in relation to conditions 23 and 24 to provide an updated restoration plan which more clearly shows the proposed restoration contours.

1.1.5 It is proposed to vary the above number conditions to reflect the required changes to operations at the Quarry.

1.2 Application Documents

1.2.1 A range of supporting documents are provided in relation to this planning application. They are:

- Planning Application Form
- Planning Statement
- Noise Assessment
- Mineral Sales

- Site Location Plan GPP-BP-HQ-11-01
- GPP-HQ-EIA-02 Site Plan
- GPP-HQ-EIA-03 Site Plan
- GPP/BP/HA/15/04 Revised Phase 4
- GPP/BP/HA/15/05 Revised Phase 5
- GPP/BP/HA/15/06 Revised Phase 6
1.3 Planning History

1.3.1 Planning permission was granted in 1981 for the extraction of sandstone and infilling with inert waste at the original site. In 1994 permission was granted for an extension in time and in 2000 a further permission was granted for an extension in time, ref DA/00/617C. Restoration of this site was expected to be complete by 2009, although tree planting is still being finalised. Permission was granted in June 2002 to extend the quarry and landfill operations in a southerly direction as far as the Round Oak Plantation, ref DA/01/1255C. A related planning permission was granted in May 2002 for the establishment of an area for recycling of inert waste to produce recycled aggregates, ref DA/01/1254C.

1.3.2 Planning permission DA/05/876C was granted in 2006 for the extension of Harlestone Stone Quarry allowing the extension of working to the north of the original Quarry. Planning permission 08/00037/MIN was granted in 2008 and varied conditions 11 and 12 of planning permission DA/05/876C. This permitted a revised approach to the phasing of the extraction and restoration operations in the Quarry extension. Non Material Amendment permission 13/00109/MINNMA was granted in 2013, granting planning permission to increase screening bund heights and revised phasing for working and restoration.

1.3.3 Planning permission 15/00014/MINVOC was granted in June 2015 and permitted the removal of the retained mineral phase in order to allow more efficient extraction and landfilling operations.

1.4 The Site and Its Surrounding Context

1.4.1 The site is located to the south east of Harlestone village, Northamptonshire. The centre of Harlestone is approximately 1 km to the north west of the site and the centre of Northampton lies 4 km to the southeast. Access to the site is from the A428 trunk road that runs to the east of the site.

1.4.2 The closest residential properties to the site are isolated buildings at Heath Gates 70 m to the east and 'The Quarries' approximately 100 m to the northwest. The closest commercial property is a garden centre 100 m to the south. The site is bounded by arable farmland to the north and west. To the south lies the Round Oak Coniferous Plantation and to the east is Harlestone Heath, an area of scrub and coniferous trees.
2 THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 The Planning Application relates to a number of proposed changes to the current working arrangements and specific conditions that have been included on the extant planning permission 15/00014/MINVOC. Each proposed variation to the extant planning permission is discussed below in turn with amended wordings to the conditions are also proposed. Where additional wording is suggested it is highlighted in blue and where wording is proposed to be removed it has been struck through.

2.2 Location of Plant

2.2.1 The currently permitted working arrangements are shown by drawings GPP/BP/HA/15/04 Revised Phase 4, GPP/BP/HA/15/05 Revised Phase 5, GPP/BP/HA/15/06 Revised Phase 6. The plans identify the recycling area, located to the south of the extraction void, which is the permitted location of the crusher. The current arrangement permits the screen to follow the advance of the working mineral face around the quarry whilst the crusher remains within the recycling area to be utilised as required.

2.2.2 At the time of planning application 15/00014/MINVOC, the crusher was proposed to be located within the recycling area so that it had the benefit of a 6m earth bund to provide noise attenuation to the residential properties to the north of Harlestone Quarry. The Applicant initially undertook the quarry operations in line with the permitted arrangement but soon found that the location of the crusher at a dispersed location away from the screen at the working mineral face is restrictive causing material to be double handled. This is because of material processed by the screen at the working face having to be transported to the recycling area for crushing to achieve the necessary grade of material.

2.2.3 In addition to the operational limitations of the arrangement the process of transporting the material from the extraction void to the recycling area increased the amount of mud being displaced on the quarry haul road. This caused issues as large road going articulated HGVs accessing the extraction void would pick up excess mud on their wheels causing a management issue as mud would be tracked onto the public highway.

2.2.4 The solution which overcomes the current restriction is to locate the screen and crusher in tandem at the working face. This will negate the current scenario of having to transport the material across the quarry to the recycling area for further processing.

2.2.5 On this basis the it is proposed to vary the wording of condition 5 to read:

‘The minerals processing plant and crusher shall be set down on the sandstone deposits below original ground levels and the crusher shall only be located and operated within the recycling area behind the 6 metre bund as shown on drawing GPP/BP/HA/15/04 Rev 2’

2.2.6 The suggested arrangement of the screen and crusher working in tandem has been working successfully since October 2015. Retrospective planning permission is therefore required.
2.3 End Date

2.3.1 Condition 25 of planning permission 15/00014/MINVOC is currently worded as follows:

‘The development hereby permitted shall cease not later than 31st December 2016 by which time the site shall be reinstated in accordance with the conditions of this permission provided that if within this period operations cease for a period in excess of twelve months or the use is otherwise discontinued for a like period, the condition of this permission relating to restoration and rehabilitation shall be carried out forthwith.’

2.3.2 There has been a marked down turn in minerals sales and the amount of inert material imported for restoration since the recession hit in 2008. The Applicant has charted sales since April 2007 which indicate an approximate 6 year period of low imports and exports through the quarry gate. There were some anomalies, particularly for mineral sales, which related to infrastructure and local development projects such as the M1 widening scheme in 2010 and 2011 and the construction of the University of Northampton Innovation Centre at the site of the former Gas Towers in Northampton. These individual projects occurred during periods of generally low market demand providing a much needed boost to sales. A graph showing imports and exports since April 2007 at Harlestone Quarry is included at Appendix 1.

2.3.3 The wording of condition 25 requires that the site is to be reinstated in line with the agreed restoration plan by the set end date of 31st December 2016. The Applicant has identified that in the event that mineral extraction was to cease immediately there will be a significant void space remaining which would need to be filled with inert material to achieve the required restoration contour levels. The recent topographical survey drawing 9010/update270715/botminN1/2 shows that the current void space in the quarry is approximately 158,000m³. However, there is a mineral reserve still present at the Harlestone Quarry which the Applicant intends to extract prior to restoration; thus increasing the void space above the currently identified figure.

2.3.4 The Applicant has recently experienced an upturn in sales and imports of inert waste to the site. This is considered to be reflective of the general increase in confidence in the construction industry. On the basis that the existing sales trends continue it is considered that it will take a period of 5 years to restore the quarry to the proposed contour levels. In terms of the importation of inert material this will average out at approximately 54,000 tonnes per annum which is considered achievable.

2.3.5 On the basis of the above it is required that the wording of condition 25 is varied to read:

‘The development hereby permitted shall cease not later than 31st December 2016 by which time the site shall be reinstated in accordance with the conditions of this permission provided that if within this period operations cease for a period in excess of twelve months or the use is otherwise discontinued for a like period, the condition of this permission relating to restoration and rehabilitation shall be carried out forthwith.’

2.4 Restoration

2.4.1 Planning condition 23 of permission 15/00014/MINVOC reads:
‘Within 3 months of the date of this permission a revised restoration and landscaping scheme showing final levels shall be submitted to the Mineral Planning Authority for approval in writing. The scheme as approved shall thereafter be implemented in full and completed by the date referred to in condition 25 of this permission’.

2.4.2 A revised restoration and landscaping scheme has not been submitted to discharge condition 23. To rectify this drawing GPP/HQ/EIA/9 v2 Restoration Levels is submitted with this planning application. The drawing shows a simplified version of the restoration drawing submitted with the original planning application in 2005 (DA/05/876C); reference GPP/HQ/EIA/9 Proposed Restoration Contours. The submitted restoration drawing GPP/HQ/EIA/9 v2 Restoration Levels is fundamentally the same as drawing GPP/HQ/EIA/9 however the restoration contours are set out in a manner that is more clearly interpreted for purposes of both implementation by the Applicant and control by the Mineral Planning Authority.

2.4.3 A landscaping scheme has not been presented with this planning application as per the requirements of condition 23 as it is considered that the final scheme can be secured via the arrangements set out in condition 24. The condition 24 states:

‘The quarry complex and vehicular access shall be restored progressively in accordance with the submitted phased working plans and planted for forestry purposes in accordance with a scheme to be submitted for approval in writing by the Mineral Planning Authority twelve months prior to the completion of the quarrying operations or the end date referred to in condition 25, whichever is sooner.

2.4.4 A condition as set out above has consistently been included on the each of the varied planning permissions since the original planning permission for the ‘Extension of Harlestone Stone Quarry’ (DA/05/876C) was granted in July 2005. The Applicant does not propose to vary the principle of restoring the land to the forestry end use.

2.4.5 In order to achieve the desired restoration and end use it is proposed that conditions 23 and 24 are amalgamated. It is suggested that the condition reads:

‘The quarry complex and vehicular access shall be restored progressively in accordance with submitted working plans GPP/BP/HA/15/04 Revised Phase 4, GPP/BP/HA/15/05 Revised Phase 5, GPP/BP/HA/15/06 Revised Phase 6, GPP/HQ/EIA/9 v2 Restoration Levels, GPP/HQ/EIA/10 Cross Section of Proposed Restoration and planted for forestry purposes in accordance with a scheme to be submitted for approval in writing by the Mineral Planning Authority twelve months prior to the completion of the quarrying operations or the end date referred to in condition 25, whichever is sooner. The scheme as approved shall thereafter be implemented in full and completed by the date referred to in condition 25 of this permission’.

**Method of Restoration**

2.4.6 In restoration of the site Barton Plan surcharge the main body of the restoration area by an additional 0.5m to 1m in order to allow for settlement of the material. The surcharge is carried out prior to the final shaping of the proposed ridge and furrow contours when the restored area is land formed and soils materials are placed in their final location in preparation for the proposed tree planting.
2.4.7 To provide visual screening of the works associated with creating the final landform a temporary 4m high bund will be constructed along the northern boundary as shown on drawing GPP/BP/HA/15/07 Temporary Bund Arrangements. The bund will remain in place until the completion of the operations and works have progressed to the stage shown on drawing GPP/BP/HA/15/06 Site Phasing Plan – Revised Phase 6.
3 PLANNING POLICY CONTEXT

3.1 Introduction

3.1.1 This chapter provides an indication of the main Development Plan policies that has been considered and assessed in the preparation of this planning application.

3.1.2 The Development Plan in this instance consists of:

- Northamptonshire Minerals and Waste Local Plan (October 2014)

3.1.3 The main objectives and planning policies that are relevant to the proposal are set out below.

3.2 The Development Plan

Northamptonshire Minerals and Waste Local Plan (October 2014)

3.2.1 The Northamptonshire Minerals and Waste Local Plan (NMWLP) was adopted in October 2014 after the review process had been completed.

3.2.2 Harlestone Quarry, the Application Site, is an active building stone quarry. The Quarry has been active for a number of years and its continuing provision of building stone mineral will have been considered in terms of the delivery of the identified strategy, principles and locations for minerals related development as set out by the NMWLP. In terms of the provision of building stone the key planning policies are:

Policy 6: Building and roofing stone

Provision of building and roofing stone should be made for its use in:

- the restoration and renewal of existing historic buildings and structures, or
- new buildings in conservation areas, or
- the enhancement of local character and distinctiveness in other sensitive locations.

This provision will come from both extensions to existing sites and new sites subject to being assessed as meeting environmental, amenity and other requirements of the Local Plan. Allocations that will contribute to meeting provision are identified in Policy 7 of the Local Plan.

Policy 7: Sites for the provision of building and roofing stone

Building and roofing stone will be provided for by: sites with planning permission as of 1 January 2011, the following allocated sites, and by any other site that comes forward in line with Local Plan policies.

MA10: Pury End South (limestone and building stone) 150,000 tonnes (approximately)
MA11: Collyweston Village (roofing stone) 50,000 tonnes (approximately)
If there is a need to manage the provision of building and roofing stone, allocated sites will be given preference for extraction over non-allocated sites.

3.2.3 Harlestone Quarry is also formally identified in the NMWLP as a site that produces crushed rock (in the form of sandstone) contributing to the calculated annual aggregates provision rate for Northamptonshire.

3.2.4 Linked to the quarrying operations the extraction void is being progressively restored with inert material. The provision provided by the quarry void has also been considered in terms of the delivery of a sustainable waste management strategy for Northamptonshire.

3.2.5 Paragraph 5.36 of the NMWLP indicates that there is sufficient permitted inert waste disposal capacity in the County to meet the objectively assessed needs of the plan. The permitted capacity at Harlestone Quarry will have been considered by the exercise. Paragraph 5.36 relies upon the statements set out in paragraph 5.30 in setting out the claim that there is sufficient permitted inert waste disposal capacity. With specific reference to footnote 9 which informs paragraph 5.30 it should be noted that there is acknowledgement that commercial factors (market constraints) have an important role in the delivery and implementation of the waste management strategy. This is an important point in the context of this planning application.

3.2.6 Further note should be made to the statement at Paragraph 5.27.

Where planning permission expires within the plan period there will be a commensurate decline in the available waste management and / or disposal capacity. This will require (where found to be appropriate through the development assessment process) either the development of additional waste management and / or disposal facilities, expansion of existing facility(ies) or an extension in time to the planning permission.

3.2.7 The planning application also seeks to vary planning conditions which have been imposed in order to safeguard the amenities of the local residents and the occupiers of ‘The Quarries’. In this case, particular regard should be given to policy 22. The wording of the policy is detailed below:

Policy 22: Addressing the impact of proposed minerals and waste development:

‘Proposals for minerals and waste development must demonstrate that the following matters have been considered and addressed:

- Protecting Northamptonshire’s natural resources and key environmental designations (including heritage assets);
- Avoiding and / or minimising potentially adverse impacts to an acceptable level, specifically addressing air emissions (including dust), odour, bioaerosols, noise and vibration, slope stability, vermin and pests, birdstrike, litter, land use conflict and cumulative impact;
- Impacts on flood risk as well as the flow and quantity of surface and groundwater;
- Ensuring built development is of a design and layout that has regard to its visual appearance in the context of the defining characteristics of the local area;
- Ensuring access is sustainable, safe and environmentally acceptable, and
- Ensuring that local amenity is protected.’
4 PLANNING CONSIDERATIONS

4.1 Introduction

4.1.1 From an assessment of the Development Plan and other relevant documents, it is considered that the main issues in the assessment of this proposal relate to the following main issues:

- The need for the extension of time
- Potential impacts on residential amenity

4.2 The Need for the Extension of Time

4.2.1 As set out in section 3.2, Harlestone Quarry has an important role in the delivery of the County Council’s sustainable spatial strategy for mineral and waste development. The Quarry provides in terms of building stone and crushed rock materials and also in relation to the delivery of inert waste disposal/recovery capacity.

4.2.2 Condition 25 of planning permission 15/00014/MINVOC currently requires that by 31st December 2016 that the site is reinstated in accordance with the agreed restoration plan. This includes the restoration of the extraction void and the recycling and entrance compound.

4.2.3 As is evident from drawing ‘Expected Mineral and Landfill Volumes’ submitted with this planning application there is a significant area that remains unrestored pending restoration. It is clear by current importation rates that the Applicant will not be able to meet the timescale requirements of the condition.

4.2.4 The rate of both the mineral extraction and inert fill operations at the Application Site has slowed in recent years. The downturn in operations is heavily linked to economic conditions caused by the 2008 recession. Information on sales and importation of inert waste has been logged by the Applicant showing rates since April 2007 (Appendix 1). The graph clearly indicates that there has been a downturn in rates since December 2007/February 2008.

4.2.5 The graph indicates that there have been some peaks in mineral sales during the period since December 2007. These peaks relate to infrastructure projects which were the widening of the M1 during April 2010 to August 2011 and work associated with the redevelopment of the Gas Holders (University of Northampton Innovation Centre) in Northampton during early 2014. General mineral sales in conjunction with the buoyancy of the market remained low during the peaks shown on the graph. The graph indicates that there has been a steady increase in inert waste importation since early 2012 with a sales increasing in relation to general market demand since August 2014.

4.2.6 It is requested that a 5 year extension until the 31st December 2021 is granted in order to allow for the full extraction of the mineral reserve and subsequent restoration of the quarry. The 5 year extension equates to the downturn experienced during December 2007 to April 2014 accounting for the peaks in production linked to specific infrastructure projects.

4.2.7 The NMWLP recognises the potential effects of market conditions on mineral and waste development and indicates that there is flexibility within the Waste Local Plan to respond to
market conditions. As already stated, Harlestone Quarry contributes to the delivery of the Minerals and Waste Strategy for the County. Where there is the potential for planning permission for minerals and waste development to expire before the completion of the development the plan sets provision for applications seeking to extend the end date to come forward. This is particularly the case for waste development where paragraph 5.27 states:

‘Where planning permission expires within the plan period there will be a commensurate decline in the available waste management and/or disposal capacity. This will require (where found to be appropriate through the development assessment process) either the development of additional waste management and/or disposal facilities, expansion of existing facility(ies) or an extension in time to the planning permission.’

4.3 Potential Impacts on Local Amenity

Noise

4.3.1 Planning policy 22 of the NMWLP requires that mineral development should ‘avoid and/or minimise adverse impacts to an acceptable level, specifically addressing noise’. Harlestone Quarry currently operates to noise limits set by condition 10 of planning permission 08/00037/MIN. The condition limits noise levels at identified noise sensitive properties. The limits are:

‘The noise levels at noise sensitive properties shall not exceed 45 dB(A) LAeq 1 hour (free field) at the Quarries and 55 dB(A) LAeq (free field) at the Lodge and 51 Rugby Road during working hours, other than those during initial stripping and bund formation which shall be greater than 70 dB(A) LAeq 1 hour (free field).’

4.3.2 A noise assessment (Appendix 2) of the proposed changes to the location of the crusher has been undertaken to assess the noise impact of the future development and to ultimately determine the acceptability.

4.3.3 A noise monitoring exercise was undertaken with the crusher operating in its proposed location in the extraction void. The objective of the exercise was to determine the source noise levels at the potentially most affected property, The Quarries. The Assessment identifies that at the time of the assessment, the crusher was located in a position considered to represent the likely highest noise levels associated with its operation.

4.3.4 Measurements were taken at The Quarries over a period of 1 hour whilst the quarry was fully operational, followed by a further 15 minutes whilst the quarry was not operational.

4.3.5 Subsequent noise levels at The Quarries were undertaken and the following conclusions are:

‘The details of the calculations, attached, indicate at present an overall site noise level of 42 dB LAeq, 1 hour, with the noise levels associated with the operation of the crusher, 40 dB LAeq, 1 hour, which is equivalent to the noise levels obtained from the measurements at The Quarries.

The calculations and measurement results therefore indicate that the present noise levels associated with the working of Harlestone Quarry are below the 45 dB LAeq, 1 hour noise limits as set by the condition 10 of planning permission 08/00037/MIN.’
hour limit, specified within the Condition 12 of the planning consent, and are therefore acceptable.’

4.3.6 On the basis that the current noise limits can be met, it is considered that there will be no adverse impact in noise terms resulting from the proposed varied site operations and the development is therefore compliant with planning policy 22 of the NMWLP.

Potential Visual Impact

4.3.7 Planning policy 22 of the NMWLP requires that mineral development ‘is of a design and layout that has regard to its visual appearance in the context of the defining characteristics of the local area’.

4.3.8 The operations have been carried out without generating an adverse impact in terms of visual amenity. The proposal seek to construct a temporary 4m bund along the northern boundary (to the south of the current 3m section of bund) is linked to the works that are required to shape the land to the final landform contours. The bund will provide additional screening to properties to the north of the quarry when plant and machinery are working at raised levels. The bund will enable the operations to comply with condition 17 of planning permission 15/00014/MINVOC which requires mobile plant and machinery to be located so that they do not cause an adverse visual impact.

4.3.9 Continuing compliance with condition 17 will ensure that the proposed development does not have an adverse visual impact and is therefore compliant with planning policy 22 of the NMWLP.
5 CONCLUSION

5.1.1 This planning application has been submitted in relation to the requirement to vary a number of conditions of extant planning permission 15/00014/MINVOC, most significant of which relate to the extension of the quarry end date and the arrangements in relation to the location of the crusher.

5.1.2 It is considered that the proposed extension of time to the end date of the planning permission will enable the Applicant to extract the remaining mineral reserve and achieve the proposed restoration contours. The extension relates to the adverse market conditions experienced during the economic recession. In extending the end date of the quarry it will continue to contribute positively to the strategic requirements of Northamptonshire’s adopted Minerals and Waste Local Plan.

5.1.3 From a noise perspective, the operation of the crusher within the extraction void at the working face has been shown to be acceptable as the operations will not exceed the limits set by condition 12 of planning permission 15/00014/MINVOC. The operation of the crusher in the void will enable more efficient working.

5.1.4 The proposed temporary bund will ensure the development will not generate an adverse visual impact when carrying out the final land shaping works. Thus the development will remain compliant with condition 17 of the extant planning permission.

5.1.5 It has been shown that the proposed development can be carried out in an environmentally acceptable manner. This complies with the requirements of planning policy 22 which is the main policy with regards to the control of the environmental impacts of mineral developments.
APPENDIX 1: Mineral Sales and Rates of Fill Importation
APPENDIX 2: Noise Assessment
Mr Robert Jackson  
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12 October 2015

Dear Robert

**Monitoring and Assessment of Noise Associated With the Operation of the Crusher at Harlestone Quarry**

**Introduction**

Barton Plant Ltd have recently implemented a new planning consent at Harlestone Quarry (NCC Ref 15/00014/MINVOV) to enable a more efficient operation for the extraction and restoration within the quarry.

As part of the permitted operations, a bund, which was previously maintained to screen the crushing plant has been removed, to allow improved access into the quarry void. The crusher has recently been brought back into the quarry, following a period of extraction over the summer months and is presently operational near the top of the quarry, close to its originally permitted location. It is not, however, operating within the recycling area, as required by Condition 5, as this was requiring the double handling of the stone and hence a necessity to operate additional plant within the quarry, thus generating additional noise.

In order to assess the levels of noise associated with the operation of the crusher within its present location, a noise monitoring exercise was carried out to determine the source noise levels and at the potentially most affected property, The Quarries.
At the time of the exercise, the crusher was operational close to the top of the quarry, being loaded by an excavator from a stockpile built up over the summer. The crusher was positioned close to the working face with little screening other than the main boundary bunding between this location and The Quarries. It is understood that the operators were presently clearing a path whilst processing the stone for the crusher to be moved within the stockpile area, so that it is effectively screened by the surrounding stockpile. The monitoring undertaken was therefore considered to represent the likely highest noise levels associated with its operation.

All other plant was operational during the exercise, including the loading shovel and dozer, which was working periodically at high level within the restoration area at the northern end of the quarry. There were also a number of HGV movements during the exercise. At present, there is no other screening plant operating within the quarry, as it was understood that the crusher was sufficient for the present time to process the stone.

**Noise Monitoring**

A noise monitoring exercise was carried out during the morning of Friday 9th October 2015.

Weather conditions during the survey period were fine and dry with calm conditions.

A Rion NL-52 Class 1 Sound Level meter was used for the exercise, which was calibrated before and after the measurements using a Rion NC-74 Class 1 Acoustic Calibrator, with the instrument reading 94.0 dBA on both occasions.

The measurements were taken free-field, with the microphone positioned at a height of 1.2 metres above local ground.

**Source Term Monitoring**

In order to establish the source term noise levels associated with the operation of the crusher (a Pegson XA400S), two measurements were obtained at a distance of 10 metres from the sides of the crusher whilst it was fully operational. During the measurements, the crusher was being loaded with an excavator located on the stockpile above, which was not audible above the level of noise generated by the crusher.

The measurements indicated the following levels:

- At the engine side, close to the excavator – 77.9 dBA_{eq}; and
- At the exhaust side – 79.1 dBA_{eq}.

It is worth noting that the noise levels associated with the operation of the crusher are lower than those monitored adjacent to the screening plant, which was operational within the quarry earlier in 2015 and is permitted to work anywhere within the quarry.
Noise Monitoring at The Quarries

Measurements were taken at the property over a period of 1 hour whilst the quarry was fully operational, followed by a further 15 minutes whilst the quarry was stood during the morning break.

The measurements were taken in the garden as indicated on Figure 1.

A number of continuous 5 minutes were made during the monitoring period, to enable the noise levels from the various sources and any variation in levels to be identified. The results of the monitoring are attached to this letter report.

The main sources of noise observed during the exercise were associated with distant road traffic on the main road network, occasional vehicles passing along the lane adjacent to the property, birdsong and regular aircraft flying overhead.

Operations within the quarry were generally not clearly audible throughout the monitoring exercise. The operation of the crusher was just audible, identifiable from the engine noise which remained constant; the occasional operation of the excavator was just audible; HGVs accessing the fill area were audible reversing towards the tipping area; and the operation of the dozer was just audible, although it was observed to have operated for less than 15 minutes during the hour.

Noise levels associated with the operation of the quarry were noticeably lower than from the other sources of noise identified above and it was not possible to directly measure noise from the quarry at the property. The measurements indicated a level of 48 dB L_{Aeq, 1 hour} whilst the quarry was operational (excluding the period when the helicopter was overhead) and 46 dB L_{Aeq, 15 minute} whilst the quarry was stood, which would indicate that the level of noise from the quarry was below 45 dB L_{Aeq, 1 hour}, by subtraction of the two levels, noting that the measurements with the plant operational were principally influenced by other sources of noise, which would elevate the overall levels.

It is worth noting that due to the continuous operation of the crusher, noise from this source clearly influenced the background (L_{A90}) noise levels, with levels of 43 dB L_{A90} observed whilst it was operational, reducing to 40 dB L_{A90} during the period when the crusher was stood. This would suggest that the crusher was generating a level of the order of 40 dB L_{Aeq} at the property.

Calculation and Assessment of Noise Levels Associated with the Operation of the Crusher

As indicated above, it was not possible to directly measure the noise levels associated with the operation of the crusher within the quarry at The Quarries, due to the influence of other surrounding noise sources.

It has therefore been considered appropriate to calculate the noise levels at the property, based upon the source term noise monitoring undertaken adjacent to the crusher.

The details of the calculations, attached, indicate at present an overall site noise level of 42 dB L_{Aeq, 1 hour}, with the noise levels associated with the operation of the crusher, 40 dB L_{Aeq, 1 hour}, which is equivalent to the noise levels obtained from the measurements at The Quarries.
The calculations and measurement results therefore indicate that the present noise levels associated with the working of Harleston Quarry are below the 45 dB $L_{Aeq,1\text{ hour}}$ limit, specified within the Condition 12 of the planning consent, and are therefore acceptable.

As indicated previously, the crusher is presently operating in a relatively open area of the quarry, whilst the stockpile is worked to enable it to be repositioned within the stockpile, thus enabling additional screening and a further reduction in noise levels. It is understood that this would be undertaken within the next few days.

Summary

Barton Plant Ltd have recently implemented a recent planning consent, which allows Harlestone Quarry to be worked more efficiently.

During the summer months, a large amount of stone has been extracted and stockpiled, for processing over the next few months. A crusher has recently been brought back to process the material. It was initially anticipated that the crusher would be located within the recycling area within the southern part of the quarry, however, once operational it was found that additional plant was being required to double handle the material to the processing area and back into the quarry, potentially increasing noise levels. It has therefore been considered to relocate the crusher adjacent to the stockpile where the material can be loaded directly into the plant. Whilst it is presently operating in the main quarry area, it will be relocated within the stockpile shortly, so that it is effectively screened by the surrounding material.

A noise monitoring exercise was carried out on 9 October 2015, to assess the noise levels associated with the present operations at the potentially most affected property, The Quarries. The measurement and subsequent calculation exercise indicated that the operations were generating noise levels below the planning condition limits and are therefore acceptable.

On this basis, it is considered that the operation of the crusher adjacent to the stockpiles would not result in any exceedances of the site noise limits or additional potential disturbance to surrounding residents.

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

Yours sincerely

Les Jephson
Figure 1: Noise Monitoring Position at The Quarries
Harlestone Quarry - Noise Monitoring at The Quarries
Results of Noise Measurements Carried Out
on 9 October 2015

Equipment Used: Rion NL-52 Class 1 Sound Level Meter (Serial No. 00231655)
Location: On Rear Property Boundary
All Levels; Fast, Freefield, Mic Height 1.2 metres.

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<tr>
<th>Start Period</th>
<th>Measured Noise Levels [dB]</th>
<th>Comments</th>
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<td>50.6</td>
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<td>9:00</td>
<td>48.4</td>
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Measured Noise Levels [dB] - 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80
Freefield Noise Level [dB(A)]
Time

Distant road traffic / birdsong major source
Distant road traffic less audible
Helicopter overhead
Birdsong reducing / Aircraft overhead audible
Aircraft high overhead audible
Birdsong increasing / aircraft high overhead audible
Aircraft high overhead audible
Aircraft high overhead audible
Light aircraft overhead / Quarry Stood
Aircraft high overhead audible
Barton Plant Ltd - Harlestone Quarry

Calculated Noise Levels from Site Operations

12-Oct-2015

Receptor: The Quarries

Uses BS5228

Height 106.5 m

Predicted Freefield Noise Levels

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<tr>
<th>Source</th>
<th>Ref L_{Aeq} (@10 m)</th>
<th>Ref Dist (m)</th>
<th>No. (/hr)</th>
<th>% On Time</th>
<th>Source Ht</th>
<th>Dist S-R</th>
<th>Barrier Ht</th>
<th>Dist S-B</th>
<th>Distance Attenuation</th>
<th>CRTN Attenuation</th>
<th>Max Attenuation</th>
<th>LA_{eq} Rest. Ref</th>
<th>LA_{eq} Rest. Total</th>
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