WELCOME

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Welcome to Breedon's second pre-application public consultation event about our development proposals for Bonnington Mains Quarry.

These boards have been prepared to provide further details about the issues identified by attendees of the first public event, which took place on the 28th August 2023.

In summary, the proposal involves the following forms of development;

- The extension of existing quarrying operations
- The formation of a Materials Recycling Plant, to process building and construction waste
- The infill of the quarry void within inert residual material from the recycling process
- The restoration of the quarry site

FEEDBACK DURING THE FIRST PUBLIC EVENT

Breedon primarily received verbal feedback during the initial public event, with limited written comments being received. The main issues raised during the event are summarised as follows;

- Transport
  - Routing of HGV's
  - Number of HGV's generated by the existing, permitted and proposed development
- Blasting & Vibration
  - Existing impact of Blasting Activities
  - Blasting Frequency
  - Timing of Blasting
  - Vibration Limits
  - Blasting Warning Siren
  - Blasting Mitigation & Monitoring
- Dust & Air Quality
  - Concern raised with regards to the air emissions of the existing and proposed development, including the permitted asphalt plant
- Noise Impact, Mitigation & Assessment
- Landscape & Visual
  - Impact on views from the 'Cala housing development'
  - Impact on views from Wilkieston Road
  - Proposed trees in south-west corner of site would block views from Wilkieston Road
- Recycling and Infilling
- Further information sought regarding type of material to be recycled and type of material to be used during the infilling proposals
- Duration of Development
  - Confirmed that it is planned for all development to be completed by 2050, and site restored by 2052, in line with current planning permission. No change to the permitted duration of development is therefore proposed.

PLEASE PROVIDE FEEDBACK

Breedon would welcome further verbal and written feedback with regards to this consultation event and the development proposals. Please provide your comments in writing, by either using the Feedback Forms provided at this event, or email your comments to donald.wilkins@breedongroup.com

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TRANSPORT

HGV ROUTING

HGV's travelling to and from the quarry are currently required to do so using Cliftonhall Road, travelling north/south to the quarry from Newbridge Industrial Estate. No change is proposed to these existing access arrangements.

Concern was expressed by residents that, on occasion, HGV's do not follow the prescribed routing and use other roads within the local area.

Breedon will actively enforce the routing arrangements. Members of the public are encouraged to inform a member of the site management team if they are aware of HGV drivers not adhering to these arrangements.

Exit signage at Cliftonhall Road

HGV MOVEMENTS

A planning application to enable the resumption of quarrying operations, made to the City of Edinburgh Council in 2017, assessed a number of scenario's with regards to HGV movements to and from the quarry, looking at potential peak traffic flows. The peak HGV movements assessed in the 2017 Environmental Statement was 365 daily movements. This level of activity was assessed by the Council's Roads department and deemed acceptable.

Since reopening of the quarry and concrete plant, HGV movement numbers have been well below the 2017 maximum scenario of 365 movements per day.

The predicted maximum HGV movements as result of the existing and proposed development are set out below.

PROPOSED HGV MOVEMENTS (PEAK OPERATIONS)

Date Range	Quarry Movements	Asphalt Plant Movements	Concrete Plant Movements	Recycling Imports	Recycled Exports	Total
Monthly	2,317	975	555	1,847	1,847	7,703
Weekly	579	244	139	462	462	1,926
Daily	105	44	25	91	84	350

The operations would be undertaken in phases, and the maximum predicted HGV movements would be experienced during Phase 2 only. Each phase of the development is summarised below;

- Phase 1 of the proposed operations involve an extension to the quarrying operations only (no recycling and infilling would be undertaken during Phase 1). Phase 1 would therefore involve a continuation of the permitted quarry, concrete and asphalt operations (174 daily movements). This phase would last for approximately 8 years, following commencement of development.
- Phase 2 of the operations would add HGV's associated with the Recycling operations to the ongoing Phase 1 operations. This phase would last for approximately 4 years.
- Phase's 3 & 4 would see the completion of mineral extraction and HGV numbers would be associated with the asphalt, concrete and recycling plants only.

The maximum HGV movements would therefore be experienced only during Phase 2, which would last for approx. 4 years. HGV numbers during other phases would be significantly less than the peak operations in Phase 2.

PROPOSED DAILY HGV MOVEMENTS PER PHASE (MAXIMUM PREDICTION)

Phase	Quarry Movements	Asphalt Plant Movements	Concrete Plant Movements	Recycling Imports	Recycled Exports	Total	Duration
Phase 1	105	44	25	0	0	174	8 years
Phase 2	105	44	25	91	84	350	4 years
Phase 3	0	44	25	91	84	244	6 years
Phase 4	0	44	25	91	84	244	5 years

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BLASTING & VIBRATION

INTRODUCTION

The first operation in the mineral extraction works is drilling and blasting, to fragment the strata such that it can be fed into the processing equipment, to be made into quarry products. Even the most well designed and executed of blasts will generate a certain amount of energy in the form of both ground vibration and airborne vibration.

FREQUENCY OF BLASTING

Breedon is permitted to undertake up to 3 blasts per week and 104 blasts per year. However, in reality, Breedon blast less than 20 times per year.

Blasting is undertaken approximately every 3 to 4 weeks. The frequency of blasting is dictated by the demand for quarry products. Each blast is designed to create a blast pile which contains between 20,000 to 40,000 tonnes of rock, which is then crushed and screened into a variety of quarry products.

TIMING OF BLASTING

The quarry is permitted to carry out blasting between the following hours;

Mondays to Fridays: 10:00 and 16:00 hours

Blasting tends to be undertaken in the morning. No change to the permitted timing of blasts are proposed by Breedon.

VIBRATION LIMITS

Ground vibration generated by blasting at the quarry is currently limited at residential properties by planning condition.

The planning conditions state that blasting operations shall not exceed a peak particle velocity of 6 mms^{-1} in 95% of all blasts measured over any period of 6 months and no individual blast shall exceed a peak particle velocity of 12 mms^{-1} as measured at vibration sensitive buildings.

No change to the permitted blast limits are proposed by Breedon.

BLASTING WARNING SIREN

A warning siren is sounded at the quarry approximately 5 minutes & 2 minutes prior to a blast taking place.

This warning siren is a health and safety precaution to ensure all staff are clear of the blasting danger zone. The siren is not intended as a warning for members of the public, residing outwith the quarry, and Breedon is not obliged to ensure the siren is audible outwith the quarry boundary.

VIBRATION MITIGATION

Each blast undertaken at the quarry is designed in order to maximise the production (tonnage) of the blast whilst ensuring it complies with the vibration limits stipulated within the planning conditions.

Blasting may incorporate a number of mitigation measures within the blast design to manage blast induced vibration, including reducing the ‘maximum instantaneous charge’ (MIC), ‘double decking’, using electronic detonators, bore hole spacing etc.

VIBRATION MONITORING

Breedon employ specialist consultants to monitor blast vibration. This monitoring is generally undertaken at the closest residential properties to the location of the blast – usually at either Bonnington Mains Lodge to the south-west of the quarry, or the Park Ranger Lodge to the east of the quarry.

Vibration levels reduce as the separation distance from the blast location increases. Vibration levels at the closest residential properties therefore represent the highest vibration levels which will be experienced at residential properties within he local area.

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NOISE

INTRODUCTION

The use of large plant and machinery within the quarry has the potential to generate noise levels at sensitive locations close to the mineral extraction operations. The quarry contains a variety of noise sources, including crushing and processing plant, on-site mobile plant and equipment such as tractors, excavators, loading shovels, and road going HGV lorries.

PLANNING ADVICE NOTE 50 – ANNEX A

Planning Advice Note (PAN) 50, Annex A, provides the most relevant planning policy advice applicable the control of noise from surface mineral workings in Scotland. PAN 50 recommends the setting of absolute values for noise limits, linked to day-time and night-time working periods, defined as 07:00 - 19:00 hours and 19:00 - 07:00 hours respectively.

PAN 50 introduces the concept of a maximum fixed acceptable noise level of 55 dB $L_{Aeq,1h}$ for daytime operations during the working week. It also introduces a nominal night time limit of 42 dB $L_{Aeq,1h}$.

The document also states that in some circumstances, e.g. in quieter rural areas, the setting of nominal limits lower than 55 dB $L_{Aeq,1h}$ may be considered. This may be considered, for example, where the nominal 55 dB $L_{Aeq,1h}$ level is more than 10 dB above the measured background level. In these circumstances, PAN 50 recommends the use of a condition limiting mineral operators to a noise level which is 10 decibel excess over the existing background noise level, albeit, PAN 50 notes that it would not normally be appropriate to require a daytime limit below 45 dB $L_{Aeq,1h}$.

EXISTING NOISE LIMITS

That with respect to the control of noise resulting from the operations during the permitted hours of operation, the nominal noise limit from site operations shall not exceed the following, when measured free field over any one-hour period:

- Clifton Cottage 45 dB(A) LAeq,
- Bonnington Mains Farm 52 dB(A) LAeq,
- Craigpark Housing Development 52 dB(A) LAeq,
- Park Ranger Lodge 52 dB(A) LAeq,
- Ratho Mains Farm 51 dB(A) Laeq

b) During night-time operations the nominal noise limit from the asphalt plant and associated operations shall not exceed NR25 when measured within the nearest noise sensitive receptor.

c) Notwithstanding the terms of part (a), that during temporary operations, such as soil stripping operations, the nominal daytime noise limit from site operations, shall be no more than 70dB LAeq over any one-hour period for a maximum of 8 weeks per year.

NOISE MITIGATION

The most effective noise mitigation is the use of barriers to minimise direct line of sight between quarry operations and noise sensitive receptors. This is generally achieved by operating within the quarry void or creating noise attenuation bunding around the periphery of the site. Other forms of mitigation include the use of low level reversing alarms, minimizing drop heights and enclosures around noise generating plant such as crushing equipment.

NOISE ASSESSMENT

Breedon's planning application will be supported by an Environmental Impact Assessment (EIA) Report which will incorporate a Noise Impact Assessment (NIA) prepared by professional acoustic consultants. The NIA will utilize specialist environmental noise prediction software (Cadna 'A'), incorporating the local topographical environment and maximum noise power level of the onsite plant. This modelling has been found to be highly accurate in predicting noise levels from quarrying activities. The NIA will be presented in the EIA Report which accompanies the planning application.

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DUST & AIR QUALITY

INTRODUCTION

Dust from quarrying operations is generally created by firstly the extraction or breaking of strata and secondly the handling of previously broken materials. Potential sources of dust include the stripping and handling of soil and overburden, and the blasting, loading, processing, transportation and storage of mineral.

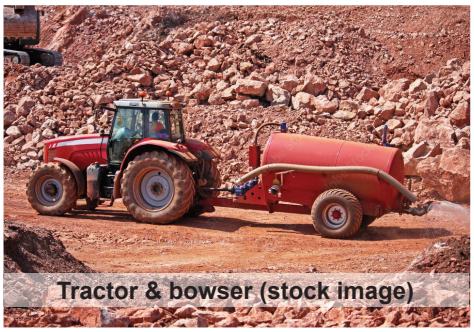
WEATHER CONDITIONS

Weather conditions have a significant impact on the likelihood of dust being generated. During dry windy weather, the potential for dust generation is much greater than during calm wet weather. Wind direction also influences where dust may be deposited.

DUST CONTROL MEASURES

Breedon employ a range of measures on site to minimise and mitigate emissions of dust and fine particulates. These measures include;

- Water sprays and a tractor and bowser on roadways and hardstandings
- Filtration systems on drill rigs
- Water sprays on crushers and transfer points
- Conveyors enclosed
- Transfer points being enclosed
- Minimise free fall drop heights
- Using belts of suitable capacity
- Avoiding overfilling conveyors
- Belt cleaning equipment on conveyors
- Cleaning up spillages promptly
- Vehicle exhausts directed above the horizontal
- Location of stockpiles to benefit from available screening
- Profiling stockpiles to minimise wind whipping



Tractor & bowser (stock image)

POLLUTION PREVENTION AND CONTROL REGULATIONS

Breedon operate plant and equipment within Bonnington Mains Quarry which is licensed under the *Pollution Prevention and Control (Scotland) Regulations* 2012 (PPC Regs). The PPC Regs are administered by SEPA, who set's permit conditions with the aim of achieving a high level of protection for the environment.

The primary focus of a PPC 'Part B' permit, under which all of the licensed equipment at Bonnington Mains Quarry operates, is in relation to emissions to air – i.e. the emission of dust and particulates. The PPC Permit conditions are closely monitored by SEPA.

DUST MONITORING

Breedon's site management visually monitor dust emissions during operations to ensure dust generation is minimised. Where necessary, dust generating activities will be suspended until appropriate weather conditions prevail or mitigation is implemented.

In addition, Breedon undertake dust monitoring using dust monitoring gauges which can monitor the quantity and direction of dust deposition. Breedon has recently installed two permanent gauges along the northeastern boundary of the site in order to .

Dust monitoring gauge

DUST ASSESSMENT

Breedon's planning application will be supported by an Environmental Impact Assessment (EIA) Report which will incorporate a Dust and Air Quality Assessment. The EIA Report will be publicly available once the planning application is submitted to The City of Edinburgh Council.

LANDSCAPE & VISUAL

INTRODUCTION

Views into Bonnington Mains Quarry are currently well contained as a result of local topography and roadside screening, in the form of bunding and tree planting.

Breedon's proposals seek to protect the landscape and visual amenity of the area through the use of screening (bunding and tree/hedge planting) and through the quarry design. A detailed Landscape and Visual Impact Assessment will be prepared in support of the planning application.

VIEW FROM CALA HOMES / WHINSTONE PLACE

Views towards the quarry from the Cala Homes development / Whinstone Place are well screened by the intervening topography which currently accommodates the construction operations associated with the *Lost Shore* wave garden development. The common boundary between the quarry and Lost Shore is due to be planted with trees, which will (in time) provide additional visual screening.

The higher vertical elements of the proposed Materials Recycling Plant, some soil storage and upper quarry faces may be visible from Whinstone Place, however the majority of the proposed quarry and infill operations would continue to benefit from topographical screening and would be viewed well beyond the Lost Shore built development.

View from Whinstone Place

VIEW FROM WILKIESTON ROAD

In order to screen views into the proposed quarry extension, it is proposed to form up low lying bunding around the southwest corner of the development site, bordering Wilkieston Road and Cliftonhall Road.

Concern was raised during the first public event about the loss of long-range views north towards the Firth of Forth as a result of the proposed tree planting on the proposed roadside bunding.

Breedon is currently undertaking a review of the potential screening requirements and options for this location, with the aim to screen the proposed mineral extraction options whilst retaining the longer distance views towards the Firth of Forth. This work is currently ongoing and may lead to an amendment to the bunding and planting proposals in the southwestern corner of the development site.

View from Wilkieston Road

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RECYCLING & INFILLING

INTRODUCTION

Planning permission is sought for the erection of a Materials Recycling Facility which can process construction, demolition and excavation waste through a crushing, screening and washing process, to produce a range of recycled sands and aggregates.

THE RECYCLING PROCESS

On arrival, the incoming materials would be checked at the weighbridge to ensure they are suitable to be processed through the wash plant.

On entering the process, a powerful magnet would remove any scrap metals before the material is processed. The materials would then be given an initial rinse and screened to remove anything over 40mm and separate it into either a coarse fraction (4-40mm gravel) or fine fraction (0-4mm sand).

Anything below 4mm (sand, silt or clay) would be sent through the sand plant where centrifugal force is used to separate the denser sand from the less dense silt/clay. The sand would then be transferred onto a dewatering screen and conveyed to either the sharp or soft sand stockpiles ready to be used. The remnants would be processed through the water treatment system where flocculant is firstly added to help settle the silt and clay out of the water in the clarifying tank.

The clean water would then filter through a final 'piano wire' screen where floating micro-organics can be removed before entering a holding tank to be recirculated around the plant. Meanwhile, the silt/clay slurry would be pumped from the bottom of the thickening/clarifying tank into buffer tanks before being pumped into the filter press. The press would then act like a giant vice to squeeze the water from the slurry at high pressure leaving a filter cake behind. The filter cake would be used to infill the quarry void and eventually restore it to approximately pre-development contours.

By the end of the process, the plant would have cleaned, separated and sized the incoming material into high quality usable materials. The five core products that come from the wash plant would be: 0-2mm soft sand, 0-4mm sharp sand, 4-10mm gravel, 10-20mm gravel and 20-40mm gravel.

Processing Plant at Pumpherston, Livingston

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