

PERMIT NO. 024



POLLUTION PREVENTION AND CONTROL ACT 1999
 POLLUTION PREVENTION AND CONTROL (ENGLAND AND WALES)
 REGULATIONS 2000

PERMIT OF PROCESS

THIS IS TO CERTIFY THAT the process of blending, packing and loading of bulk cement

at: **BRETT LANDSCAPING LTD, SILEBY ROAD, BARROW ON SOAR,
LOUGHBOROUGH, LE12 8LX**

National Grid Ref: SK 590165

has been duly permitted in accordance with Regulations 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 subject to the conditions outlined in this document.

Name of Operator: BRETT LANDSCAPING LTD
Registered Office ST PAUL'S HOUSE, WARWICK LANE, LONDON EC4P 4BN

This Permit shall apply only to the premises occupied by the applicant, as specified and described in the Application for Permit submitted to the Borough of Charnwood. This Permit, consisting of twelve pages, shall be subject to replacement, variation or amendment, as may be considered appropriate by the Borough of Charnwood at any time, according to provisions of Regulations 12, 15 and 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000

The conditions contained herein shall apply from the date of the Permit unless otherwise stated.

Refer to Variation Notice dated 13 May 2004

Signed on behalf of Charnwood Borough Council

.....
Beverley Green, Specialist Environmental Health Officer
(the delegated officer for the purpose)

Counter-signed.....

Dated13 May 2004

Directorate of Housing and Health, Southfields, Southfield Road, Loughborough LE11 2TX

**BRETT LANDSCAPING LTD, SILEBY ROAD, BARROW ON SOAR,
LOUGHBOROUGH, LEICESTERSHIRE**

1.0 Process Description

1.1 Purpose

The purpose of the process is to produce concrete products using cement and other ingredients.

1.2 Plant Detail

The site is located approximately 1Km south east of Barrow-upon-Soar and 1.5Km north west of Sileby as shown in Figure 1/024. The nearest residential properties at the time of Permit are at Huston Close, Barrow-upon-Soar.

The principal emissions are dust associated with the handling of cementitious materials and aggregates. The location of the main plant and emissions points for dust are shown in Figure 2/024 and are referred to by the following letters:

- A Aggregate storage hoppers - Storage hoppers fed directly from quarry owned by Lafarge Aggregates Ltd and discharged into lorries in an area enclosed on three sides, to serve the site. A water sprinkler system is provided to control dust in this area.
 - B Trief kerbing and concrete raft plant - Aggregate bays, loading hopper, radial conveyor, two enclosed storage bins, two cement silos with enclosed air slides. Enclosed mixer and batching plant within main building. A water sprinkler system is provided to control dust in this area.
 - C Wet-cast and tile plant - Small aggregate arrival bay adjacent to three covered hoppers and cement silo. Aggregates discharged via chutes into weighing hopper or tracks beneath. Cement discharged into same weighing hopper via an inclined, enclosed screw conveyor and flexible sock. Transfer of cement and mixer box is inside main building
 - D Concrete block paving plant - Covered feed hoppers, covered wind protected conveyors, four covered storage hoppers, pigment addition in enclosed building, holding hopper in main building, three silos with enclosed screw conveyors (two containing cement, one containing ground granulated blast furnace slag). Weigh hopper and mixer in main building.
 - E Decorative concrete slab production - Aggregate storage bays, fully enclosed overhead storage hoppers. Belt weighing conveyor, fully enclosed mixer and pigment addition all within main building. Two cement silos with enclosed screw conveyors. Weigh hopper within main building.
 - F&G Concrete Slab Production - Granite dust and washed sand brought in from outside. Overflow/buffer supplies of dust and sand are stored in one set of storage bays serving the two production buildings. Each slab plant has a set of low level feed hoppers into which are fed supplies of dust and sand from the bays and aggregate from the main aggregate storage
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hoppers. The feed hoppers at X and Y are covered. Covered conveyors discharge into weight hoppers in main building. Each production building has two silos with enclosed screw conveyors (one containing cement, one containing pulverised fuel ash). The mixers are in the main building.

- H. Block Rumbling Process – Concrete blocks are sent into a fully automated machine where they are de-palletised onto a feed conveyor. The blocks are then fed into a rotating drum, fitted with a water spray dust suppression system where they are tumbled against themselves to give an aged look. The blocks exit the drum and are then fed by conveyor to a sorting table that puts the blocks into the right orientation for packing. The blocks are then automatically palletised and spun wrapped on pallets in preparation for dispatch. The conveyor is fitted with a dust arrestment unit.
- I. Shot-Blasting Process – The process involves pallets of paving slabs being fed into an automatic depallitiser before being passed through a shot-blasting unit by conveyor. The shot-blaster is fitted with a dust arrestment unit, capable of a capacity of 140 cubic metres per hour, which is situated between the rumble shop and shops 4 and 5.

Silos for Cementitious Materials

There are a total of 11 silos on site. All silos are fitted with Disa Silo Safe – 24 compact cartridge filters with reverse jet cleaning (as in the table below). All have spring-loaded pressure relief valves and high-level sensors. These activate an audible alarm and shut-off the fill pipe when silos are likely to be over-filled.

Silo No.	Product	Contents	Filter	High Level Indication	
				<i>Audible</i>	<i>Visual</i>
1	SLABS (4 & 5)	OPC	RAJ	YES	YES
2	SLABS (4 & 5)	PFA	RAJ	YES	YES
3	SLABS (2 & 3)	OPC	RAJ	YES	YES
4	SLABS (2 & 3)	PFA	RAJ	YES	YES
5	BLOCKS	RHC	RAJ	YES	YES
6	BLOCKS	RHC	RAJ	YES	YES
7	BLOCKS	OPC	RAJ	YES	YES
11	TRIEF/KASSEL	OPC	RAJ	YES	YES

NB.Silos 8, 9, and 10 not used

<i>Key</i>	
RAJ	Reverse air jet filter
OPC	Ordinary Portland cement
PFA	Pulverised fuel ash
RHC	Rugby Rapid Hardening Cement

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1.3 Plant Operation

From storage hoppers and silos aggregates and cement are weighed before being mixed with water to form concrete. This concrete mix is compressed and/or vibrated in a mould. The concrete is then removed from the mould and allowed to cure before stocking.

The ingredients which may be used to produce the concrete in all cases include water and cement. The other ingredients used depend upon the product but may include granite dust, various sizes of crushed granite, washed sand, pulverised fuel ash (PFA), and iron oxide powdered pigments.

Aggregates are fed into the process from main aggregate storage hoppers (or from outside suppliers) by lorry and from storage bays by loading shovel.

Cement is delivered by sealed cement tankers and is blown from the tankers into silos.

Iron oxide pigments are delivered in 25Kg sacks and 1m³ bags. Bags and sacks are opened within the buildings where they are added automatically to dry aggregate as it passes on a conveyor or manually into the mixing vessel.

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2.0 Emission Limits and Controls

- 2.1 All emissions to air, other than steam or water vapour, must be colourless and free from persistent mist. All emissions to air must be free from persistent fume and free from droplets.

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3.0 Monitoring Sampling and Measurement of Emissions

- 3.1 Regular visual assessments of emissions of cement and cementitious powders shall be made on a random basis, at least daily, by the operator. The assessments shall be made having regard to the possible sources of dust emissions which shall include storage areas and plant.
- 3.2 Visual assessments of emissions shall be made during charging of silos with cement and PFA having regard to the possible sources of emissions
- 3.3 All visual assessments shall be recorded in the log book required by condition 3.4. The log book shall include the following details regarding visual assessments:
- a) The date and time of observation.
 - b) Weather conditions
 - c) Wind direction
 - d) Position of observer
 - e) Assessment
 - f) Identification of observed area or plant
 - g) Remedial action taken (if appropriate)
 - h) Name of person completing the log book.
- 3.4 The results of all monitoring and inspections shall be recorded in a log book retained by the operator for a minimum of two years and made available by the operator for examination by Charnwood Borough Council

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4.0 Process Controls

- 4.1 Bulk cement and other cementitious materials must be stored in silos. Silos shall be vented to arrestment plant as detailed in condition 1.2. Arrestment plant fitted to silos shall be of sufficient size (and kept clean) to avoid over-pressurisation during delivery.
- 4.2 Visual assessment of emissions from the arrestment plant to the silo shall be undertaken while all bulk deliveries are made.
- 4.3 All storage silos shall be equipped with audible and/or visual high level alarms to warn of over-filling. The correct operation and use of all such alarms shall be checked on a weekly basis by a designated and competent person. Details of these checks shall be recorded in the log book required under condition 3.4 on the day of inspection and the details shall include:-
- a) Date and time of inspection
 - b) Name of person carrying out the check
 - c) Description of any defects noted
 - d) Suggested further action
- 4.4 In order to minimise fugitive emissions during the charging of silos, the security of the connections of the transfer lines to the tanker discharge point and the silo delivery inlet point shall be checked before the commencement of each delivery.
- 4.5 Over-pressurisation of the silos and fugitive emissions during delivery operations from tankers shall be avoided by taking the following measures:
- a) The use of tankers with sufficient valve work to allow a gradual release of pressure to occur and by carefully controlled venting.
 - b) Tanker delivery drivers and any other person who carries out the silo delivery operation shall be sufficiently trained to carry out the correct delivery procedures to avoid over-pressurisation of the silos and the release of fugitive emissions.
- 4.6 Materials which may generate airborne dust emissions (other than cement and cementitious materials) shall be delivered, stored and handled so as to prevent or minimise dust emissions.
- 4.7 Feed hoppers shall be provided with an enclosure around the upper opening sufficient to prevent or minimise dust emissions while material is discharged into the hopper
- 4.8 Aggregates which are not stored under cover shall be enclosed by three sided bays and the height of stored materials shall not exceed the height of the bay walls to prevent the entrainment of dust by wind.
- 4.9 Dust emissions from materials which are not stored under cover shall be minimised by a method of dampening in the event of persistent dust emissions, for example during prolonged dry periods.
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- 4.10 The transfer of cement and other cementitious material, other than delivery to site storage, shall be by sealed screw conveyors or air slides.
- 4.11 Internal transport of dusty materials other than cement and cementitious materials shall be carried out so as to prevent or minimise airborne dust emissions.
- 4.12 Conveyors shall be of sufficient capacity to handle maximum loads.
- 4.13 All conveyors shall be covered to provide protection against wind-whipping
- 4.14 Conveyor discharges shall be arranged to minimise free fall at all times.
- 4.15 All spillages which may give rise to dust emissions shall be cleaned up promptly, by wet handling. Dry handling of dusty spillages over 5kg shall not be permitted. Major spillages shall be dealt with using a vacuum cleaning system. It shall not be necessary for vacuum cleaning equipment to be kept on site provided such equipment can be readily obtained on the same day the spillage occurs and interim measures such as dampening are taken immediately.
- 4.16 All accumulations of dust and materials liable to produce dust on roofs, walls and support structures shall be cleared as soon as possible where this is necessary to prevent or minimise dust emissions. Deposits shall be collected and removed by a method which will minimise dust emissions.
- 4.17 All filter bags shall be inspected at the frequency specified below. If defects or significant blindings are detected, corrective action shall be taken promptly and, wherever possible before another delivery occurs. Operators shall record in the log book required in condition 3.4 all cases where deliveries are made prior to corrective action being taken.

Filters fitted with reverse jets - at least once a month

- 4.18 A water sprinkler system shall be installed in front of the aggregate hoppers and in front of the Trief and Kassel unit. This system shall be used when visual assessment required under condition 3.1 indicate it is necessary to prevent dust emissions.

The use of the sprinkler system shall be recorded in the log book required by condition 3.4 and shall include the following details:-

- 1) Date and time of observation
 - 2) Date and time that suppression system was used
 - 3) Duration that the system was used
 - 4) Name of person operating the system
- 4.19 During prolonged periods of dry weather or when visual assessment of the site identifies dust emissions, a water bowser will be used to prevent emissions across the site boundary.

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5.0 Vents

- 5.1 The final discharge point from particulate matter arrestment plant shall be at low level in order to minimise the effect on the locality of abnormal emission and to facilitate maintenance and inspection. This condition shall not apply where arrestment plant is located on top of a storage silo or container to enable any captured material to be returned to the silo/container.

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6.0 General Operation

- 6.1 When abnormal dust emissions are observed or when any malfunction or breakdown likely to lead to an escape of dust is found then:-
- a) An immediate investigation shall be carried out
 - b) Prompt remedial action shall be taken
 - c) The observation, finding, result of investigation and remedial action taken shall be entered in the log book required by Condition 3.6, and
 - d) If the remedial action is not immediately effective then action to mitigate any effects shall be taken.
- 6.2 In the event of malfunctions and breakdowns causing abnormal dust emissions likely to have an effect on the local community, Charnwood Borough Council shall be notified in writing within 24 hours detailing:
- a) The time and nature of the malfunction or breakdown
 - b) The remedial action taken
 - c) The nature, extent and effect of emissions.
- 6.3 In the event of a breakdown of any arrestment plant liable to cause abnormal dust emissions the operator shall immediately notify Charnwood Borough Council by telephone.
- 6.4 Roadways in normal use and all other areas where there is regular movement of vehicles including the yard storage areas shall be hard surfaced. Compacted stone is acceptable as a hard surface.
- 6.5 All hard surfaced roadways and yard areas shall be kept clean in order to prevent or minimise dust emissions.
- 6.6 Vehicle exhausts shall not, wherever practicable, be directed below the horizontal.

EXPLANATORY NOTES

These notes do not comprise part of Permit Serial No.024 but contain guidance relevant to the Permit.

1. You should note that Regulation 12(10) of the Regulations provides that in relation to any aspect of the process not regulated by conditions 2.1 to 6.6 the best available techniques ('BAT') shall be used for the purpose of preventing or, where that is not practicable, reducing emissions into the air.

Section 3(7) of the Regulations describes 'BAT' as meaning the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

2. This Permit is issued under the Pollution Prevention and Control (England and Wales) Regulations 2000. The responsibility you have under legislation for Health, Safety and Welfare in the workplace remains in force. In addition, the Permit does not relieve you of your obligations to obtain planning permission, hazardous substances consent, discharge consent from the Environment Agency Building Regulations approval, or a Waste Disposal Licence.
 3. Any proposed 'change in operation' in the process (within the meaning of Regulation 2(1)) shall be notified to Charnwood Borough Council as required by Section 16(1) of the Regulations.
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