

## PERMIT



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

**PERMIT OF PROCESS**

THIS IS TO CERTIFY THAT the manufacture of ready mixed concrete from a mobile Readymix plant involving the blending and use of bulk cement.

Operated by: **LAFARGE AGGREGATES LTD,  
GRANITE HOUSE, WATERMEAD PARK, SYSTON LE7 IPL**

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

**Name of Operator: LAFARGE AGGREGATES LTD**  
**Registered Office GRANITE HOUSE WATERMEAD PARK SYSTON LE7 IPL**

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 thirteen 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.

Signed on behalf of Charnwood borough Council

Dated 5 July 2006

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

Counter-signed.....Ann Green, Specialist Environmental Health Officer  
Directorate of Housing and Health, Environmental Protection, Southfields,  
Southfield Road Loughborough LE11 2TX

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**LAFARGE AGGREGATES LTD, MOBILE READYMIX PLANT OPERATED FROM GRANITE HOUSE WATERMEAD BUSINESS PARK, SYSTON****1.0 Process Description****1.1 Purpose**

The process involves the blending of bulk cement using mobile plant.

This process is included in Schedule I, Chapter 3, Section 3.1, Part B of the Pollution Prevention and Control (England and Wales) Regulations 2000.

**1.2 Principal Emissions**

The emissions are particulate matter (cement dust, aggregate dust) arising from the use of the following raw materials:

- 1) Washed gravel or coarse and fine aggregate including granite materials.
- 2) Cement (OPC)
- 3) Ground granulated blast furnace slag (GGBFS)
- 4) Pulverised Fuel Ash (PFA)

**1.3 Plant Details**

- a) 4 no. aggregate storage bins of 25 tonnes
- b) 1 no. inclined conveyor
- c) 2 no. screw conveyors
- d) 2 no. cement silos, total capacity 120 tonnes.
- e) 1 no. aggregate weigh hopper
- f) 1 no. high pan mixer

**1.4 Plant Operation**

Aggregates and washed sand and gravel are delivered to the plant in high-sided road vehicles and stored in Stelcon bays. The materials are then transferred to one of four storage bins on the mobile plant by rubber tyred loading shovel. The materials when required are transferred by covered incline conveyor into a weighing hopper before discharge into either the pan mixer or truck mixer unit.

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Cement (OPC) and substitute cement (GGBS or PFA) are delivered to the site in sealed tankers and loaded into two 60 tonne plant silos by pressure loading. The cement and substitute cement materials are fed via a fully enclosed screw conveyor into a cement weigh hopper and from there screwed either directly into the pan mixer where water is added or alternatively, via a screw conveyor into the 'dry leg' discharge chute directly into the back of the mixer truck.

Each silo is equipped with an Airmaster 24 reverse jet filter and high level visual and audible alarms and rubber sealed, spring loaded pressure relief valves.

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**2.0 Emission Limits**

- 2.1 All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist.
- 2.2 All emissions to air shall be free from persistent fume and free from droplets.
- 2.3 No visible emissions of dust shall be noticeable across the site boundary.
- 2.4 The silo filtration plant shall be designed to operate to an emission standard of less than 50mg/m<sup>3</sup> for particulate matter.
- 2.5 The silo filtration plant shall be operated and maintained to ensure the emission limit is met.
- 2.6 No emissions of dust shall be visible during cement deliveries.

### **3.0 Visible Emissions and Monitoring**

#### Visible 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 visual assessment shall be made having regard to the piece(s) of plant or equipment in operation at the time and should include cement silos, loading points, aggregate conveyors, aggregate storage bins and arrestment plant. The results shall be recorded in a log book required by condition 3.4. In addition, visual assessment of dust emissions from the cement silos shall be carried out during the discharge of cement from delivery tanks into the cement silos.
- 3.2 When any visible escape of dust is 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 corrective action shall be taken
  - c) The observation, finding, result of the investigation and action(s) taken under heading b) and d) in this condition shall be entered in the log required by condition 3.4.
  - d) If corrective action is not immediately effective then action to mitigate any effects shall be taken.
- 3.3 Where in the opinion of officers from Charnwood Borough Council or the local authority in the area the mobile plant is sited, that there is evidence of airborne dust from the process off site, an inspection and assessment shall be undertaken by the operator to identify the source and once the source is known, corrective action shall be taken without delay.

#### Records

- 3.4 All inspections and assessments shall be recorded in a log book on a daily basis. Details of visual assessments shall include the following information when a visible emission to atmosphere is apparent: -
- i) Date of observation
  - ii) Time of observation
  - iii) Wind direction

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- iv) Weather conditions
- v) Position of observation
- vi) Assessment
- vii) Identification of observed plant

Where the assessment is that there are no visible emissions, items iii), iv) and v) need not be recorded.

- 3.5 The log book must be retained by the operator for a minimum of two (2) years and made available for examination by Charnwood Borough Council or the Local Authority where the mobile plant is sited.
- 3.6 Any historical records kept off-site shall be made available for inspection within one working day on request from officers of Charnwood Borough Council or the Local Authority in the area the mobile plant is sited.

#### Emissions from Silos

- 3.7 Visual assessment of emissions from silo inlet connections and the silo arrestment plant shall be undertaken throughout the duration of bulk deliveries. The start and finish times of all deliveries shall be recorded in the log book required by condition 3.4.
- 3.8 All audible and/or visual high level warning alarms fitted to silos shall be checked on a weekly basis by a designated and competent member of staff.
- 3.9 Details of all checks and inspections of the high level warning alarms and indicators attached to the silos shall be recorded in the log book (required under condition 3.4) on the day of inspection. These details shall include for each silo's system: -
- i) Date of the inspection
  - ii) Time of the inspection
  - iii) Name of the persons carrying out the check
  - iv) Description of any defects noted.
  - v) Suggested further action

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Inspection of Filtration Plant

- 3.10 The reverse air jet filters shall be inspected at least once a month by the Plant Supervisor and mechanically checked on a six-monthly basis by a qualified maintenance fitter. If defects are detected, corrective action shall be taken promptly and wherever possible before another delivery occurs. The operator shall record in the log book (required by condition 3.4) all cases where deliveries are made prior to corrective action being taken.
- 3.11 Details of all maintenance work carried out on the filters shall be kept in a log and shall include the following details: -
- a. Date
  - b. Description of work undertaken
  - c. Name of operative carrying out maintenance work
- 3.12 A list of key arrestment plant and a written procedure for dealing with its failure shall be provided to Charnwood Borough Council and the local authority where the mobile plant is sited. Any failure of the silo management system (e.g. high level alarms, filter, pressure relief valve) shall lead to a full investigation of the plant operation.

Abnormal Events

- 3.13 Any malfunction or breakdown leading to abnormal emissions shall be dealt with promptly and process operations adjusted until normal operations can be restored.
- 3.14 All malfunction or any breakdown leading to abnormal emissions to atmosphere shall be recorded in the log book (required under condition 3.4.)
- 3.15 For all malfunctions or any breakdown leading to abnormal emissions likely to have an effect on the local community or in the event of the failure of key arrestment plant, Charnwood Borough Council and the Local Authority where the mobile plant is sited shall be informed without delay.
- 3.16 Failure of any part of the reverse-air jet filter system of any silo shall be notified immediately to Charnwood Borough Council and the Local Authority where the mobile plant is sited.

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**4.0 Materials Handling****Silos**

- 4.1 Bulk cement and all other cementitious materials held on site shall be stored in silos.
- 4.2 All silos shall be vented to suitable arrestment plant. Suitable plant is deemed to be an Airmaster 24 reverse air jet filter to each silo.
- 4.3 Each storage silo shall be equipped with visual and audible high level alarms or volume indicators to warn of overfilling. The correct operation of such devices shall be checked weekly or before each delivery, whichever is the longer interval.
- 4.4 Seating of pressure relief valves on the silos shall be checked at least once a week or before a delivery takes place whichever is the larger interval. Immediately it appears that the valves may have become unseated, the delivery must cease and no further delivery should take place. The valve should be examined and reset if necessary. Tanker drivers should be informed of the correct procedure to be followed.
- 4.5 All filter bags shall be inspected at least once a month, unless low maintenance sealed unit filters are used. In which case the inspection frequency shall either be in accordance with the manufacturer's instructions or every six months whichever is the greatest. If defects or significant blinding are detected, corrective action shall be taken promptly and wherever possible before another delivery occurs.
- Operators shall record in a log book any cases where deliveries are made prior to corrective action being taken.
- 4.6 All silos shall be fitted with an automatic system to cut off delivery in the event of pressurisation or over-filling.
- 4.7 If emissions of particulate matter are visible from ducting, pipe-work, the pressure relief device or dust arrestment plant during silo filling, the operation shall cease, and the cause of the problem rectified prior to further deliveries taking place. Tanker drivers should be informed of the correct procedure to be followed.

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Cement Deliveries

- 4.8 The connection of transfer lines to the tanker discharge point and silo delivery inlet point shall be checked before the transfer of cement commences. The transfer of cement shall only commence once it has been established that the connection to these points will prevent the emission of cement dust. Any emission occurring from the transfer line shall be recorded in the log as detailed in condition 3.4.
- 4.9 During delivery from tankers, the venting of air to the silos shall be at a limited rate to avoid over-pressurisation of the silos. Particular care shall be taken at the end of deliveries. Only tankers with sufficient valve work to allow gradual release and controlled venting shall be used.
- 4.10 Deliveries from road vehicles to silos shall only be made using tankers fitted with an on-board (truck mounted) relief valve and filtration system – such that venting air from the tanker at the end of a delivery will not take place through the silo.

Stockpiles and Aggregate Storage

- 4.11 Materials stored in stockpiles shall be stored in three-sided storage bays. Materials shall not be piled higher than the external wall of the bay and shall not be forward of the bay.
- 4.12 Aggregate delivered to the site shall be sprayed with water if necessary to prevent the generation of dust.
- 4.13 Aggregate shall be managed to prevent overfilling of storage facilities.
- 4.14 Fixed water sprays shall be installed for use in long term stocking areas.

Conveyors

- 4.15 The main feed conveyors for aggregates into the concrete plant shall be: -
- a) Of sufficient capacity to handle maximum loads
  - b) Provided with protection against wind whipping.
  - c) Arranged to minimise free-fall at all times
  - d) All transfer points shall be enclosed within the cladded structure
  - e) Provided with belt scrapers for keeping the return belt clean.

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Loading of truck mixers

4.16 The transfer of cement other than delivery to silo storage shall be from silos by:-

A fully enclosed mechanical screw feed conveyor into a cement weigh-hopper, and from weigh-hoppers by:-

- a) screw feed into the 'wet leg' pan mixer  
or
- b) Screw feed into the 'dry leg' discharge chute into the truck mixer

4.17 Truck mixers shall be loaded in such a way as to prevent or minimise airborne dust emissions. In all cases the final discharge point will be via a flexible sock and shall be fitted with a wet suppression system. A ring spray located around the discharge sock is appropriate. This shall be maintained in good working order.

4.18 Where water is used for dust suppression, an adequate supply of water shall be available and the system shall be provided with frost protection.

4.19 Truck mixers loaded with dry materials shall use a ribbon feed technique. (This involves depositing partial load followed by water in a reiterative way until the full load has been made).

4.20 Truck mixers shall be cleaned using dry, coarse material. This material will then be discharged into existing stock bays for re-use.

Fugitive Emissions

4.21 The pan mixer shall be fitted with dust arrestment plant, such as a bag filter.

4.22 A high standard of housekeeping shall be maintained.

4.23 All spillages that may give rise to dust emissions shall be cleaned up promptly, normally by wet handling. Dry handling of dusty spillages shall not be permitted unless within a fully enclosed building.

4.24 Major spillages shall be dealt with using, for example, a vacuum cleaning system or equivalent system. It shall not normally be necessary for a vacuum cleaning system to be available on site at all times, provided that such equipment can be obtained in the

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event of a major spillage on the same day that it occurs. Measures to minimise emissions such as dampening the surface to create a crust shall be taken immediately.

Roadways

- 4.25 Roadways in normal use and any other area where there is regular movement of vehicles shall be hard-surfaced and kept clean in order to prevent or minimise dust emissions.
- 4.26 Hard surfacing shall comprise compacted stone chippings, Macadam or concrete.
- 4.27 Roadways shall be kept clean and in good repair.
- 4.28 Vehicle exhausts shall be directed above the horizontal.

Air Quality

- 4.29 In areas where air quality standards are being breached and it is clear from the detailed review and assessment work under the Local Air Quality Management that the mobile plant is a significant contributor to the problem, tighter emissions limits may be imposed.

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**5.0 Management and Training**

- 5.1 Essential spares and consumables shall be held in stock or available at short notice for all plant and the equipment concerned with the control of emissions to the air.
- 5.2 Staff at all levels shall receive proper training and instruction in their duties relating to control of the process and emissions to air. Particular emphasis shall be given to training for start-up, shut-down, dealing with spillages and action to take to minimise emissions during abnormal conditions.
- 5.3 A record of training for each of those identified personnel shall be kept and made available to the authorised officer of Charnwood Borough Council on request.
- 5.4 A written maintenance programme shall be kept to include regular cleaning of process buildings and maintenance of conveyors. A record of the maintenance undertaken shall be kept and be made available for inspection.
- 5.5 The Environmental Health Section of Charnwood Borough Council shall be notified in writing within seven days, if possible, and in no case less than three whole days prior to the process being relocated to any new site. Such notification shall include details of the plant to be used, the address of the new location, the local authority in whose area the site is located and the date that operations will commence.
- 5.6 A copy of this Permit shall be held with the mobile unit at the current operating site and made available for inspection by authorised officers of the local enforcing authority.

## EXPLANATORY NOTES

These notes do not comprise part of Permit Serial No. 118 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 5.6 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(1) 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.