POLLUTION PREVENTION AND CONTROL ACT 1999

ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2010
PERMIT OF PROCESS

THIS IS TO CERTIFY that the quarrying, roadstone coating and mobile crushing activities

at: **LAFARGE AGGREGATES LTD, MOUNTSORREL QUARRY, WOOD LANE, QUORN, LEICESTERSHIRE, LE12 8GE**

National Grid Ref: Sk.577148 (Shown on the attached map, Figure 1/21A)

has been duly permitted in accordance with Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 subject to the conditions outlined in this document.

Name of Operator: **LAFARGE AGGREGATES LTD**
Registered Office: **GRANITE HOUSE, WATERMEAD BUSINESS PARK, SYSTON, LEICESTER LE7 1PL**

This Permit shall apply only to the installation detailed above. This Permit, consisting of forty-one pages, shall be subject to replacement, variation or amendment, as may be considered appropriate by Charnwood Borough Council at any time, according to provisions of Regulations, 18, 20, and 34 of the Environmental Permitting (England and Wales) Regulations 2010.

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

Signed on behalf of Charnwood Borough Council

…….. Dated 7 June 2012
Beverley Green, Lead Officer- Environmental Protection
(the delegated officer for the purpose)

Counter-signed……

Regulatory Services, Environmental Protection, Southfields, Southfield Road Loughborough LE11 2TX

Introductory note

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010/675), as amended, ("the EP Regulations") to operate an installation carrying out one or more of the activities listed in Part 2 of Schedule 1 of the EP Regulations, to the extent authorised by the Permit:

Section 3.5 Part B requires the following activities to be permitted:

(a) Unless falling within Part A(1) or Part A(2) of any Section in this Schedule, the crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product except where the operation of the activity is unlikely to result in the release into the air of particulate matter.

(b) Any of the following activities unless carried on at an exempt location:

(i) crushing, grinding or otherwise breaking up coal, coke or any other coal product;
(ii) screening, grading or mixing coal, coke or any other coal product;
(iii) loading or unloading petroleum coke, coal, coke or any other coal product except unloading on retail sale.

(c) The crushing, grinding or other size reduction, with machinery designed for that purpose, of bricks, tiles or concrete.

(d) Screening the product of any activity described in paragraph (c).

(e) Coating road stone with tar or bitumen.

(f) Loading, unloading, or storing pulverised fuel ash in bulk prior to further transportation in bulk.

(g) The fusion of calcined bauxite for the production of artificial corundum.

Status Log

Holder	**Details**	**Date**	**Comments**
Redland Aggregates Ltd	Date first Issued	5th August 1993	
Redland Aggregates Ltd	Variation Notice	31st January 1995	
Redland Aggregates Ltd	Variation Notice	14th November 1996	Consolidated permit
Lafarge Aggregates Ltd	Variation Notice	25 Novembre 2004	Consolidated permit
Lafarge Aggregates Ltd	Variation Notice	16th March 2005	Consolidated permit
Lafarge Aggregates Ltd	Draft variation	4 December 2007	Not issued
Lafarge Aggregates Ltd	Draft variation	10 July 2010	Not issued
Lafarge Aggregates Ltd	Variation Notice	7 June 2012	Revised permit issued

Origins of the conditions contained in the permit

The Secretary of State has issued various guidance notes to local authorities to assist with determining those conditions which represent 'best available technique' in the different circumstances which apply to each installation. The conditions within this permit have largely been derived from the following guidance notes;

PG 3/08 (04) Quarry Processes
PG 3/15a (04) Roadstone Coating Processes
PG 3/16 (04) Mobile Crushing & Screening

Process Description

Quarrying and Roadstone Coating

The purpose of the process is the general quarrying operations associated with the extraction and processing of stone, including:-

a) The production of coated road stone
b) The crushing and size reduction of hard rock for use within the construction industry.

Stone is quarried by drilling and blasting. It is transported from the quarry face by dump trucks. A primary cone crusher initially reduces the size of the quarried rock (see location 1, figure 2/21A). A series of screens remove undersize material and the larger stone is conveyed to the primary surge pile. Stone from the surge pile is transported via conveyors to the secondary crusher (location 9, figure 2/21A) and the rock is reduced to the following sizes: under-5mm, 5mm, 6mm, 10mm, 14mm, 20mm, 28mm, 40mm and 50mm. The single size products are then stored in the 'toastrack' (location 3 of Phase 3, figure 2/21A). From here the products are conveyed through a tunnel to either the coated stone production plant for the production of roadstone or via a conveyor across the Soar valley to the rail load out facility at Barrow-upon-Soar. The process boundary is shown on Plan 01/21A attached to this Permit.

The layout of plant in Phases 1, 2 and 3 is shown on Plan 02/21A attached to this Permit.

During the production of roadstone, aggregate is conveyed from the toast rack in metered proportions depending upon the mix required. It is transported to the rotary drum dryer of either the Standard Haven drum mix plant or the KVM asphalt plant. These are steel cylinders placed on a slight inclination, with flights placed on the inside. As the drum rotates, the flights lift the material and let it fall down through the hot air stream in the drum. For the heating and drying process an oil fired burner is positioned at the bottom end of the drum. The combustion gas flow direction is opposite to the flow of the aggregate material. Water vapour and exhaust air are extracted from the cold end of the drum through a bag filter house and emitted to atmosphere via the plant stacks. The dust collected is fed back into the mixing process.

The hot aggregates (135 - 180 °C) drop into a bucket elevator and are lifted to the top of the mixing tower. They are transferred onto vibrating screens and separated into different grades in individual storage bins. The required grade of aggregate is dropped to a weigh hopper then into a pug mill (mixer) where it is coated with bitumen which is pumped from a heated storage tank, weighed and injected into the mixer. Mixing times vary between 25 - 90 seconds depending on plant and mix type. The finished asphalt mix is then transferred directly to a waiting truck for immediate delivery to the site or by a conveyor to heated asphalt storage silos.

Powdered materials are delivered by tanker from where they are delivered under pressure into the silos associated with the coating plant. Displaced air from the silos is vented to atmosphere through a filter and the silos are also fitted with pressure relief valves which will displace in the event of the silos over pressuring.

Crushing and Screening of Recycled Products

The materials crushing and screening operations are undertaken in the recycling area (marked location 16 in Phase 3 in plan 2/21A). Waste bricks, tiles, concrete and waste asphalt are crushed and screened to provide feed additives for products manufactured elsewhere on the installation. Waste glass is also crushed and screened in this area, although this activity is not included in the description of a permitted process in Schedule 1 of the EPR Regulations. The glass crushing and screening activities are not therefore included within the remit of this permit.

The crushing and screening plant is used in conjunction with a front-end loader that feeds material to the crushing and screening units and move pre and post-processed materials.

The Pegson crusher consists of a feed hopper incorporating a vibrating feeder. The twin contra-rotating vibrating motors impart a linear movement to the feeder, causing the material loaded into the hopper to move towards the jaw crusher.

The jaw crusher consists of two jaws, one stationary and the other moving by reciprocating to a set distance with respect to the stationary jaw. Material entering the jaws is crushed by the action of the moving jaw until it is of a size which is smaller than the set distance. The crushed material falls onto a conveyor belt which delivers material forward of the machine. The section of the conveyor belt beneath the jaws is enclosed on three sides. Crushed material is carried to the end of the conveyor and falls by gravity onto a conveyor and then on to a stockpile.

Principle Emissions and Emission Points

There are three contained emission points from arrestment plant as follows:-

i) Chimney serving the Phase 2 crushers (building numbered 9 in "Phase 1 and 2" on plan 02/21A). This exhausts air containing particulate from the Phase 2 crushers via bag filtration abatement plant. The air handling capacity is above 300m^3/minute.

ii) Chimney serving the KVM asphalt plant. This exhausts combustion gases from the burner, which heats the rotary drum dryer and particulate-laden air from the rotary drum dryer via bag filtration abatement plant. This is shown as location 9 on plan 02/21A. The air handling capacity is above 300m^3/minute.

iii)Chimney serving the Standard Haven drum mix plant This exhausts combustion gases from the burner, which heats the rotary drum dryer, and particulate-laden air from the rotary drum dryer via bag filtration abatement plant. This is shown as location 12 on plan 02/21A. The air handling capacity is above 300m^3/minute.

There are also six silos associated with the roadstone coating activities in Phase 3. These include 2 limestone and 2 filler silos serving the KVM plant and 1 limestone and 1 filler silo serving the Standard Haven.

Fugitive particulate is also emitted from multiple sources on the site. Potential sources include: particulate emissions from the operations associated with the crushing and screening activity, from particulate emitted during the blasting of granite from the quarry face, re-entrainment of dust from vehicle movement on haul roads across the site, wind whipping of particulate from product contained in storage areas and accumulations of spilled product on plant housing and the ground, particulate emissions from conveyor product movement, particulate emission from product impacting on surge piles and particulate emission from the loading and unloading of aggregate into vehicles.

The above named company is permitted to operate the activities and/or associated activities as specified in table 1 below: -

Table 1

Activity listed in Schedule 1 of PPC regulations/ associated activity	Description of specified activity	Limits of specified activity
The crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product	The crushing and screening of granite in Phases 1,2 & 3 of Mountsorrel quarry from receipt of raw materials to the dispatch of finished products.	See process description and plans 1/21A and 2/21A
The crushing, grinding or other size reduction, with machinery designed for that purpose, of bricks, tiles or concrete.	The crushing of bricks, tiles and concrete in the recycling area of the Mountsorrel quarry from receipt of raw materials to the dispatch of finished products.	See process description and plans 1/21A and 2/21A
Coating road stone with tar or bitumen.	The coating of roadstone in Phase 3 of Mountsorrel quarry from receipt of raw materials to the dispatch of finished products.	See process description and plans 1/21A and 2/21A

Subject to compliance with the following conditions:

Permit Conditions

Emission Limits

1. The emission limits from contained emissions sources and the monitoring frequencies and methods detailed in Table 2 below shall be complied with.

Table 2 Contained Emissions

Substance	Source	Emissions Limit	Monitoring Method	Monitoring Frequency
Particulate matter	1. Stack serving the Phase 2 crusher bag arrestment plant.	50mg/m^3	Recorded indicative particulate monitors	Continuous

Particulate matter	2. Stack serving the Standard Haven drum mix plant. 3. Stack serving the KVM asphalt plant	50mg/m^3 50mg/m^3	Annual monitoring in accordance with BS ISO 9096:2003, in conjunction with continuously recorded indicative monitoring	Annually during first quarter, in conjunction with continuous monitoring
Particulate matter	Silo inlets and outlets	No visible emission	Operator observations Record start and finish times	Every delivery
Particulate matter	All principal emission points, including Phase 2 crusher bag arrestment plant	No abnormal emission	Operator observations	At least daily
Smoke	1. Stack serving the Standard Haven drum mix plant. 2. Stack serving the KVM asphalt plant	Ringleman shade 1	In accordance with BS 2742:1969	Daily visual checks
Odour	All principal emission points,	No abnormal emission outside site boundary	Operator olfactory assessment	At least daily

Note 1. *The reference conditions for emission limits in this section are: 273.15K, 101.3kPa, without correction for water vapour content, unless stated otherwise.*

Note 2. *Observation points must provide an unimpeded view of the emission points listed in the process description above and at appropriate points around the installation boundary.*

2. The introduction of dilution air to achieve the emission concentration limits in these conditions is not permitted. However, the introduction of air to balance arrestment systems is acceptable.

Monitoring, Investigations and Recording

3. Dust management and monitoring shall, be undertaken using the techniques and methods described in the documentation specified in Table 3 or as otherwise agreed in writing by Charnwood Borough Council. This Document shall be reviewed every 2 years and the revised document shall form part of this permit.

Table 3 – Dust Management and Monitoring Documentation		
Description	**Report**	**Dated**
Dust Management and Monitoring Plan for Lafarge Aggregates Ltd - Alex Grant AirQ Air Quality Consultancy	Report No. AG008-R01g final Section 4 Means of Prevention Section 5 Maintenance Section 6 Site Management Section 7 Emissions Monitoring Section 8 Emergency Response Section 9 Complaints Section 10 Review and Update *(reproduced in Appendix 1 of this document)*	October 2011(as amended)

4. Visual assessments of emissions from the principal emission points described in the introduction to this permit shall be made at least once daily during daylight hours. Remedial action shall be taken immediately in the case of abnormal emissions or apparent failure of the continuous alarms to detect abnormal emissions.

5. Records of all visual assessments and of any remedial action taken shall be kept in a log book by the operator. This log shall include the date, time and name of the person making the entry and where relevant the weather conditions, source of emission, point of observation and remedial action taken. The log shall be kept for at least two years and made available to an authorised officer of Charnwood Borough Council on request.

6. The results of all monitoring, including non-continuous monitoring shall be retained by the operator for a minimum of two years and made available for examination by an authorised officer of Charnwood Borough Council on request.

7. Charnwood Borough Council shall be advised at least 7 days in advance of any periodic monitoring exercise to determine compliance with emission limit values of the provisional time and date of monitoring pollutants to be tested and the methods to be used.

8. The results of all non-continuous emission testing shall be forwarded to Charnwood Borough Council within 8 weeks of the completion of the testing. A summary of results of all continuous monitoring shall be retained at the installation for at least two years.

9. Adequate safe facilities for sampling that meet the procedural requirements of BS.ISO 9096:2003 shall be provided on all plant to be monitored. Where monitoring is not in accordance with the main procedural requirements of the relevant standards, deviations, as well as an estimation of any error shall be reported.

10. In the event of adverse results from any monitoring activity (both continuous and non continuous) the site operator shall:
    - identify the cause and take corrective action
    - record as much detail as possible regarding the cause and extent of the problem, and the
    - action taken by the operator to rectify the situation
    - re-test to demonstrate compliance as soon as possible; and
    - notify Charnwood Borough Council

Visible and Odorous Emissions

11. All emissions to air from the installation, other than steam or condensed water vapour, shall be colourless and free from persistent visible emissions.

12. All emissions to air shall be free from persistent fume except for the loading of lorries with coated roadstone and free from droplets.

13. There shall be no visible emissions from any source beyond the site boundary.

Abnormal Events

14. In the event of a continuous indicative emissions trigger, an abnormal emission being identified during a visual assessment test or an abnormal emission being identified during other routine activities anywhere on the installation the operator shall:
    - identify the cause and take corrective action
    - record as much detail in the log book (condition 5) as possible regarding the cause and extent of the problem, and
    - the action taken by the operator to rectify the situation
    - if appropriate re-test to demonstrate compliance as soon as possible and
    - notify Charnwood Borough Council immediately by telephone if the emission is likely to result in perceptible off-site impact.

15. Incidents or alleged incidents of odorous emissions outside the installation boundary shall be investigated by the operator. The nature of and conclusions arising from the investigation shall be retained by the operator for a period of at least two years and made available to an authorised officer of Charnwood Borough Council on request.

16. Where in the opinion of a duly authorised officer from Charnwood Borough Council, there is evidence of visible emissions from the process off-site; corrective action shall be taken immediately. If the source is uncertain the operator shall undertake an inspection and assessment, and where deemed necessary by Charnwood Borough Council, undertake ambient monitoring to identify the process operations giving rise to the emission. The monitoring

method shall be agreed with Charnwood Borough Council. Once the source is known, corrective action shall be taken without delay.

Continuous Emissions Monitoring

17. The emissions from the Phase 2 crusher, KVM and Standard Haven plants shall be continuously monitored using indicative, recorded particulate monitors.

Emissions from Silos

18. Visual assessment of emissions from silo inlet connections and the silo arrestment plant shall be undertaken throughout the duration of all bulk deliveries. Particular regard shall be made to the first and last five minutes of the delivery. The results of the assessment and the start and finish times of all bulk deliveries shall be recorded in the log book required by condition 5.

19. All silo arrestment plant and arrestment plant serving other processes shall be inspected for correct operation on the following frequencies:

Filter cleaning method	Frequency of inspection
Silos with reverse jets - Phase 2	At least once a month
Silos with pulsed air	At least once a month

These frequencies may be varied with the agreement of the local authority inspector and subject to the criteria a to d in paragraph 5.17 of PG 3/15a (04)

20. Each silo delivery inlet point shall be clearly marked with the delivery pressure to be applied and the nature of the material contained therein.

21. All storage silos shall be equipped with audible and/or visual high-level alarms to warn of overfilling. The correct operation of such alarms shall be checked at least once a week or before each delivery, whichever is the longer interval and the results recorded in the log book detailed in condition 5. *This condition shall be complied with within 6 months from the date of this permit.*

22. Seating of pressure relief vales shall be checked at least once a week or before a delivery takes place whichever is the longer interval. Immediately, it appears that the valve may have become unseated, the delivery shall cease and no further delivery shall take place until the problem is rectified. The valve shall be examined and re-seated or a replacement fitted if necessary. Tanker drivers shall be informed of the correct procedure to be followed.

23. The connection of transfer lines to the tanker discharge point and silo delivery inlet point shall be checked before the transfer of dry materials commences. The transfer shall only commence once it has been established that the

connection to these points will prevent the emission of dust. Any emission occurring from the transfer line during bulk deliveries shall be recorded in the log as detailed in condition 5.

24. No particulate emissions shall be visible during silo filling activities. 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.

25. Deliveries to silos from road vehicles shall only be made using tankers with an on-board (truck mounted) relief valve and filtration system. This means that venting air from the tanker at the end of a delivery shall not take place through the silo.

26. During delivery from tankers, the venting to air to the silo shall be at a limited rate to avoid pressurisation of the silo. Particular care shall be taken at the end of the delivery. Only tankers with sufficient valve work to allow gradual release and controlled venting shall be used.

Aggregate Storage

27. In order to minimise visible emissions from the handling of materials (other than fume arising from the loading of vehicles with coated roadstone) the loading to stockpiles and the construction and management of stockpiles shall comply with the Requirements of section 4.9 of The Dust Management and Monitoring Plan specified in Table 3 above (and reproduced in Appendix 1 of this permit).

28. No material shall be stored in the open except for:-
    a) Material that has been screened to remove material 3mm and under;
    b) Sand;
    c) Scalpings;
    d) Material used for road sub-bases (commonly known as 'MOT material') that has been conditioned before deposition;
    e) Crusher run material or blended material that has been conditioned before deposition;
    f) Material under 3mm that is in excess of the internal storage capacity (the internal storage capacity is 200 tonnes in Phase 2 and 2000 tonnes in Phase 3);
    g) Glass/recycled products.

29. The aggregate storage area shall be served by a water suppression system. Aggregate stored in stockpiles shall be sprayed with water as necessary to prevent visible emissions.

30. In the event of a fault with the water suppression system, this shall be noted in the logbook and repaired as soon as practicable.

Conveying

31. In order to minimise visible emissions from the handling of materials (other than fume arising from the loading of vehicles with coated roadstone) all external conveyors shall comply with the Requirements of section 4.8 of The Dust Management and Monitoring Plan specified in Table 3 above (and reproduced in Appendix 1 of this permit).

32. All conveyors shall be: -

    i. Of sufficient capacity to handle maximum loads,
    ii. Enclosed with covers or weather boards, in critical areas, to prevent visible particulate emissions,
    iii. Arranged to minimise drop heights at feed hoppers and discharges,
    iv. Provided with shrouding at all transfer points where visible particulate emissions occur,
    v. Provided with belt scrapers for keeping the return belt clean and a means of collecting arisings removed by this cleaning operation**.**

33. Planned preventative maintenance schedules shall include conveyor systems. Conveyor systems shall be inspected weekly. Recordings of findings and of any action taken shall be kept in the maintenance log. This log shall be available for inspection on request by a duly authorised officer of Charnwood Borough Council.

Bitumen and Oil Storage

34. To minimise emissions of fume and associated odour, all bitumen and tar shall be stored and handled within the appropriate temperature range for its grade. Details of suitable storage and handling temperatures are given in Appendix 2 at the end of this permit.

35. Bulk bitumen and tar storage tanks shall be fitted with a high-level alarm or volume indicator to warn of overfilling.

36. Emissions from displaced air vents on the bulk waste oil storage tanks shall not cause offensive odours beyond the process boundary, as perceived by a duly authorised officer of Charnwood Borough Council.

37. The temperature gauge on all hot binder storage tanks shall be displayed. A high temperature trip device, to prevent the binder overheating, shall be operational at all times.

38. Above ground bulk waste oil storage tanks shall be completely contained by bunding which is impervious and resistant to the fuels in storage and capable of holding 110% of the capacity of all storage tanks within the bund.

39. Where PFO is burned, a certificate of conformity to demonstrate that the oil meets with the current Quality Protocol produced by the Environment Agency, shall be made available to a duly authorised officer of Charnwood Borough Council on request.

40. Charnwood Borough Council shall be notified in writing within 24 hours of a change in oil supplier or type of fuel.

41. Filter dust collected by the abatement plant on the KVM asphalt plant and Standard Haven drum mix is usually returned back into the aggregate store via an enclosed system. Where dust cannot be recycled due to customer specifications, it shall be moistened in the designated conditioning plant and stored and disposed of in a manner which prevents fugitive emission of the material. Dust collected by the stage 2 crusher abatement plant shall be stored in a silo prior to loading via an enclosed system to tanker for resale or disposal.

Control of Fugitive Emissions

42. In order to minimise visible emissions from quarrying activities, the handling of coated roadstone and crushing and screening activities, process operations shall comply with the Requirements of section 4.0 of The Dust Management and Monitoring Plan specified in Table 3 above (and reproduced in Appendix 1 of this permit).

43. External surfaces of the process buildings, ancillary plant, yards and storage areas shall be inspected monthly and cleaned if necessary to remove deposited material. Particular attention shall be paid to external support structures, roofs and guttering. Where necessary, to prevent or minimise airborne emissions, these deposits shall be dampened prior to removing.

44. Major spillages shall be dealt with on the same day using, for example, wet handling methods or a vacuum cleaning 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 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.

Loading, Unloading and Transport

45. All potentially dusty materials being loaded into rail wagons at the Barrow railhead shall be sprayed with an aqueous polymer dust suppressant to the

surface of the load, unless the rail wagons are canopied or the loads aerodynamically designed to eliminate product blow-off.

46. All hard surfaced roadways and yards shall sprayed and swept so as not to give rise to visible dust emissions.

Chimneys Vents and Process Exhausts

47. The stacks to the contained emission points shall not be fitted with any restriction at the final opening such as a plate, cap or cowl. However, the use of accelerator cone on the Standard Haven is permitted.

48. Emissions from the contained emission points shall be designed for an efflux velocity of not less than 15m/s at full load operation. No changes to any of the plant associated with these sources shall be made which is likely to significantly reduce or increase this efflux velocity without the prior permission of Charnwood Borough Council.

49. The height of stacks serving the contained emission points shall not be changed without the prior permission of Charnwood Borough Council. The permitted stack heights are as follows:

Emission Point	Height (meters above ground level)
Phase 2 crusher stack	18.1
Standard Haven Stack	45.7
KVM stack	30

50. The stacks to the KVM and Standard Haven plant shall be sufficiently insulated to ensure that there is minimum condensation by keeping the temperature of the exhaust gases above the dew point. Stacks and ductwork shall be leak proof.

Maintenance

51. Site maintenance shall comply with the Requirements of section 5 of The Dust Management and Monitoring Plan specified in Table 3 above (and reproduced in Appendix 1 of this permit) and shall include maintenance of conveyors and cleaning of process buildings.

52. A record of the maintenance undertaken shall be kept and be made available for inspection to a duly authorised officer of Charnwood Borough Council, on request.

Management/ Training

53. Site management and training of staff shall comply with the Requirements of section 6 of The Dust Management and Monitoring Plan specified in Table 3

above (and reproduced in Appendix 1 of this permit) and shall include action to take during plant and equipment malfunctions and abnormal conditions.

54. The operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person. These documents shall be made available for inspection to a duly authorised officer of Charnwood Borough Council on request.

Standard Conditions

55. If the operator proposes to make a change in the operation of the installation, he shall, at least 14 days before making the change, notify Charnwood Borough Council in writing. The notification must contain a description of the proposed change. In this condition 'change of operation' means a change which may affect the substances or concentration of substances being emitted to air.

56. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation which is not regulated by any other condition of this permit.

Upgrading Plan

57. All continuous monitors shall, comply with the requirements of the upgrading plan below, within the timescales indicated.

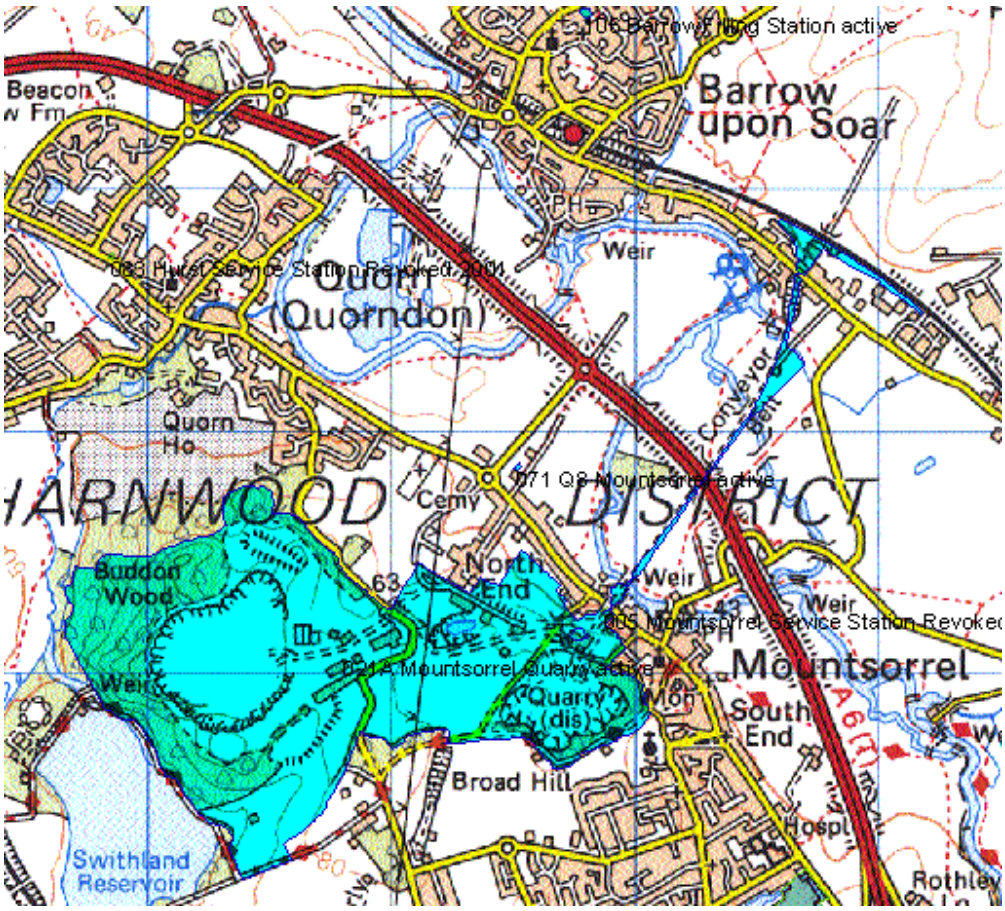
<table>
<tr><th>Number</th><th>Condition Requirement</th><th>Timeframe</th></tr>
<tr><td>UP1</td><td>The continuous emission monitors fitted to the Phase 2 crusher, KVM and Standard Haven plants shall be fitted with audible or visual alarms to warn of arrestment plant failure</td><td>within 6 months from the date of this permit</td></tr>
<tr><td>UP2</td><td>The continuous emission monitors shall activate in the event of any emission in exceedance of the following limits:
<table>
<tr><th>Emission Point</th><th>Alarm Trigger Limit</th><th>Alarm Type</th></tr>
<tr><td>Phase 2 crusher</td><td>Trigger limit 38 mg/m3 (75% of emission limit)</td><td>PCME VIEW370</td></tr>
<tr><td>KVM</td><td>Trigger limit 38 mg/m3 (75% of emission limit)</td><td>PCME 990PLUS</td></tr>
<tr><td>Standard Haven</td><td>Trigger limit 38 g/m3 (75% of emission limit)</td><td>PCME 990PLUS</td></tr>
</table></td><td>within 6 months from the date of this permit</td></tr>
</table>

UP3	The alarm serving the Phase 2 plant shall display data in the Phase 2 Control Room (location 12, Figure 2/21A) and shall be connected to an audible and visual alarm in this location.	*within 6 months from the date of this permit*
UP4	Activations of the alarm shall be automatically recorded on the computer on which the alarm is displayed. Records of the activations shall be made available to an authorised officer of Charnwood Borough Council on request.	*within 6 months from the date of this permit*
UP5	The continuous indicative monitors shall be maintained and referenced in accordance with manufactures instructions once every 12 months. Documented evidence of maintenance and referencing of the monitors shall be retained on site and made available to an authorised officer of Charnwood Borough Council on request.	*within 6 months from the date of this permit*

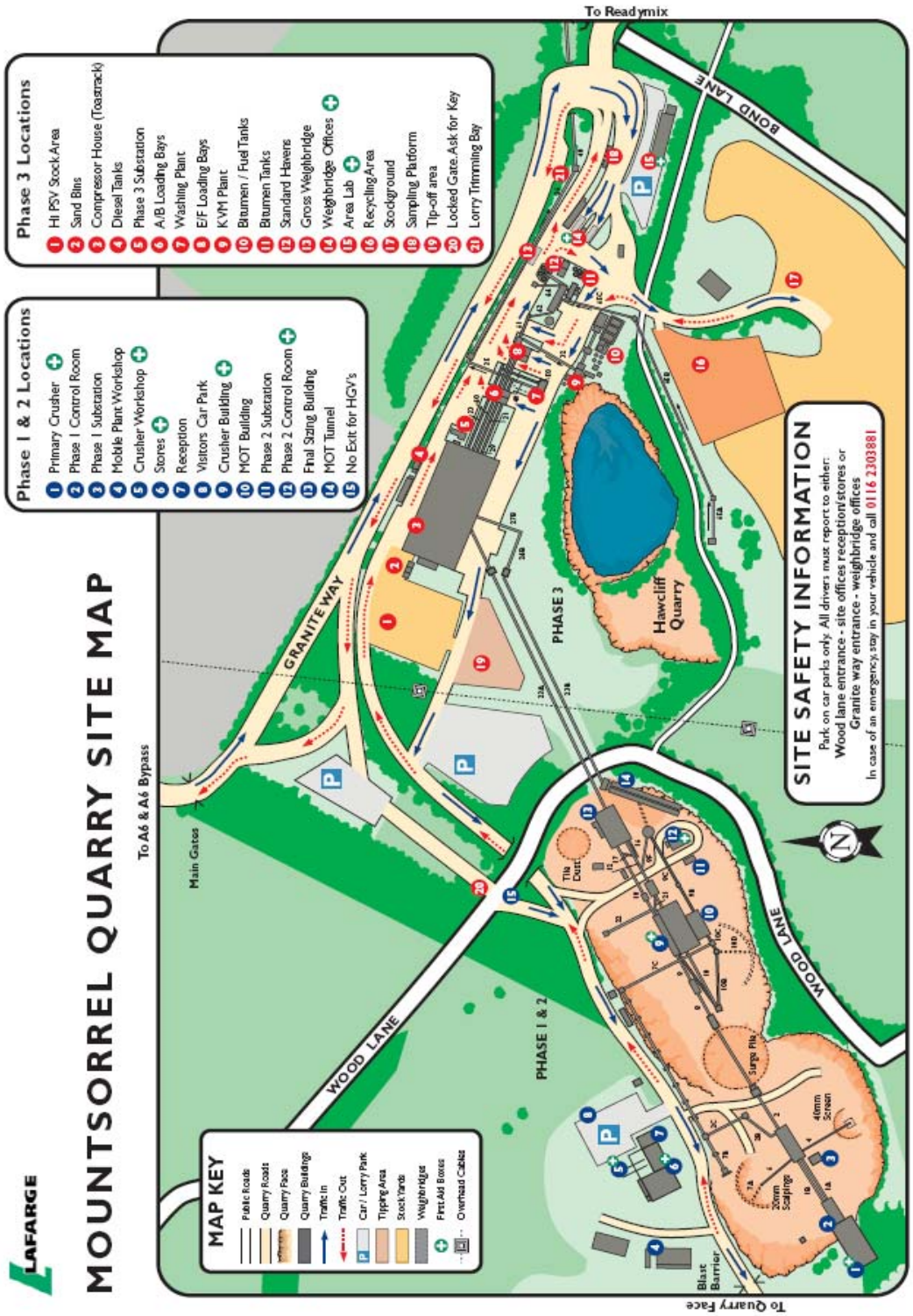
End of Conditions

Site Location **Figure 1/21A**

"Reproduced from the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office Crown Copyright 2000. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings".



Site Layout **Figure 2/21A**



Appendix 1 Dust Management And Monitoring Plan (Report No: AG008-R01g October 2011)

1 Introduction

1.1 Lafarge Aggregates Ltd operates a granite quarry and associated processes, including roadstone coating and concrete batching plants, at Mountsorrel, Leicestershire. A Review of Minerals Planning Permissions (ROMPP) application for the continuation of the operations has been submitted to Leicestershire County Council (LCC). The application was accompanied by an Environmental Statement (ES), including an air quality assessment[1].

1.2 Alex Grant AirQ (AG) was instructed to prepare a Dust Management and Monitoring Plan which will be submitted as supplementary information. The plan is based on the conclusions and recommendations provided in the air quality assessment. Reference is made to the relevant process guidance notes and the dust monitoring protocol has been revised to address the assessed risks.

2 Site Operations and Site Setting

2.1 Site Operations

2.1.1 A full description of the quarrying and associated processes is provided in the ROMPP application.

2.1.2 The site comprises four principal areas:

Phase 1: the quarry on land west of Wood Lane, including the primary crusher;
Phase 2: the crushing and screening processes, between the quarry and Wood Lane;
Phase 3: the "toast rack" aggregates storage bins, two roadstone coating plants, a concrete batching plant, a recycling area[2] and an aggregates stocking ground; and
Phase 4: the railhead loading point, on the eastern side of Barrow-on-Soar, linked by a covered conveyor from the "toast rack".

2.1.3 Restoration works, using site-sourced materials, are taking place on land south of the current quarry workings.

2.1.4 Road transport serving the quarry and associated operations accesses the site from the A6 Leicester-Loughborough road via Granite Way. Light vehicles access Phases 1 and 2 via Wood Lane. Any vehicles travelling between Phases 2 and 3 pass through a bridge under Wood Lane and are segregated from the public highway.

[1] *Report R1284-R01-v2, Mountsorrel Quarry, Air Quality Assessment, Alex Grant LLP, June 2009*

[2] *The recycling area is covered by a separate planning permission and is not included in the provisions of this dust management and monitoring plan.*

2.2 Site Setting

2.2.1 The quarry and Phase 2 processing operations are located in a generally rural setting and are largely bounded by the remnants of Buddon Wood. The processes are effectively screened by woodland except in the vicinity of the site entrance on Wood Lane. Properties in Quorn lie to the north and northeast. Further properties lie on Rushey Lane, to the south of the present restoration area.

2.2.2 The processes in Phase 3 are located in a more developed setting, with commercial development and, beyond this, residential properties at Hawcliffe Road, lying just to the northeast. The aggregates stocking ground lies almost 500m northwest of Mountsorrel and 300m southwest of Loughborough Road. The concrete batching plant lies about 140m southwest of Loughborough Road. A planning application has been submitted recently for a residential development on land between Bond Lane and Halstead Road, to the south of the stocking ground.

2.2.3 The railhead lies to the northeast of a residential area on Sileby Road, Barrow-upon-Soar and to the southeast of commercial properties. The conveyor to the railhead crosses the valley of the River Soar, which is used for boating and other amenity purposes.

2.2.4 Other activities in the area include a highways depot, waste transfer station and skip hire / transport depot situated just to the north of Phase 3. A pre-cast concrete business lies to the southeast of the railhead. Beyond this is a plasterboard factory. The A6 dual carriageway runs to the northeast of Quorn and Mountsorrel.

3 Potential for Emissions

3.1 The nature of the operations is such that, in the absence of adequate management controls, airborne dust including fine particulates less than 10µm (PM10) can be raised. Coarse dust particles larger than 30µm make up the greatest proportion of dust emitted from mineral workings, and are largely deposited within 100m of the dust source(s)[3]. Adverse impacts due to nuisance dust are therefore most likely to be experienced within this distance.

3.2 Impacts due to PM10 can extend over a greater distance and operators are required to assess whether PM10 levels at communities within 1 km of the site are likely to exceed the NAQS objective[4]. If the objective is likely to be exceeded then PM10 monitoring and additional control measures, typically operational restrictions, are to be instituted.

3.3 The principal potential sources of dust emissions have been identified as:

soils stripping, storage and replacement;
drilling and blasting;
loading and tipping;
site haulage;
crushing and screening;
conveyors;
aggregates stocking;
recycling;
roadstone coating;
concrete batching;
road transport; and
wind blow across bare ground and stockpiles.

3.4 Of these, the principal dust sources have been identified as site haulage and wind blow across bare ground and stockpiles. Potentially significant dust emissions may also arise at the tipping point into the primary crusher, the conveyor discharge onto the primary crush surge pile, during loading operations at the "toast rack", during operations in the aggregates stocking ground and at the stockpiles for the concrete batching plant. The other identified dust sources are assessed as being of low significance.

3.5 The dust assessment concluded that, in the absence of mitigation, the estimated risks of fugitive and wind blown dust at Hawcliffe Road and at Stonehurst Farm, near the "toast rack", at Sileby Road, near the railhead, and at Rushey Lane, adjacent to current restoration works, are high. The risks at Loughborough Road and at the Quorn Lodge Hotel are estimated as medium-low. The estimated risks at other receptors are low or near zero. A medium risk has since been identified in respect of the recently proposed residential development to the south of Bond Lane. However, the low frequency of complaints received indicate that dust impacts are adequately managed.

3.6 It was also concluded that, on the basis of previously obtained data, there is a small increase in PM10 concentrations and that the significance of the impact is "slight adverse". However, preliminary data since obtained by Charnwood Borough Council (CBC) indicate that the NAQS 24-hour mean objective is being exceeded at

Hawcliffe Road, in the vicinity of the "toast rack".

3.7 The assessments of respirable crystalline silica and HGV exhaust emissions indicate that these potential sources will not cause any additional ecxceedances of the relevant NAQS objectives and environmental assessment limit. However, the potential exposure to respirable silica will be reviewed when data obtained by CBC become available.

[3] *Best Practice Guide appended to The Environmental Effects of Dust from Surface Mineral Workings, HMSO, 1995*

[4] *Minerals Policy Statement 2, Controlling and Mitigating the Environmental Effects of Minerals Extraction in England, Annex 1, Dust, ODPM, 2005*

4 Means of Prevention

4.1 General Requirements

4.1.1 The quarrying and associated operations at Mountsorrel are currently governed by a planning permission, reference 91/2240/2. This includes the following conditions in respect of dust:

16: wheel cleaning facilities;
20: sheeting of loaded lorries;
29: dust not to exceed agreed levels;
55: water bowser on haul routes / sweeping tarmac surfaces;
56: control of dust during construction of overburden embankments;
57: suspension or amendment to activities during adverse weather;
58: best practicable means to control dust;
59: design of fixed plant and machinery to prevent dust emissions;
60: enclosure of conveyors and transfer points; and
61: surveys of respirable and nuisance dust.

4.1.2 The processes which are carried on at Mountsorrel are regulated under two Pollution Control and Prevention (PPC) permits issued by CBC:

Permit No 21A, in respect of the quarry processes, roadstone coating plants and recycling operation; and
Permit No 014, in respect of the concrete batching process.

4.1.3 The permits include conditions based on the adoption of best available techniques (BAT) as detailed in the relevant process guidance notes[5, 6, 7, 8].

4.1.4 The essence of the guidance is that any impacts can be controlled by effective site management.

4.1.5 Lafarge has implemented accredited Environmental Management Systems (EMS) across all of the company's UK sites. The control of dust and air quality impacts forms an integral part of the EMS. This accords with the process guidance notes which note the desirability of a structured approach to environmental management.

4.1.6 This dust management and monitoring plan is based on the current and likely future planning conditions, PPC permits, Lafarge's EMS and relevant parts of current best practice for minerals extraction[9]. In preparing this plan, it is recognised that many of the provisions are already carried out by Lafarge.

4.1.7 The timescale for implementation of the proposed dust monitoring and management measures is three months from the date of any revised planning permission which may be issued, except where specifically noted.

4.1.8 For ease of reference, a schedule of actions is attached as Appendix A.

[5] *Process Guidance Note3/1 (04), Secretary of State's Guidance for Blending, Packing, Loading Unloading and Use of Bulk Cement, DEFRA, 2004*

[6] *Process Guidance Note3/8 (04), Secretary of State's Guidance for Quarry Processes, DEFRA, 2004*

[7] *Process Guidance Note3/15a (04), Secretary of State's Guidance for Roadstone Coating Processes. DEFRA, 2004*

[8] *Process Guidance Note3/16 (04), Secretary of State's Guidance for Mobile Crushing and Screening, DEFRA, 2004*

[9] *Minerals Policy Statement 2, Appendix B, Methods for Controlling Dust, ODPM, 2005*

4.2 Weather Conditions

4.2.1 As an over-riding requirement, during dry windy weather, i.e. "red" conditions as defined in Section 7, if any operations are identified as causing or likely to cause visible emissions across the site boundaries, or if abnormal emissions are observed within the site, the Quarry Manager will immediately modify, reduce or suspend those operations until either effective remedial actions can be taken or the weather conditions giving rise to the emissions have moderated.

4.3 Soils Stripping, Storage and Restoration

4.3.1 Soils handling is generally a short-lived seasonal activity and there is considerable

flexibility as to its timing. However, some dust may be raised due to the requirement to handle soils in a dry friable condition. Soils handling operations will therefore be suspended, or moved to another part of the site, should visible dust be carried towards any sensitive boundary, particularly towards Rushey Lane during the current restoration works.

4.3.2 Soil storage mounds, except those of marl overburden which is cohesive and is allowed to seed naturally, and replaced soils will be sealed and seeded as soon as is practicable.

4.4 Drilling and Blasting

4.4.1 Drill rigs will continue to be equipped with cyclones and filtration systems to treat the exhaust air.

4.4.2 The blasting operations will be designed to avoid excessive breakage and fly rock and thus reduce dust emissions.

4.5 Loading and Tipping

4.5.1 Drop heights will be controlled during all loading and tipping operations, particularly of soils near sensitive boundaries and of processed aggregates at the “toast rack”, aggregates stocking ground and concrete batching plant, to minimise the entrainment of dust into the atmosphere.

4.5.2 The enclosure of the tipping point into the primary crusher will be maintained to provide containment to any dust which may be raised. The water sprays will be used at all times.

4.5.3 Subject to operational constraints, the primary crush surge pile will be kept as high as possible to minimise the drop height from the discharge of the conveyor.

4.5.4 Where necessary, mounds of blasted rock and aggregates stockpiles will be sprayed using a rain gun attached to a water bowser or fixed sprays to treat any surfaces which may have dried out.

4.5.5 Where possible, loading and tipping operations will be carried out in sheltered locations to contain any dust which may be raised.

4.5.6 Polymer sealant will be used during loading operations at the railhead.

4.6 Site Haulage

4.6.1 All site traffic will keep to designated haul routes to reduce the creation and subsequent entrainment of fine material into the atmosphere.

4.6.2 Standard good practices for site haulage include:

- avoiding abrupt changes in horizontal and vertical alignment;
- regular clearing, grading and maintenance of haul routes;
- setting an appropriate site speed limit;
- fitting heavy plant with upswept exhausts and radiator fan shields;
- evenly loading vehicles to avoid spillages; and
- regular application of water, whether by bowser or by fixed sprays, in dry conditions.

4.6.3 Haul routes across the surface of the site will be located where possible in positions which are remote from any sensitive boundaries.

4.6.4 All internal paved surfaces will be sprayed and swept as necessary. The routes and schedules for road sweeping will be reviewed and re-defined as necessary

4.7 Crushing and Screening

4.7.1 All crushing and screening operations, except for temporary installations and those involving recycled materials will continue to take place within fully clad structures.

4.7.2 The cladding will be inspected at monthly intervals and cleaned as necessary. Any loose deposits will be removed and any gaps or other damage will be repaired promptly.

4.7.3 The rubber sealing strips to the conveyor entries and exits to each process building will be inspected and maintained as necessary.

4.7.4 The dust suppression sprays within the process buildings will be used at all times that processing is taking place.

4.7.5 The dust extraction system in the secondary crusher house will also be used at all times.

4.7.6 The throughput will be kept within the capacity of the plant to minimise spillages.

4.7.7 Any spillages of loose fine material within the processing buildings will be vacuum

cleaned or damped down before sweeping.

4.8 Conveyors

4.8.1 All external conveyors will be inspected weekly. Records of the findings, and of any actions taken, will be kept in the site logbook.

4.8.2 Enclosure, comprising covers and weather boards, will be provided in any critical areas where dust emissions are identified as causing or likely to cause any adverse impacts. Any damaged or missing covers and weather boards to conveyors, particularly between Phase 3 and the railhead, will be replaced promptly.

4.8.3 Shrouding will be fitted to any transfer points and conveyor discharges where visible dust emissions occur.

4.8.4 A belt turner has been fitted to conveyor 42, leading into the railhead, to reduce spillages from the underside of the return belt.

4.8.5 Other potential impacts will be mitigated by:

- installation on an even alignment with no abrupt changes in grade;
- return belt cleaners, with arisings collected into a bin or cleaned up;
- maintenance of the structures and rollers to minimise spillages;
- shrouding of feed hoppers, transfer points and discharges;
- fixed sprays where required;
- clearance of any spillages to minimise accumulations of loose dry material around the structures; and
- minimisation of drop heights at feed hoppers and discharges.

4.8.6 A foam dust suppression has been fitted to the conveyors between the primary crusher and the discharge onto the surge pile.

4.9 Aggregates Stocking

4.9.1 The fixed spray system in the aggregates stocking ground has been extended.

4.9.2 The surfaces of the stockpiles will be managed to maintain a smooth profile and to minimise the spreading of loose materials throughout the stocking ground. The surfaces of stockpiles in the open will be sprayed as necessary using a water bowser.

4.9.3 The heights of open stockpiles in the vicinity of Bond Lane have been reduced. A new bund will be planted with screening vegetation. Hydro-seeding of the outer

slopes has been completed.

4.9.4 Specific care will be exercised when handling aggregates and trafficking within Phase 3. The stockpiles of high PSV stone will be kept below the tops of the bay walls. The water spray system will be extended to cover the surfaces of the stockpiles within six months of ROMPP approval. Any spillages or accumulations of loose material in this part of the site will be cleared promptly.

4.10 Roadstone Coating

4.10.1 The roadstone coating process will be carried out in accordance with the requirements of the PPC permit, which is based on the guidance in PGN 3/15a (04). The measures detailed in the preceding sections will be applied as appropriate to the process.

4.10.2 All alarms, pressure relief valves and filters will be checked in accordance with the maintenance schedule, to ensure that they are operational, before any filler or other fine powders are discharged from the road tanker into a silo.

4.10.3 The tanker driver will attend the discharge controls throughout and will immediately suspend the discharge operation should any alarm be activated or if a visible emission occurs. The Quarry Manager will be informed promptly and no further discharge will take place until the cause of the event has been identified and remedied.

4.11 Concrete Batching

4.11.1 The concrete batching operations will be carried out in accordance with the requirements of the PPC permit, which is based on the guidance in PGN 3/1 (04). The measures detailed in the preceding sections will be applied as appropriate to the process. Because of the proximity of the process to sensitive receptors off Loughborough Road, specific measures will be taken to ensure that adverse impacts due to dust are not caused.

4.11.2 The fixed spray system will be extended within six months of ROMPP approval, and will be used as necessary during dry conditions, to cover the whole of the aggregates stockpiles and the yard areas around the stockpiles and batching plant..

4.11.3 All alarms, pressure relief valves and filters will be checked in accordance with the maintenance schedule, to ensure that they are operational, before any cement and

other cementitious materials are discharged from the road tanker into a silo.

4.11.4 The tanker driver will attend the discharge controls throughout and will immediately suspend the discharge operation should any alarm be activated or if a visible emission occurs. The Quarry Manager will be informed promptly and no further discharge will take place until the cause of the event has been identified and remedied.

4.12 Road Transport

4.12.1 All lorries carrying aggregates into or out of the site will be securely sheeted. This is monitored using CCTV at the site exit, with disciplinary action taken against any haulier breaking this rule.

4.12.2 The existing wheel-wash has been refurbished recently to ensure its effective operation. All departing transport will pass through the wheel-wash and will then be inspected for cleanliness by driver. If necessary, the vehicle will driven through the wheel-wash again and further inspected by the driver before proceeding towards the site entrance. A CCTV camera will be installed within 6 months of ROMPP approval to ensure that the wheel-wash is used correctly.

4.12.3 Fixed sprays along the access road and around vehicle circulation areas will be inspected and upgraded as necessary, to minimise track-out.

4.12.4 A road sweeper will be deployed at least twice weekly to clean the access road, the site entrance on Wood Lane, Granite Way and Loughborough Road. Further deployments will be made promptly in the event of spillages or deposits occurring in these areas or elsewhere on the public highway. The routes and schedules for road sweeping will be reviewed and re-defined as necessary.

4.13 Wind Blow across Bare Ground and Stockpiles

4.13.1 The effects of wind blow across stripped surfaces, unpaved vehicle circulation areas, stockpiles and other areas of bare ground will be minimised by ensuring that loose materials are removed or treated.

4.13.2 During dry conditions, unpaved circulation areas and the surfaces of stockpiles in the open will be watered using fixed sprays or a rain gun attached to a water bowser. Water will also be applied as necessary to stabilise other loose bare surfaces.

4.13.3 Although receptors are generally already screened from the effects of dust from the site, the opportunity for further planting will be kept under regular review.

4.14 Other Matters

4.14.1 General matters and the management of the site can affect the likelihood of significant dust emissions. These include:

- the use of clean water for dust suppression to avoid re-circulating fine material;
- high standards of house-keeping to minimise track-out and wind blown dust;
- effective staff training in respect of the causes and prevention of dust.

4.14.2 The water supply to the dust suppression installations will be protected against frost to ensure its availability at all times.

4.14.3 The operation and settings of the fixed water sprays, which are operated by timers with a manual override, will be reviewed as necessary to ensure optimum performance in all weather conditions.

4.15 Action Plan

4.15.1 Further specific measures will be carried out as appropriate in accordance with a monthly Dust Management Action Plan drawn up by the Quarry Manager.

5 Maintenance

5.1 Effective control of airborne dust emissions requires the maintenance and proper operation of all plant and equipment, including fixed and mobile dust extraction and suppression equipment. A programme of planned maintenance will be carried out on all plant and equipment in accordance with the manufacturers' recommendations to ensure that it operates at optimum efficiency.

5.2 Stocks of essential spares and consumable items will be held at the site or kept readily available for use at short notice.

5.3 Any malfunction or breakdown leading to abnormal emissions will be dealt with promptly and operations will be modified or suspended until normal working can be restored. All such malfunctions and the actions taken will be recorded in the site logbook.

6 Site Management

6.1 The Quarry Manager will exercise, either personally or by delegation to suitably trained and responsible staff, day-to-day control of the site. He will be responsible for the satisfactory working of the whole site and for ensuring full compliance with the dust management and monitoring plan.

6.2 Staff at all levels will receive the necessary training and instruction in their duties relating to all operations and the potential sources of dust emissions. Particular emphasis will be given to plant and equipment malfunctions and abnormal conditions.

6.3 The Quarry Manager will ensure that customers and suppliers are aware of the need to comply with the provisions of this plan so far as they are relevant to their activities on site. Specifically, an information sheet summarising the requirements in respect of road transport will be handed to drivers employed by external hauliers. The drivers will be asked to sign for the sheet, acknowledging that they have read and understood the requirements.

6.4 Any member of staff who fails to comply with the provisions of the dust management and monitoring plan will be re-trained as necessary and may also be subject to disciplinary action. External hauliers failing to observe the requirements in respect of vehicle operations will be asked to leave the site.

7 Emissions Monitoring

7.1 Visual Observations

7.1.1 Activities with the potential to cause dust emissions, as detailed in Section 3, will be monitored at the start-up of operations and again in the early afternoon. This will include a visual assessment of any potential impacts at downwind receptors.

7.1.2 A trigger system will be adopted to identify those weather conditions when there is an increased or high risk of wind blown dust. The trigger levels are detailed in the following matrix.

Table 7.1: Wind blown dust risk matrix

Wind speed			**Rainfall**		
Beaufort	**m/s**	**mph**	**Dry**	**Showers**	**Heavy rain**
4+	6+	13+	Red	Amber	Green
2 - 3	2 - 5.5	4 - 12	Amber	Green	Green
0 - 1	0 - 1.5	0 - 3	Green	Green	Green

7.1.3 The trigger levels will be interpreted as follows:

Red:	All exposed areas of loose bare ground and stockpiles will be inspected and treated as necessary in accordance with Section 4.13;
Amber	Loose bare ground and stockpiles within 100m of the site boundary will be inspected and treated as necessary in accordance with Section 4.13; and
Green	Wind blown dust not normally likely to occur.

7.1.4 All observations and findings, including wind and other weather conditions, will be recorded in the site logbook.

7.1.5 Should visible dust be generated, the Quarry Manager will act promptly to identify the source(s) of the dust and take the necessary corrective action. Each event, its cause and the action taken will be recorded in the site logbook.

7.1.6 If necessary to avoid nuisance, the Quarry Manager will instruct the reduction or suspension of any operation or process causing visible dust emissions across the site boundary towards a sensitive receptor until the emissions can be controlled.

7.1.7 Site personnel will be instructed to inform the Quarry Manager whenever visible dust emissions are observed, or appear likely to occur, as a result of any operation or process.

7.2 Stack Emissions

7.2.1 Monitoring of particulate matter emissions from the roadstone coating plant stacks and the filtration equipment at the secondary crusher house and concrete batching plant will continue to be carried out and reported in accordance with the PPC permits for the processes.

7.3 Dust Deposition and Soiling

7.3.1 The earlier dust monitoring scheme was based on the use of outdated directional flux gauges, most of which were unsuitably located in sheltered positions. The results were unlikely to be representative of the actual impacts of the quarry and, as agreed with CBC, the scheme has been superseded by a scheme based on an alternative methodology.

7.3.2 Combined dust deposition / direction gauges as supplied by TES Bretby 10, were installed initially at or near the seven earlier monitoring stations. The locations were agreed on site with LCC and CBC on 14 June 2010. Subsequently, following repeated vandalism, Stn 2 was removed and a second station, Stn 8, was established on the eastern side of the railhead. The location of Stn 7, adjacent to Hawcliffe Road Depot, was amended and is now Stn 9. Finally, Stn 10 has been installed on land between the open stockyard and Halstead Road.

7.3.3 The locations of the eight current dust monitoring stations are shown on drawing AG008-D01 Rev D, as detailed below:

- Stn 1: off Kinchley Lane;
- Stn 2: deleted;
- Stn 3: at Mill Farm;
- Stn 4: off Wood Lane;
- Stn 5: Broad Hill;
- Stn 6: west side of Barrow Railhead;
- Stn 7: deleted;
- Stn 8: east side of Barrow Railhead;
- Stn 9: adjacent to Hawcliffe Road Depot; and
- Stn 10: between stockyard and Halstead Road.

7.3.4 Each combined gauge comprises a ‘frisbee’ deposition gauge with a collecting bottle around which a directional adhesive strip is fixed. The samples are collected at monthly intervals by ESG (formerly TES Bretby) and are analysed at their UKAS-accredited laboratories.

7.3.5 The analyses are reported in terms of deposition rates for undissolved and dissolved solids (mg/m2/day), pH and daily percentage effective area coverage in each of the eight principal directions. The reporting of effective area coverage, essentially a measure of soiling, permits an assessment to be made of the main direction(s) from which the collected dust arises.

7.3.6 Typical dust deposition rates[11] range from 10 to 50 mg/m^2/day in rural areas, from 30 to 80 mg/m^2/day in suburban areas and from 80 to 160 mg/m^2/day in town centre

or industrial areas. The areas around Hawcliffe Road and Barrow Railhead are best considered as "suburban", which indicates a typical background dust deposition rate of about 50 mg/m^2/day.

7.3.7 Complaints about dust may occur when the monthly dust deposition rate is 2.5 times the median rate, and are likely if the monthly rate is 3.5 times the median rate[12]. The indicative baseline deposition rate given above suggests that the onset of potential nuisance will occur if the deposition rate for undissolved solids exceeds about 125 mg/m^2/day, and nuisance will become likely if the rate exceeds about 175 mg/m^2/day.

7.3.8 The onset of potential nuisance due to soiling is generally considered to occur when the daily effective area coverage exceeds 0.5% at a sensitive property.

7.3.9 A deposition rate for undissolved solids of 125 mg/m^2/day and a soiling rate of 0.5% effective area coverage per day will be adopted as trigger limits for investigation to identify the likely dust source(s), taking account of the direction data. A record will be kept of the findings and of any actions which are subsequently taken.

[10] *TES Bretby was formerly the Technical and Scientific Research Establishment of the National Coal Board*

[11] *Environmental Effects of Surface Mineral Workings, Waller Associates for DoE, 1991*

[12] *Vallack HW and Shillito DE, 1998, Suggested Guidelines for Deposited Ambient Dust, Atmospheric Environment **30** pp2737-2744*

7.4 PM10 Monitoring

7.4.1 CBC monitored PM10 concentrations at the southern end of Hawcliffe Road throughout 2009 into the early part of 2010, utilising a Partisol 2025 sequential air sampler. The sampler is recognised as appropriate for the detailed assessment of PM10 under the LAQM regime. Lafarge is continuing PM10 monitoring at Stn 9, which is close to CBC's monitoring station, using a similar sampler.

7.4.2 The Partisol 2025 is equipped with a cassette holding up to fifteen one-day filters, which are changed automatically. The cassettes are replaced at fortnightly intervals and are sent to an accredited laboratory for analysis.

7.4.3 The laboratory procedures for the weighing of the filters will comply with EN 12341[13], an essential feature of which concerns the pre- and post-conditioning of the filters. A further requirement is that the resolution of the weighing balance is to be 10 µg.

7.4.4 The analyses provide 24-hour gravimetric data for direct comparison with the NAQS 24-hour mean objective of 50 µg/m3 and, by aggregating the results provide a direct comparison with the annual mean objective of 40 µg/m3. In assessing the data, it is noted that the NAQS permits up to 35 exceedances per annum of the 24-hour mean objective.

7.4.5 The sampling head is non-directional. However, the directional soiling strip attached around the adjacent deposit gauge permits an apportionment, on a monthly basis, of the principal direction(s) from which the PM10 arise.

7.4.6 If the data obtained with the Partisol indicate likely or actual exceedances of the NAQS objectives for PM10, a portable PM10 monitor [14] will be used to measure real-time total suspended particulates and PM10 concentrations at spot locations, locations to identify the principal contributors in and around the site.

7.4.7 Additionally, the portable PM10 monitor will be used as a screening tool to identify the principal emission sources on site. Initially, portable PM10 monitoring will be carried out at or around the following locations:

- quarry void;
- primary crusher;
- surge pile;
- toast rack;
- stocking ground;
- Granite Way / access road;
- conveyor crossing above Loughborough Road;
- railhead; and
- Stn 9, collocated with Partisol;

7.4.8 This will provide an indication of the relative significance of the emissions from each source. However, reliance will not be placed on the absolute magnitude of the data obtained due to uncertainties in the appropriate scaling factors applicable to this type of monitor.

[13] *EN 12341, Air quality – Determination of the PM10 fraction of suspended particulate matter – Reference method and field test procedure to demonstrate reference equivalence of measurement methods, CEN, 1998,*

[14] *Turnkey Instruments Osiris or similar monitor*

7.5 Reporting

7.5.1 A monthly summary and review of the PM10 and dust data, including the results of any investigations into potential nuisance or exceedances of the NAQS 24-hour mean objective for PM10, will be prepared. The findings will be passed to LCC and

CBC within two weeks of Lafarge receiving the results and will be used to inform the need for any action or additional mitigation which may be agreed to ensure compliance with the NAQS or to avoid nuisance.

7.5.2 Following weighing, the Partisol filters will be made available if requested for checking and further examination by LCC and CBC.

8 Emergency Response

8.1 An emergency response procedure, to be followed in the event of a major dust emission, will be issued to all site personnel and the drivers of cement and filler tankers.

8.2 Laminated copies of the procedure will be posted at strategic points around the site including:

- processing plant control rooms;
- "toast rack" and railhead control rooms;
- roadstone coating and concrete batching plant control rooms;
- silo inlet points; and
- workplace canteens.

8.3 For the purposes of emergency response, major dust emissions will be defined as including:

- visible dust crossing the site boundaries;
- fugitive dust from clad structures;
- fugitive dust from conveyor hoppers, transfer points and discharges;
- persistent fugitive dust when loading or tipping soils, rock or aggregates;
- visible emissions during silo deliveries;
- fugitive dust during roadstone or concrete loading operations;
- persistent fugitive dust from transport or plant movements; and
- persistent wind blown dust.

8.4 The contact details of key personnel and organisations will be listed in the procedure.

9 Complaints

9.1 All complaints will be recorded and reported to the Quarry Manager, who will investigate the circumstances and ensure that the necessary corrective measures are taken. A prompt response will be made to the complainant and a record, including copies of all correspondence and telephone file notes, will be made in the complaints register.

9.2 LCC and CBC will be notified of any dust complaint received, together with details of the findings of the investigation and any corrective measures which have been taken.

9.3 In the event of any substantiated complaint, the effectiveness of the dust management and monitoring plan will be reviewed.

10 Review and Update

10.1 Quarterly meetings will be held with CBC to review the dust and PM10 monitoring data and any specific actions which may be indicated by the results.

10.1 The continuing effectiveness of the dust management and monitoring plan will be reviewed in consultation with LCC and CBC every two years. The reviews will take into account the compliance records, complaints history, monitoring records and any recent sensitive developments on neighbouring land. The plan will be amended as necessary, including any changes to the monitoring methods and control measures which may be agreed.

10.2 Reviews of the plan will also be undertaken in the event of:

- exceedances of the NAQS 24-hour and annual mean objectives for PM10;
- exceedances of the nuisance dust deposition and soiling rates; or
- changes to the PPC permit regime.

10.3 Any agreed changes to the dust management and monitoring plan will be incorporated in the PPC permits and site EMS as appropriate.

Appendix A **Schedule of Actions Mountsorrel Quarry DMMP**

The following dust monitoring and management measures will be implemented following the issue of a revised planning permission.

Within three months

Soils handling

para 4.3.1: suspend soils handling if visible dust is carried towards a sensitive boundary

para 4.3.2: seal and seed soil storage mounds and replaced soils.

Drilling and blasting

para 4.4.1: use drill rigs fitted with cyclones and filtrations systems

para 4.4.2: design blasting operations to avoid excessive breakage and fly rock.

Loading and tipping

para 4.5.1: control drop heights during loading and tipping

para 4.5.2: use water sprays at primary crusher

para 4.5.3: minimise drop height onto primary crush surge pile

para 4.5.4: spray dry surfaces of stockpiles with water

para 4.5.5: carry out loading and tipping operations in sheltered locations.

para 4.5.6: use polymer sealant at railhead

Site haulage

para 4.6.1: keep site traffic to designated haul routes

para 4.6.2: adopt standard good practices for site haulage

para 4.6.3: locate site haul routes away from sensitive boundaries

para 4.6.4: spray and sweep internal paved surfaces as necessary, review road sweeping routes.

Crushing and screening

para 4.7.1: carry out principal crushing and screening operations within clad structures

para 4.7.3: maintain rubber sealing strips to process building entries and exits

para 4.7.4: use dust suppression sprays during processing

para 4.7.5: use dust extraction system in secondary crusher house

para 4.7.6: keep throughput within capacity of plant

para 4.7.7: vacuum clean or damp down and sweep up any spillages.

Conveyors

para 4.8.2: replace any damaged or missing conveyor covers or weather boards

para 4.8.3: shrouding to transfer points and conveyor discharges

para 4.8.5: adopt standard good practices for conveyors.

para 4.8.6: fit and trial foam dust suppression system in Phase 1

Aggregates stocking
para 4.9.2: manage and treat surfaces of stockpiles
para 4.9.3: reduce height of open stockpiles in the vicinity of Bond Lane,
plant new bund with screening vegetation
hydro-seed surface of outer slopes
para 4.9.4 manage high PSV stockpiles
clear spillages

Roadstone coating

para 4.10.1: comply with permit for process

para 4.10.2: check alarms, valves and filters before discharging fine powders into silos

para 4.10.3: attend controls throughout discharge operations (tanker driver)

Concrete batching

para 4.11.1: comply with permit for process

para 4.11.3: check alarms, valves and filters before discharging cement into silos

para 4.11.4: attend controls throughout discharge operations (tanker driver)

Road transport
para 4.12.1: sheet all aggregates lorries
para 4.12.2: use wheel-wash and inspect vehicle for cleanliness (drivers)
para 4.12.3: inspect and upgrade fixed sprays on access road
para 4.12.4: review road sweeping routes

Wind blown dust

para 4.13.1: remove or treat loose materials

para 4.13.2: apply water to loose bare surfaces

para 4.13.3: review opportunity for further screening planting

Other matters

para 4.14.1: use clean water for dust suppression
maintain high standards of house-keeping
train staff about the causes and prevention of dust

para 4.14.2: protect water supply against frost

para 4.14.3: review operation and settings of fixed water sprays

Within six months

Aggregates stocking

para 4.9.4 extend water spray system for high PSV stockpiles

Concrete batching

para 4.11.2: extend spray system across stockpiles and yard

Road transport

para 4.12.2: install CCTV camera at wheel-wash

Regular actions

Frequency	Paragraph	Actions
Twice weekly	4.12.4	deploy road sweeper on the access road, site entrance on Wood Lane, Granite Way and Loughborough Road (and as necessary)
Weekly	4.8.1	inspect external conveyors
Monthly	4.7.2	inspect cladding to crushing and screening processes

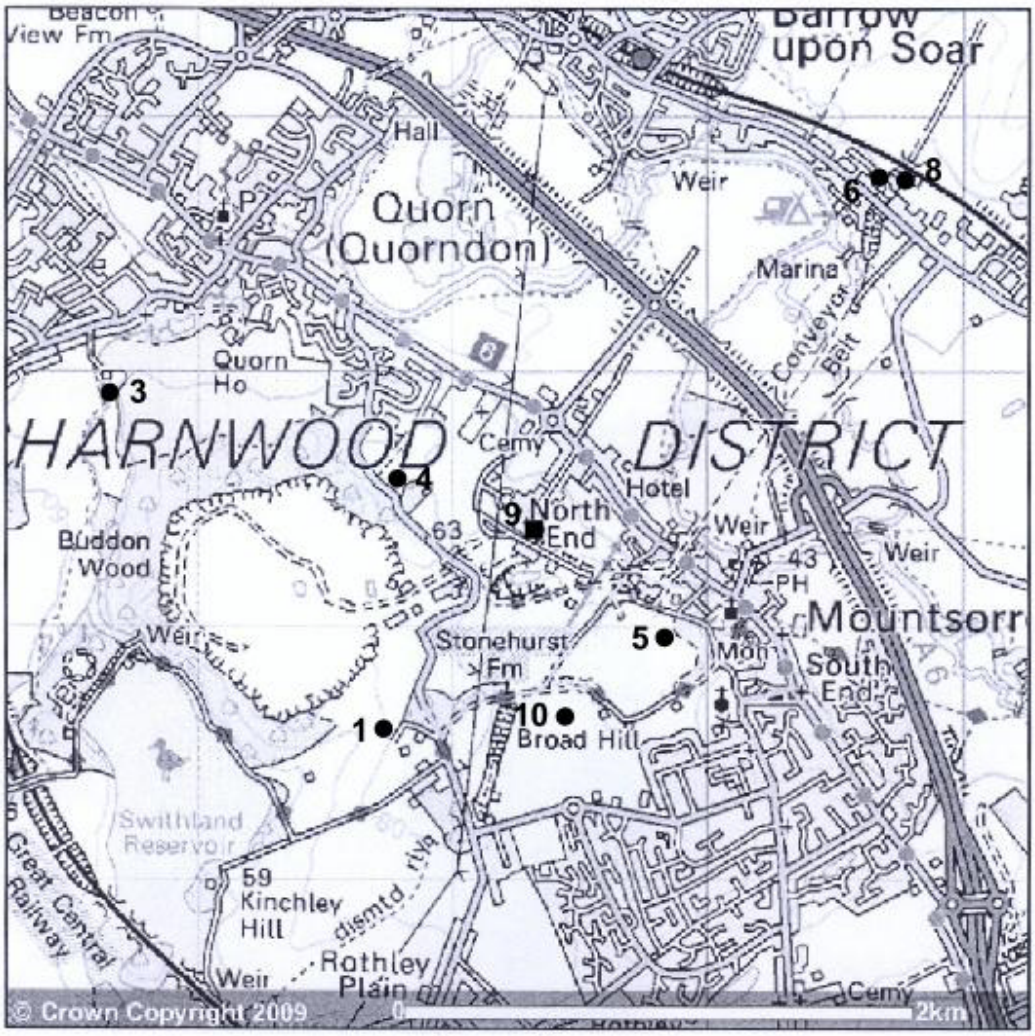
Monitoring

Frequency	Paragraph	Actions
Twice daily	7.1.1 - 7	visual inspections, using trigger system (and if weather conditions vary)
Fortnightly	7.4.2	exchange PM10 filters for analysis
Monthly	7.3.3	collect dust deposition and soiling samples (by ESG)
	7.5.1	summarise and review PM10 and dust data

Management

Frequency	Paragraph	Actions
Monthly	4.15.1	Update Action Plan
Quarterly	10.1	Meeting with Charnwood Council to review monitoring data and actions
Bi-annually	10.2	Review and amend DMMP (more frequently if required

Appendix B Dust Monitoring Locations



- 9: PM10 sampler + combined deposit / direction gauge
- 1, 3 - 6, 8, 10: Combined deposit / direction gauge

Appendix 2 Bitumen and Oil Storage and handling temperatures

Grade (BS 3690)	Minimum Pumping Temperature (°C)	Maximum Handling & Storage Temperature (°C)
Penetration Grades		
450 pen	90	190
350 pen	95	190
200 pen	100	190
100 pen	105	200
70 pen	110	200
50 pen	115	200
40 pen	125	200
35 pen	125	220
25 pen	135	220
15 pen	140	220
Cutback Grades		
50 secs	65	160
100 secs	70	170
200 secs	80	180

* these figures do not apply to coal tars

BS EN 1251:2000 'Bitumen and bituminous binders - specification for paving grade bitumens' is the new standard which has partially replaced BS 3690 Part 1. Under the new standard, which took effect from January 2002, there is a slight change in some of the above listed penetration grades. The new grades fall within the same overall penetration range as the previous ones, and the recommended storage and handling temperatures can be determined by 'read across' or interpolation from the above table.

Explanatory Notes

These notes do not form a part of the permit but contains guidance relevant to it.

Inspections

Regular inspections will be made by officers of Charnwood Borough Council (without prior notice), in order to check and ensure full compliance with this permit.

BAT (Best Available Techniques)

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by conditions of the Permit are subject to the implied condition that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Health and Safety at Work and Other Statutory Requirements

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 some Waste Disposal Licences.

Submission of Information

Note that the Permit requires the submission of certain information to the Local Authority (LA). In addition, the LA has the power to seek further information at any time under Regulation 60(1) EP Regulations provided that it acts reasonably.

Public Registers

Considerable information relating to Permits including the Application is available on public registers in accordance with Requirement 46(1) EP Regulations. Certain information may be withheld from public registers where it is commercially confidential or contrary to national security.

Variations to the Permit

This Permit may be varied in the future (by the LA serving a Variation Notice on the Operator). If the Operator itself wants any of the Conditions of the Permit to be changed, it must submit a formal Application. The Status Log within the Introduction will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the Permit

Where the Operator intends to cease the operation of an installation (in whole or in part) The LA should be informed in writing, such notification must include the information specified in Regulation 24 or Regulation 25 and Part 1 of Schedule 5 of the EP Regulations.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another person, an Application to transfer the Permit has to be made jointly by the existing and proposed holders. A transfer will be allowed unless the LA considers that the proposed holder will not be the person who will have control over the operation of the installation or will not comply with the conditions of the transferred Permit.

Annual Subsistence Fee

In accordance with Regulation 65(1) of the EPR Regulations the holder of a permit is required to pay a fee for the subsistence of the permit. This fee is payable annually on 1st April. You are advised that under the provisions of Regulation 22 of the EPR Regulations, if you fail to pay the fee due promptly, Charnwood Borough Council may revoke the permit. You will be contacted separately each year in respect to this payment.

Talking to us

Please quote the Permit Number if you contact Charnwood Borough Council about this Permit. To give a Notification under Conditions 10 and 14 the Operator should use the telephone number 01509 634636 or any other number notified in writing to the Operator by Charnwood Borough Council for that purpose. For notifications in writing please use the address on the front of this permit.

Appeals in relational to Environmental Permits

1. Anyone who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs within 6 months from the date of the permit issue.

2. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations and should be addressed as follows:

   The Planning Inspectorate
   Environment Team, Major and Specialist Casework
   Room 4/04 Kite Wing
   Temple Quay House,
   2 The Square,
   Temple Quay,
   Bristol, BS1 6PN

3. An appeal bought under Regulation 31(b) in relation to the conditions in a permit will not suspend the effect of the conditions appealed against: the conditions must still be complied with.

4. There are no forms or charges for appealing. However for an appeal to be valid, appellants are legally required to provide information as detailed in paragraphs 2(1) and (2) of Schedule 6 of the EP Regulations., namely:

   I. A statement of the grounds of appeal
   II. A copy of any relevant permit
   III. A copy of any relevant correspondence between the appellant and the regulator
   IV. A statement indicating whether the appellant wishes the appeal to be in the form of a hearing or dealt with by way of written representations.

5. In determining an appeal against one or more conditions, the Act allows the Secretary of Sate in addition to quash any of the other conditions not subject to the appeal, to direct the local authority either to vary any of these other conditions or to add new conditions.