

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Padeswood Works

Castle Cement Limited

Environmental Permit Variation Application

Supporting Document

Prepared by:

Caulmert Limited

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APPROVAL RECORD

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Client: Castle Cement Limited

Project Title: Environmental Permit Variation Application

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Project Manager: Andy Stocks

Caulmert Limited: Strelley Hall, Main Street, Strelley, Nottingham, NG8 6PE

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| Approved | Andy Stocks Director of Environment | Date | 17/04/2023 |

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Supporting Document

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1.0 INTRODUCTION

1.1 Application Context

- 1.1.1 Caulmert Limited have been appointed by Castle Cement Limited (trading as Hanson Cement) to prepare an environmental permit variation application for permit ref. EPR/BL1096IB to include for the upgrade to the existing Clinker Dome dust filter and associated monitoring requirements for 'A11' in Table S3.2 of the permit, and also for the addition to the permit for a new surface water discharge point at Padeswood Works site in Mold, Flintshire, North Wales. The site is located at postcode CH7 4HB.
- 1.1.2 This variation application is in response to Actions required by NRW Compliance Assessment Report (CAR) ref. CAR_NRW0040097, dated 14/06/2022, specifically Action 11 which requires the Operator to apply for a permit variation to include the emission point to surface water from the horseshoe ditch around the coal shed.
- 1.1.3 This application also provides the installation details of the upgraded dust filter and dust monitoring equipment located at the clinker entry point into the Clinker Dome and the proposed revised monitoring requirements for the non-kiln point source emission to air 'A11' for the Clinker Dome Filter in Table S3.2 of the permit. There will be no change to the location, activities or emissions from the replacement dust filter.

1.2 Document structure

- 1.2.1 This Supporting Document has been prepared to provide additional information to support the information provided in Parts C2 and F1 of the environmental permit application form for varying a bespoke installation permit. Answers to Part A are within the form and answers to Part C3 and an environmental risk assessment are covered in the Operating Techniques & BAT Review document ref. 5426-CAU-XX-XX-RP-V-0303.
- 1.2.2 To aid cross-referencing between this document and the application forms, the various issues are presented in the same order as in the application forms and the headings in this document include the specific question number to which the information relates.

2.0 FORM PART C2 – GENERAL: VARYING A BESPOKE PERMIT

2.1 Q1a Pre-application discussions

- 2.1.1 The Operator has obtained verbal agreement with the local NRW Officer for the site during recent discussions that the installation of the upgraded dust filter and monitoring probe at the entry point for clinker into the Clinker Dome of Padeswood Works will be an improvement for dust control at the site.

2.2 Q1b Permit number

- 2.2.1 The permit to which this application relates is EPR/BL1096IB for the installation at Padeswood Works, operated by Castle Cement Limited (trading as Hanson Cement).

2.3 Q2a Type of variation

- 2.3.1 This application provides the details of the upgraded dust filter located at the entry point of the Clinker Dome for the existing cement clinker activity and is not adding a new activity or changing the existing activities within the installation permit. This permit variation is also to add a surface water discharge point to the permit for uncontaminated surface water run-off which enters the horseshoe ditch, in response to Action 11 of CAR Form ref. CAR_NRW0040097, dated 14/06/2022. It is not proposed to include discharging water from the sweeper pit as part of this new discharge point, and therefore it is considered a H1 Surface Water Pollution Risk Assessment is not required.
- 2.3.2 Therefore, it is considered that this is a minor variation application on the basis that all aspects have been discussed with the local NRW Officer and no further technical assessment is required.

2.4 Q2b Non-Technical Summary

- 2.4.1 Caulmert Limited have been appointed by Castle Cement Limited (trading as Hanson Cement) to prepare an environmental permit variation application for permit ref. EPR/BL1096IB to include for the upgrade to the existing Clinker Dome dust filter and associated monitoring equipment and monitoring requirements for 'A11' in Table S3.2 of the permit, and also for the addition to the permit for a new surface water discharge point at Padeswood Works site in Mold, Flintshire, North Wales. The site is located at postcode CH7 4HB.
- 2.4.2 This variation application is in response to Action 11 of NRW Compliance Assessment Report (CAR) ref. CAR_NRW0040097, dated 14/06/2022, which requires the Operator to apply for a permit variation to include the emission point to surface water from the horseshoe ditch around the coal shed to Table S3.3 of the permit. The surface water run-off from this area of the site, which includes the coal shed area and clinker dome area, is considered to be uncontaminated and therefore a H1 Surface Water Pollution Risk Assessment has not been undertaken as part of this permit variation and no monitoring parameters or emission limits are proposed. This new surface water discharge point will be referenced as 'W3' and is

included on the 'Environmental Permit Plan' ref. 5426-CAU-XX-XX-DR-V-1800, included within the Operating Techniques & BAT Review report ref. 5426-CAU-XX-XX-RP-V-0303. It should be noted that any discharge of water from the sweeper pit is not proposed to be undertaken at this emission point and therefore this is not considered further in this application.

- 2.4.3 This application also provides the installation details of the upgraded dust filter and dust monitoring equipment for the Clinker Dome and the proposed revised monitoring requirements for the non-kiln point source emission to air 'A11' for the Clinker Dome Filter in Table S3.2 of the permit. It should be noted that this dust filter only provides dust filtration at the location where clinker enters the store, not the entire Clinker Dome store building, for which the filter only provides minimal filtration (see correspondence from Operator to NRW in Appendix 1). There will be no change to the existing activities as a result of upgrading the dust filter, with dust management and monitoring to be improved by the upgrade. The existing dust filter monitoring in place is a burst bag detector which was installed in response to Improvement Condition 2 of the permit, and is monitored continuously by triboelectric probe, however the Operator acknowledges this is not the most effective monitoring probe for a bag filter. However, due to the existing set-up of ducting, a triboelectric probe was selected as the most relevant solution. Therefore, it is proposed to replace the existing bag filter with a 'DCE Envirojet Reverse Jet Bag Filter' or equivalent that is to be monitored for particulate matter using a 'SICK Dusthunter SP100' probe with forward scattered light measurement, already proven to be effective at other emission points at the site (see 'Operating Techniques & BAT Review Report' ref. 5426-CAU-XX-XX-RP-V-0303 for more detailed specifications).
- 2.4.4 The existing permitted activity to which this permit variation relates is Section 3.1 A(1)(a) of Schedule 1 of the Environmental Permitting Regulations – cement clinker production, discharge of clinker from the cooler to the clinker store or export facility, and discharge of emissions from the chimney or other process vents. There will be no change to the existing activities, activity capacities or storage capacities as a result of this permit variation. This permit variation is to provide information on the upgrade to the existing dust filter and dust monitoring equipment located at the entry point which clinker enters the Clinker Dome at Padeswood Works, and also for the addition of a new surface water discharge point 'W3' for uncontaminated run-off from the site into the horseshoe ditch and subsequently the Black Brook.
- 2.4.5 The upgrade of the existing dust filter at the entry point to the Clinker Dome will improve dust management at the site and reduce the potential for emissions of dust leaving the Clinker Dome. The improvement to dust management at the site and upgrading of dust monitoring equipment is considered to represent the Best Available Techniques (BAT) for the manufacture of cement and control of dust at the site.
- 2.4.6 The BAT Conclusions for the Cement Industry with respect to the proposed upgraded dust filter are reviewed in the Operating Techniques and BAT Review Report ref. 5426-CAU-XX-XX-RP-V-0303, included within this application. Further information on the proposed dust filter and new surface water discharge point is also provided in the Operating Techniques and BAT Review Report.

2.5 Q3a Relevant offences

2.5.1 There are no relevant convictions that require declaration.

2.6 Q3b Technical ability

2.6.1 In the application form it is stated that this question only relates to relevant waste operations that are being applied for the first time only, and as such this question does not relate to the installation permit for which this permit variation applies.

2.7 Q3c Finances

2.7.1 There are no relevant current or past bankruptcy or insolvency proceedings that require declaration.

2.8 Q3d Management system

2.8.1 Castle Cement Limited (trading as Hanson Cement) operates the installation at Padeswood Works in accordance with an ISO14001 accredited environmental management system (EMS). The relevant certificate is provided in Appendix 2.

2.8.2 Where necessary, the operator will update the Management System to include for the upgraded dust filter and monitoring equipment for the Clinker Dome and also for new surface water discharge point 'W3'. However, a dust filter already exists at the Clinker Dome and so the same control measures and procedures will be followed for the new dust filter where applicable. The relevant staff at Padeswood, whose duties will involve the operation and maintenance of the upgraded dust filter and monitoring probe at the Clinker Dome will have their training needs assessed and recorded in the training matrix. The training programmes will be developed to ensure the operation of the dust filter and dust probe is safe, and all reasonable steps have been taken to protect the environment.

2.9 Q5a Plans for the site

2.9.1 No land will be added to the permitted areas as a result of this permit variation. The permit variation is to cover the upgrade of Clinker Dome dust filter and dust monitoring probe, and also for the addition of new surface water discharge point 'W3'. The location of new discharge point 'W3' is clearly labelled on the 'Environmental Permit Plan' drawing ref. 5426-CAU-XX-XX-DR-V-1800 included within the Operating Techniques & BAT Review report ref. 5426-CAU-XX-XX-RP-V-0303.

2.10 Q5b Site report for any additional land

2.10.1 No additional land will be added to the permitted area.

2.11 Q5c Adding an installation

2.11.1 This question is not applicable to the application.

2.12 Q6 Environmental Risk Assessment

- 2.12.1 See Section 2.6 of the Operating Techniques & BAT Review report ref. 5426-CAU-XX-XX-RP-V-0303, which has been produced as part of this permit variation application.

3.0 FORM PART C3 – VARIATION TO A BESPOKE INSTALLATION PERMIT

- 3.1.1 Please see the Operating Techniques & BAT Review report ref. 5426-CAU-XX-XX-RP-V-0303 for answers relating to Part C3 application form, a process description and Best Available Techniques (BAT) Conclusions review.

4.0 FORM PART F1 – OPRA, CHARGES AND DECLARATIONS

4.1 Tables 1 & 2 – Working out Charges

- 4.1.1 The Natural Resources Wales (NRW) application fees have been calculated using the NRW ‘Environmental Permitting Charging Scheme 2022/23’ effective from 1st April 2022 and this states:

“For each tier 2 and tier 3 facility which is already the subject of a permit, where the proposed change in relation to that facility;

(1) is of a minor technical nature, the sum which is the lower of £1,311 or such sum as would otherwise be applicable under sub-paragraph (3) or (4)”

- 4.1.2 Where sub-paragraph (4) refers to tier 3 facilities:

“(4) is to a facility which is or will be when changed as proposed, a tier 3 facility, the sum equal to the relevant variation charge multiplier for that facility, multiplied by the relevant OPRA charging score for that facility”

- 4.1.3 For tier 3 facilities, there is no charging multiplier provided for a ‘minor technical variation’ and therefore the fee of £1,311 is relevant for this permit variation application.

4.2 OPRA Profile

- 4.2.1 The current OPRA Profile spreadsheet for the site is provided separately as a Microsoft Excel file (as Appendix 3).

4.3 Payment

- 4.3.1 A payment for the amount of **£1,311** will be made by the Operator to NRW by credit card over the phone.
- 4.3.2 As per previous applications, where NRW have agreed to call the operator for payment of the application fee, please call Mr Stewart Mitchell on 07773 318 884 or 01244 550 330 for payment over the phone.

4.4 Declaration

- 4.4.1 The authorised signatory for the Declaration in Form Part F1 on behalf of the operator is Mr Iain Walpole, as detailed in the attached letter in Appendix 4.

APPENDIX 1

Email Correspondence

From: Mitchell, Stewart (Mold) GBR <stewart.mitchell@hanson.biz>

Sent: Monday, April 11, 2022 11:15 AM

To: Cubley, Lara <Lara.Cubley@cyfoethnaturiolcymru.gov.uk>

Cc: Pierce, Emma <Emma.Pierce@cyfoethnaturiolcymru.gov.uk>; Quick, David (Mold) GBR <david.quick@hanson.biz>

Subject: CAR 0038997 Action 2

Hi Lara,

ACTION 2: Review potential dust control measures when carrying out activities in this area and provide your findings and proposed improvement measures by 28th January 2022.

Filtration for clinker entering the store is supplied by BF41 located at the non-drive end of CV02 and its principal purpose is to de-dust CV02. This filter provides some filtration of the store but it is minimal.

The doors on the clinker dome remain open whilst a vehicle is operational in there for safety reasons. We are willing to try to operate with one door closed but as a means of knowing where the exit is at all times, one will need to remain open. A trial of operating with one door closed will take place the next time a vehicle is in use in the store. This activity only happens when the store contents are low and the kiln is off and timing of the next time we are moving clinker in the store is currently unknown.

A misting unit has been considered to use as an additional control measure however the noise associated with the use of such a unit has potential to be heard off site and the use of this type of unit could not be limited to daytime hours.

The improvement required in this area is a replacement to BF41 and not just a like for like replacement, a significant upgrade would be required. It is inherently very difficult to keep such a large building under negative pressure. The site will reach out to filter suppliers with a scope of what is required from a replacement filter and get specification of what would need to be installed. This will be complete by 31st October 2022

Regards,

Stewart

APPENDIX 2

Environmental Management System Certificate

Certificate of Conformity

Calumite Ltd/Castle Cement Ltd/ Civil & Marine Ltd

**Hanson House, 14 Castle Hill, Maidenhead,
Berkshire SL6 4JJ**

*The Environmental Management System in operation at the locations
shown on the attached schedule for the following scope of activities:*

***Manufacture, processing and storage of
cementitious and other mineral products, operation of
a laboratory for the testing of the company's products***

is certified to conform to the following management system standard:

BS EN ISO 14001:2015

This Certificate is issued within the scope of the UKAS accreditation of CPC

Certificate No: CP E 00023 – Issue 3



Colin Head
Chief Executive

Date Authorised: 15 March 2023

Date of original certificate: 1 July 2012

THIS CERTIFICATE IS VALID FROM 17 MARCH 2023 TO 31 DECEMBER 2025

subject to continued compliance with the above standard as confirmed by routine surveillance.
Confirmation of the current status of Certification may be obtained by enquiry to the CPC Central Records Office.

Construction Products Certification is an operating division of the Quality Scheme for Ready Mixed Concrete. A UKAS accredited certification body



CPC
Construction
Products
Certification

1 Mount Mews
High Street, Hampton
Middlesex TW12 2SH
Telephone: 020 8481 9640
Facsimile: 020 8979 4558
www.qsrmc.co.uk



009

Certificate Schedule

(attached to and forming part of Certificate No: CP E 00023)

Environmental Management System Certification – ISO 14001:2015

Calumite Ltd/Castle Cement Ltd/Civil & Marine Ltd t/a Hanson Cement/Hanson Packed Products

Hanson House
14 Castle Hill
Maidenhead SL6 4JJ

Location

Activity

| | |
|---|---|
| Hanson Cement, Ketton Works, Ketton, Stamford PE9 3SX | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Cement, Ribblesdale Works, West Bradford Road, Clitheroe BB7 4QF | The manufacture processing and storage of cementitious and mineral products. |
| Hanson Cement, Padeswood Works, Chester Road, Mold CH7 4HB | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Cement, Avonmouth Terminal, Royal Edward Dock, Bristol BS11 9BT | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, Bellshill Railhead, Reema Road, Bellshill ML4 1RR | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, British Rail Freight Depot, York Way, London N1 0AU | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, Forty Foot Road, Middlesbrough TS2 1HG | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, New Works Road, Low Moor, Bradford BD12 0LB | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, King George V Dock, Glasgow G51 4SD | The storage and processing of dry bulk and packaged products. |
| Hanson Cement, Rio Tinto Wharf, Port Talbot Docks, Port Talbot SA13 1RA | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Cement, London Road, Grays RM20 3NL | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Cement, Teesport, Grangemouth, Middlesbrough TS6 6UG | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Cement, Llanwern Works, Newport, NP19 4QX | The storage and processing of dry bulk and packaged products. |
| Hanson Packed Products, Needingworth Quarry, Needingworth Road, Bluntisham, Huntingdon PE28 3RJ | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Bulls Lodge Quarry, Generals Lane, Boreham, Chelmsford CM3 3HR | The processing, storage and packing of aggregates. |

Certificate Schedule

(attached to and forming part of Certificate No: CP E 00023)

Environmental Management System Certification – ISO 14001:2015

Calumite Ltd/Castle Cement Ltd/Civil & Marine Ltd t/a Hanson Cement/Hanson Packed Products

**Hanson House
14 Castle Hill
Maidenhead SL6 4JJ**

Location

Activity

| | |
|--|--|
| Hanson Packed Products, Chequers Lane, Dagenham, Essex RM9 6QD | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Packed Products, Griff Clara Industrial Estate, off St Davids, Nuneaton CV10 7PP | The manufacture, processing and storage of cementitious and mineral products. |
| Hanson Packed Products, Basin Road South, Portslade, Brighton BN41 1WF | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Sutton Courtenay Quarry, Appleford, Abingdon, Oxfordshire OX14 4PP | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Pottal Pool, Penkridge, Stafford ST19 5RR | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Whiteball Quarry, Nr Wellington, Somerset TA21 0LY | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Wykeham, Scarborough, North Yorkshire YO13 9QU | The processing, storage and packing of aggregates. |
| Hanson Packed Products, Trottiscliffe Road, Addington, Nr Wrotham, Kent ME19 5DL | The processing, storage and packing of aggregates. |
| Calumite Limited, Brigg Road, Scunthorpe DN16 1AW | The manufacture, handling and storage of Calumite, a raw material for the glass industry |
| Hanson Cement, Brigg Road, Scunthorpe DN16 1AW | The operation of a laboratory for the testing of the company's cementitious products and Calumite. |
| Hanson Cement, Cefn Mawr Quarry, Pantybuarth, Mold, Flintshire CH7 5EA | The extraction and processing of raw materials for cement production. |

APPENDIX 3

OPRA Profile Spreadsheet
(provided separately as Excel spreadsheet)

APPENDIX 4

Letter of Authorisation

Permit Receipt Centre
Natural Resources Wales
Cambria House
29 Newport Road
Cardiff
CF24 0TP

Hanson UK

Hanson House
14 Castle Hill
Maidenhead
SL6 4JJ

Phone 01628 774194
Fax 01628 774232

www.hanson.com/uk

14 April 2016

Dear Sirs

Hanson Quarry Products Europe Limited - Company No. 300002
Hanson Packed Products Limited - Company No. 26306
Castle Cement Limited - Company No. 2182762
Civil and Marine Limited - Company No. 2301423
Midland Quarry Products Limited - Company No. 3173418

I confirm that the persons listed below are relevant persons for the purposes of completing Natural Resources Wales permit applications, including water and waste permits and carbon related permits, and compliance matters (e.g. ETS, CRC and ESOs) on behalf of Hanson UK and that they have the authority to bind each of the above companies in relation to documents signed on their behalf.

The relevant persons are:

Claire Bark, Senior Geologist (Central Region)
Adam Chapman, Geologist (Southern Region)
Roger Griffiths, Principal Geologist (South-Western Region)
David Holman, National Landfill and Recycling Manager
Dan Senkans, Geologist (Northern Region)
John Peate, Principal Geologist (Northern Region)
Matthew Uttley, Geological Services Manager
Bob Woodbridge, Principal Geologist (Central Region)
Martin Crow, Senior Sustainability Manager
Matthew Newton, Energy Manager
Neil Kilner, Energy and Carbon Advisor
Iain Walpole, Safety, Health and Environment Manager
Mark Tyrer, Safety, Health and Environment Manager
Asif Khalil, Safety, Health and Environment Advisor
Graham Dunwell, Senior Safety, Health and Environment Advisor
Kevan Shovlar, Safety, Health and Environment Advisor
Jon Dransfield, Safety, Health and Environment Advisor
Darren Herbert-White, Safety, Health and Environment Advisor
Bryan Abbot, Safety, Health and Environment Advisor
Tom Hill, Internal Auditor and Radiation Protection Supervisor

Please note this notification replaces any previous notifications of relevant persons by the above companies.

Yours faithfully

A handwritten signature in cursive script that reads "Wendy F Rogers".

W F Rogers

Company Secretary of each of the above companies

wendy.rogers@hanson.com

DDI: 01628 774167

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