

MELTON ROSS WESTERN QUARRY AREA RESTORATION

Environmental Permit Variation Application

Non-Technical Summary

Prepared for: Singleton Birch Limited

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SLR Ref: 416.00075.00104
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CONTENTS

1.0	INTRODUCTION.....	1
2.0	SUMMARY OF THE REGULATED FACILITY.....	1
2.1	The Site.....	1
2.2	Current Status.....	1
2.3	Proposed Development.....	2
3.0	WHAT IS BEING APPLIED FOR?	2
3.1	Specified Waste Management Activities.....	3
4.0	APPLICATION CONTENTS.....	3
4.1	Application Forms	3
4.2	Drawings.....	3
4.3	Environmental Setting and Site Design.....	4
4.4	Environmental Risk Assessment.....	4
4.5	Hydrogeological Risk Assessment	4
4.6	Stability Risk Assessment	5
4.7	Waste Acceptance Procedure	5
4.8	Waste Recovery Plan.....	5
4.9	Operating Techniques.....	5
5.0	KEY TECHNICAL STANDARDS AND CONTROL MEASURES	5
5.1	Waste Acceptance.....	6
5.2	Site Engineering.....	6
5.3	Environmental Monitoring.....	6

DOCUMENT REFERENCES

APPENDICES

Appendix A: EA - RVD Pre-application advice letter. Ref. EPR/HB3209FF/A001 dated 25th June 2019

Appendix B: Enhanced pre-application advice and correspondence. Ref. EPR/HB3209FF/A001

DRAWINGS

Drawing EP1: Site Location

Drawing EP2: Environmental Permit Boundary

Drawing EP3: Cross Sections

Drawing EP4: Illustrative Phasing

Drawing EP5: Environmental Site Setting

Drawing EP6: Cultural and Natural Heritage

Drawing EP7: Engineering Cross Section

Drawing MRLC1: Landform Comparison

Drawing RS1: Restoration Status

Drawing RS2: Proposals for Restoration of Western Quarry Area

Drawing RS6: Overall Restoration Masterplan

Drawing HRA1: Environmental Monitoring Plan

Drawing HRA2: Groundwater Contours (Welton Chalk)

Drawing HRA3: Groundwater Contours (Ferriby Chalk)

Drawing HRA4: Conceptual Site Model

1.0 Introduction

SLR Consulting Limited (SLR) has been instructed by Singleton Birch Limited (SBL) to prepare an environmental permit variation application to add the restoration of the Western Quarry Area of the Melton Ross Quarry Complex, hereafter referred to as 'the Site', to SBL's Melton Ross Lime Works permit (ref. EPR/BL8805IZ).

The environmental permit variation application is to add the permanent deposit of inert waste for the restoration of the quarry to agricultural and nature conservation uses at the Site.

This Non-Technical Summary (NTS) provides a summary of the regulated facility, an explanation of exactly what is being applied for, and a summary of the key technical standards and control measures that will be implemented at the Site.

2.0 Summary of the Regulated Facility

2.1 The Site

The Site lies within the Melton Ross Quarry Complex which is located within a predominantly agricultural landscape, approximately 17km to the east of Scunthorpe, within North Lincolnshire. It is located west of the village of Croxton, and north of the village of Melton Ross. Access to the complex is gained from the B1211 to the southeast.

The complex is bisected by the A180(T), which runs east – west between parts of the complex. The original quarry workings lie to the south of the A180(T) and a more recent quarry extension is being developed to the north of this road. The Western Quarry comprises the western part of the original quarry area to the south of the A180(T), centred on national grid reference TA 07288 11446. The Camp Wood landfill lies in the eastern part of the original quarry area to the south of the A180(T).

The Site is located within an area which is predominantly agricultural and rural, within a local topography that is gently undulating. The nearest residential properties are situated approximately 280m south in the conurbation of Melton Ross, followed by a cluster of properties located approximately 345m north.

The Site is located within a Principal Aquifer which is also designated as a Source Protection Zone 3. There is one Local Wildlife Sites (LWS) but no other ecological designations within a 2km radius of the Site.

The location of the Site is illustrated on Drawing EP1 Site Location Plan, and its extent is visible on Drawing EP2 Environmental Permit Boundary.

2.2 Current Status

The Site consists of a partially excavated chalk quarry. The Site is now almost fully worked out of the chalk that is of a suitable chemical quality as feedstock for lime production within SBL's lime kilns. This chalk, known as Welton Chalk, is a distinct geological horizon which is separated from a lower chalk horizon, known as the Ferriby Chalk, by a layer of dark marl, known as the 'Black Band' or the Plenus Marl.

The Ferriby Chalk is not sufficiently pure to allow it to be used for lime manufacture. However, a trial excavation, in the southern part of the Site, through the Plenus Marl, and into the underlying Ferriby Chalk, has demonstrated that it is suitable for use as low-grade aggregate which can be used off site as a construction material, thus husbanding the reserves of high quality Welton Chalk for use in the company's lime kilns.

The northern part of the Site is being used to stockpile restoration materials including soils from the northern extension area as well as mining waste from within the Site. The location of the northern extension area is illustrated on Drawing EP2 for information.

2.3 Proposed Development

Following extraction of chalk from the Site, it is proposed that the Site will be progressively restored with inert materials under a deposit for recovery (DfR) scheme. Restoration will be conducted in a phased approach from north to south.

The restoration proposals, illustrated in Drawing RS2, aim to mimic the character and after uses that would be provided by the adjacent Camp Wood Landfill to produce an attractive landform including agricultural and nature conservation after uses.

The Western Quarry has been largely excavated to close to the base of the Welton Chalk, with typically 1 – 2m of in-situ chalk present beneath the base of the quarry. It is proposed to deepen the existing quarry in the south of the Site to excavate through the Black Band and to work the underlying Ferriby Chalk.

The Ferriby Chalk excavation will subsequently be backfilled using mining waste material (<22mm chalk scalplings), low-quality chalk extracted from the Northern Quarry and overburden/interburden material (i.e. the Black Band) to bring the elevation level with the base of the Welton Chalk. An attenuation layer will then be installed across the base and sidewalls of the Welton Chalk prior to the deposition of imported inert waste material to restoration level. The extraction and engineering of the Site is illustrated conceptually in Drawing EP7.

Key Points regarding the proposed restoration are as follows:

- Extraction of Welton Chalk, Plenus Marl and Ferriby Chalk is proposed in the southern part of the Site at the same time as restoration commences in the northern part of the Site;
- Restoration of the southern part of the Site will commence when extraction is completed, to catch up with deposits made in the northern part of the Site;
- Thereafter, restoration will be undertaken in lifts to achieve the restoration profile minus the top soil and subsoil layer;
- Approximately 340,000m³ of topsoil and subsoil stripped from the Northern Quarry Area will be spread over the surface of the landform to a depth of 1m to effect final restoration in line with Drawing RS2;
- It is estimated that approximately 4,817,385m³ of material is required to restore the Site. Of this a minimum of 1,889,000m³ will be provided by site-derived materials, reducing the imported inert waste requirement to a maximum of 2,928,385m³; a reduction of 40%; and
- Assuming an average density of 2.0 t/m³, the mass of imported inert waste materials will be approximately 5,856,770 tonnes.

The Site will accept up to 750,000 tonnes per annum of inert material for deposit for recovery. Inert materials for the restoration would be sourced from the local area and will be imported to the site through existing quarry infrastructure.

3.0 What is being applied for?

The Environmental Permitting (England and Wales) Regulations 2016 (as amended) require operators of 'waste operations' comprising the recovery or disposal of waste to obtain an environmental permit. In the case of the Melton Ross Western Quarry Area Restoration, imported inert waste materials will be recovered in the restoration of the Site. As such, an environmental permit is required.

SBL are applying to obtain an environmental permit for the use of suitable imported inert waste materials as a replacement for non-waste construction material in the restoration of the Western Quarry Area. SBL are applying for a bespoke environmental permit as the Site is not eligible for a standard rules environmental permit.

Further to pre-application discussions with the EA, it is proposed that the environmental permit for SBL's lime production activities (ref. EPR/BL88051Z) is varied to incorporate the restoration of the Western Quarry. This is because the environmental permit (ref. EPR/BL88051Z) incorporates a mining waste activity and it is proposed that mining waste deposits will continue in conjunction with the deposit of imported inert waste in the restoration of the Western Quarry.

3.1 Specified Waste Management Activities

The activities that will be carried out at the Site as defined under Annex II of the Waste Framework Directive can be summarised as follows:

- **R5:** Recycling/reclamation of other inorganic materials; and
- **R13:** Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).

4.0 Application Contents

To support this environmental permit variation application, the following documentation is submitted in addition to this Non-Technical Summary:

- Section 2 - Application Forms (Parts A, C2, C4 and F1) and supporting documentations;
- Section 3 – Drawings
- Section 4 - Environmental Site Setting and Design (ESSD);
- Section 5 - Environmental Risk Assessment (ERA);
- Section 6 - Hydrogeological Risk Assessment (HRA);
- Section 7 - Stability Risk Assessment (SRA);
- Section 8 - Waste Acceptance Procedure (WAP);
- Section 9 - Waste Recovery Plan (WRP); and
- Section 10 - Operating Techniques (OT).

4.1 Application Forms

Parts A, C2, C4 and F1 of the Environment Agency's application forms have been completed in support of the application and are enclosed as Section 2 of the application.

4.2 Drawings

Drawings are included in Section 3 of the application. The drawings are referenced throughout the application as follows:

- Drawing EP1 Site Location;
- Drawing EP2 Environmental Permit Boundary;
- Drawing EP3 Cross Sections;
- Drawing EP4 Illustrative Phasing;
- Drawing EP5 Environmental Site Setting;
- Drawing EP6 Cultural and Natural Heritage;

- Drawing MRLC1 Landform Comparison;
- Drawing RS1 Restoration Status;
- Drawing RS2 Proposals for Restoration of Western Quarry Area;
- Drawing RS6 Overall Restoration Masterplan;
- Drawing HRA1 Environmental Monitoring Plan;
- Drawing HRA2 Groundwater Contours (Welton Chalk);
- Drawing HRA3 Groundwater Contours (Ferryby Chalk); and
- Drawing HRA4 Conceptual Site Model.

4.3 Environmental Setting and Site Design

An ESSD report has been prepared in support of this environmental permit application. The ESSD defines the Site's conceptual model including the potential source, pathway and receptor linkages. It provides details on the Site's environmental setting, and the proposed design of the Site.

The ESSD report is enclosed as Section 4 of this application.

4.4 Environmental Risk Assessment

An ERA has been undertaken to assess accident and amenity risk from the following:

- Accidents;
- Odour;
- Noise;
- Dust;
- Run-off to water; and
- Pests, Litter & Mud.

The ERA identified the closest and most sensitive receptors to the site and concluded that potential hazards are of low significance, provided stated risk management measures are implemented on site.

The ERA is enclosed as Section 5 of this application.

4.5 Hydrogeological Risk Assessment

The HRA assesses the risks to the hydrogeological environment from the proposed restoration. The HRA has been completed in accordance with current EA guidance.

The HRA demonstrates that the proposed restoration of the quarry void using inert waste and site-derived materials will meet the requirements of the Environmental Permitting Regulations 2016; that is, Hazardous Substances will not be discharged to groundwater such that they are discernible. The discharge of Non-Hazardous Pollutants is also expected to be limited so as to prevent groundwater pollution, given the nature of the inert waste infill and site-derived materials.

Essential and technical precautions are proposed, including monitoring, to ensure that the Site complies with the requirements of the Environmental Permitting Regulations 2016.

Compliance of the Site with the Environmental Permitting Regulations 2016 will ensure that the requirements of the Water Framework Directive (2006/60/EC) are also met.

The HRA is enclosed as Section 6 of this application.

4.6 Stability Risk Assessment

A Stability Risk Assessment (SRA) has been undertaken to assess the stability of the basal and side slope subgrade, attenuation layer, waste mass and restoration slopes.

The assessment found all aspects to screen out of requiring further assessment or attain acceptable factors of safety following detailed assessment.

The SRA is enclosed as Section 7 of this application.

4.7 Waste Acceptance Procedure

The WAP describes how SBL will ensure that only suitable, inert waste will be accepted onto site. The WAP covers rules for incoming tipping vehicles, the inspection procedure and rejection procedure.

The WAP is enclosed as Section 8 of this application.

4.8 Waste Recovery Plan

A Waste Recovery Plan (WRP) has been prepared to demonstrate that the proposed restoration is a recovery activity, in accordance with the EA guidance. The WRP was submitted to the EA for assessment at the pre-application stage. The EA has confirmed that it agrees with SBL's assessment that the restoration of the quarry is a recovery activity. A copy of the letter from the EA is provided as Appendix A to this NTS.

The WRP is enclosed as Section 9 of this document.

4.9 Operating Techniques

The Site will be operated in accordance with a management system which will ensure that:

- The risks that the activities pose to the environment are identified;
- The measures that are required to minimise the risks are identified;
- The activities are managed in accordance with the management system;
- Performance against the management system is audited at regular intervals; and
- The environmental permit is complied with.

A summary of the management system and operating techniques is enclosed as Section 10 of this application.

5.0 Key Technical Standards and Control Measures

Key technical standards laid out in the following guidance will govern the design and operation of the quarry restoration:

- How you'll be regulated: environmental permits (January 2019);
- Risk assessments for your environmental permit (February 2020);
- Control and monitor emissions for your environmental permit (February 2020);
- Develop a management system: environmental permits (December 2019);
- Waste recovery plans and permits (October 2016);
- Waste acceptance procedures for waste recovery on land (October 2016); and

- Waste recovery engineering: create a construction quality plan (October 2016).

In brief, the restoration of the quarry will be managed through close control of the acceptance of waste, engineering of an attenuation layer and groundwater and surface water monitoring. The procedures which will be in place can be summarised as follows:

5.1 Waste Acceptance

Waste acceptance measures and controls on the delivery of imported restoration materials will limit the potential for an adverse impact of the activities off-site associated with the receipt of waste the site is not designed to receive. Measures that will be employed at the site include:

- The receipt of waste only from known sources;
- Checking waste upon arrival to confirm it is as described on the waste transfer note, and as previously authorised at the pre-acceptance stage; and
- The return to the producer or the quarantine and removal off site of waste that is not as described or as permitted at the facility.

5.2 Site Engineering

The site will be engineered to minimise risks to groundwater associated with the acceptance of a rogue load of waste. A minimum 1m thick basal and side wall attenuation layer will be formed from <22mm chalk scalplings; a mining waste material generated by the extraction and processing of chalk for lime manufacture by SBL.

All elements of the engineering work will be controlled and monitored by means of a comprehensive Construction Quality Assurance (CQA) programme to ensure the suitability of the design and confirm the as-constructed works against the engineering specification.

5.3 Environmental Monitoring

A network of groundwater and gas monitoring boreholes is in place around the perimeter of the site. These boreholes have been monitored prior to recovery operations and will continue to be monitored during the operational and post closure periods of the Site to ensure the activities do not impact the surrounding environment.

Daily monitoring will be undertaken in accordance with SBL's Management System for amenity issues such as noise and dust.

APPENDIX A

EA - RvD Pre-application advice letter.
Ref. EPR/HB3209FF/A001 dated 25th June 2019

National Permitting Service
Environment Agency
Horizon House
Deanery Road
Bristol
BS1 5AH

Our ref: EPR/HB3209FF/A001
Your ref: 416.00075.00104

Date: 25/06/2019

Dear Singleton Birch Limited

Environmental Permitting – Recovery or Disposal Operation

Pre-application Reference: EPR/ HB3209FF/A001

Proposed Operator: Singleton Birch Limited

Regulated facility: Melton Ross Quarry

Site Address : Barnetby, North Lincolnshire, DN38 6AE

As part of our pre-application discussions, you have submitted information to us that includes your assessment that the activity you wish to undertake at your site amounts to a recovery operation.

We have now fully considered your submission and we would like to advise you that:

We agree with your assessment that your activity is a recovery operation. This advice is based on the information you have provided in relation to waste types, amounts and nature of proposal including any proposed landform. If you change any of these between now and when you submit an application form, this advice may no longer apply. **Please also note that following submission of an application, additional assessment will take place (for example, further assessment of the proposed waste types based on the sensitivity of the site location) and therefore agreement that an operation is a recovery activity does not guarantee that a permit will be granted or a variation issued.**

For the sake of clarity, the following documents are considered to form the approved waste recovery plan;

- Waste Recovery Plan (June 2019)
Prepared for: Singleton Birch Limited. Client Ref:416.00075.00104
File Name 190612_416.00075.00104_Western_Quarry_WRP_v3_clean

If you have any questions please phone me or email NAME@environment-agency.gov.uk

Yours sincerely

Rachel Mills
Permitting Officer

APPENDIX B

Enhanced pre-application advice and correspondence.

Ref. EPR/HB3209FF/A001



Mr Greg Altria

Our Ref: EPR/HB3209FF/A001

SLR Consulting

Date: 16 April 2020

Dear Mr Altria

Pre-application advice - Enhanced service

I am pleased to provide you with your enhanced level of pre-application advice for Melton Ross Quarry Complex as requested.

As part of this service we have provided you with the following information:

Application reference number	EPR/HB3209FF/A001 though as you are varying the installation permit you will need to apply under the installation reference – EPR/BL8805IZ – This will be a normal variation.
Habitats screening	None undertaken
Documents attached	No documents attached
Application charge required	Bespoke fee 1.17.9 Deposit of waste for recovery £9,207 and 1.19.1 WRP Assessment Fee £1,231 - £10,438 (not needed if approved WRP covers this site and activity)
Forms required to be submitted	https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-a-about-you https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c2-varying-a-bespoke-permit https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-c4-varying-a-bespoke-waste-operation-permit https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-f1-opra-charges-declarations
Additional documents required	Waste Recovery Plan (ideally already approved) Appropriate copies of technical competence or written confirmation of being booked on an appropriate technical

	<p>competence course.</p> <p>Site plan (clearly showing an outlined permit boundary)</p> <p>Environment Management System summary https://www.gov.uk/guidance/develop-a-management-system-environmental-permits</p> <p>Non-technical summary of activities on site – Ideally this should briefly explain the impact on the site as a whole and any interaction between the DfR and existing activities.</p> <p>Site-specific risk assessment produced in line with our guidance or equivalent https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</p> <p>Site condition report (may be needed if areas of the site are not subject to the WRP) https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report</p> <p>Waste acceptance criteria and waste acceptance procedures https://www.gov.uk/guidance/waste-acceptance-procedures-for-waste-recovery-on-land</p> <p>Environmental Setting and Site Design https://www.gov.uk/government/publications/report-template-environmental-setting-and-site-design</p> <p>You may also need to provide additional reports outlined in Appendix 4 of the C4 application form depending on the details of the activity.</p>
Additional information	<p>As discussed in previous correspondence you have decided to apply to vary the current permit BL8805IZ to add the proposed DFR activity to the installation permit.</p> <p>To do this you will need to submit a normal variation application with the forms and additional documents as shown above.</p> <p>You will need to explain in the technical summary that you are varying the installation permit to add a waste activity and to quote the installation permit reference on the</p>

	<p>application forms.</p> <p>Regarding the waste recovery plan assessment I can see that this has already been submitted for this site so there is no need to submit this if the area is covered within the waste recovery plan approved under EPR/HB3209FF/A001.</p>
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What enhanced pre application covers

Further information on the enhanced pre-application service is detailed on section 2 of the [Environmental permitting charges guidance on GOV.UK](#).

Our current queues are large and we are taking longer than usual to allocate work for duly made checks. Please see the table below for current average queue times.

New standard rules	6-8 weeks
New Bespoke	10-12 weeks
Admin variation	4-6 weeks
Minor variation	10-12 weeks
Normal variation	8-10 weeks
Substantial variation	15-17 weeks
Transfer	6-8 weeks
Surrender	12-14 weeks
Medium Combustion Plant	10-12 weeks

Disclaimer

The advice given is based on the information you have provided, and does not constitute a formal response or decision of the Environment Agency with regard to future permit applications. Any views or opinions expressed are without prejudice to the Environment Agency’s formal consideration of any application. Please note that any application is subject to duly making and then full technical checks during determination, and additional information may be required based on your detailed submission and site specific requirements and the advice given is to address the specific pre-application request.

When you’re ready to submit your application please quote the above reference number.

Your completed application can be sent via email to psc@environment-agency.gov.uk.

Or by post to

Permitting Support Centre
 Quadrant 2
 99 Parkway Avenue
 Sheffield
 S9 4WF

A complete application must contain the following information below;

Declaration	Please ensure the declaration section is completed by each relevant person. For a limited company, this must be a director/company secretary as listed on Companies House.
Site Plan	Site plan must be clearly marked with the full site boundary
Payment	Please note your application will not be processed until we receive the full payment.

At this stage the pre-application advice is expected to cost up to £1550 plus VAT. An invoice will be sent separately at a later date.

We look forward to working with you on this project.

If you have any questions please call 03708 506 506.

Yours sincerely

Elisabeth Platts
Permitting Officer, National Permitting Service
Elisabeth.platts@environment-agency.gov.uk

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