



CRESTWOOD ENVIRONMENTAL LTD

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Ferns Aggregates Ltd.

Non-Technical Summary

Bespoke Environmental Permit Application for the Deposit of Inert Waste for Recovery

Wrotham Quarry, Trottiscliffe Road, Addington, Kent, ME19 5DL

Report Reference: CE-WQ-1643-RP03-NTS-Final

Report Date: 18 November 2021

Produced by Crestwood Environmental Ltd.

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VISUALISATION

Crestwood Report Reference: CE-WQ-1643-RP03-NTS-Final:

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Drawing No CE-WQ-1643-DW01

Environmental Permit Boundary

1:2,000 @A3



1 Introduction

1.1.1 Ferns Aggregates Ltd (**the Client**) seeks to carry out the approved scheme of works granted under Planning Permission (ref: TM/20/841) to import inert waste material for buttressing the northern, north-western and western slopes of Wrotham Quarry, Trottiscliffe Lane, Addington, Kent, ME19 5DL (**the Site**). The proposal will be in accordance with an approved landscaping restoration scheme to achieve the following objectives:

- Provide long-term stability to the western and northern aspects of the Site's slopes;
- Ensure the safeguarding of the adjacent reservoir to the west from landslides and contamination;
- Adhere to the requirements of the planning permission to provide a detailed restoration and aftercare scheme;
- Enhance biodiversity and improve the landscape and visual aspects of the area, and
- Provide an alternative inert waste facility in Kent that would allow a significant reduction in the distance that waste is transported.

1.1.2 The Site has been a long-established quarry extracting mineral comprising of sandstones with a high silica content for the use in an array of sectors. When the western area of the quarry was excavated by preceding owners, a slope, known as the Western Slope, reaching c.27m was left on the western edge.

1.1.3 Failure of sections of the slope resulted in the subsequent repair and the installation of geotechnical equipment to monitor downslope motion and stability. Annual monitoring reports have been produced indicating the need to buttress the slopes due to the detection of slope instability.

2 Proposed Scheme

2.1.1 The proposed buttressing and restoration scheme, approved by Kent County Council on 10 November 2020, includes the buttressing of the existing faces with indigenous wastes comprising of sands and clays pertaining to the Gault Formation, supplemented by strictly inert wastes deriving from construction and landscaping arising from projects in Kent. These will be supplemented by.

2.1.2 Based on cross-sections of the landform and landscape modelling, a Restoration Plan produced by QuarryDesign and DB Landscape Consultancy showed that to achieve the required contours with the least amount of material possible, a total of 190,900m³ (229,050 tonnes) of material is required to complete the restoration of which 38,200m³ (57,300 tonnes) will comprise of indigenous material.

2.1.3 Inert materials will be used to re-grade and stabilise the northern, north-western and western aspects of the Western Slope in accordance with the approved Restoration Plan which details the landscape and ecological objectives of the restoration project to ensure the restored landform will assimilate with the environmental setting in terms of enhancing habitats and visual aspects of the area.

2.1.4 The proposal will ensure that the adjacent reservoir to the west of the Site is safeguarded from potential landslides and possible contamination as well as ensuring the long-term stability of the quarry faces.

2.1.5 The planning permission requires the works to be carried out within 5 years from the date of commencement or by 21 July 2027, whichever is sooner.

2.1.6 Discharges and surface runoff from the Site are not directed to any surface waters and all work operations will be conducted above the groundwater levels to an extent that is considered remote. As such, no derogation of surface or groundwaters as a consequence of the scheme is likely.

2.1.7 A robust basal and sidewall liner will be installed at the Site which will conform to an attenuation rate of 1×10^{-7} m/sec at 1m thickness and will also serve as a barrier to abate against any surface or groundwater contamination.

2.1.8 A raised stocking area located within the quarry void is permitted for the storage of sand, soils and overburden under planning permission TM/14/4075. The planning permission for the proposed buttressing states that an enlarged stocking area can be used for the storage of materials associated with the scheme.

2.1.9 This Non-Technical Summary supports an application for a Bespoke Waste Recovery Permit for the Site so as to finalise in accordance with the proposed landscaping scheme. It should be read in conjunction with the Environmental Management System (EMS) (report reference: CE-WQ-1643-RP02-EMS-Final), the H1 Accidents and Amenities Risk Assessment (report reference: CE-WQ-1643-RP04-H1-Final), the Site Condition Report (report reference: CE-WQ-1643-RP01-SCR-Final), the Dust Management Plan (report reference: CE-WQ-1643-RP06-CC-Final) and the Waste Recovery Plan (report reference: CE-WQ-1643-RP05-WRP-Final) which collate to form



the application to permit a Waste Recovery Operation.

2.1.10 The proposed Environmental Permit boundary is shown on Drawing No. CE-WQ-1643-DW01.

3 Gas Monitoring

- 3.1.1 The installation of 4 No monitoring boreholes took place in April 2021 for the purposes of monitoring groundwater quality with a full suite of results available in April 2022. Once the restoration profile is achieved, the boreholes will be utilised for gas monitoring if required and monitored every month for methane, carbon dioxide, oxygen and atmospheric pressure.
- 3.1.2 If required, the gas monitoring is not anticipated to record elevated levels of methane or carbon dioxide as waste types will be strictly inert. It will purely be an additional quality control measure to ensure only suitably inert materials are deposited.
- 3.1.3 It is important to note that due to the presence of landfills in the vicinity that have resulted in gas migration, should post infill gas monitoring be a requirement, pre-development gas monitoring will be conducted so as to ensure gas detection is not incorrectly attributed to the buttressing work.
- 3.1.4 These boreholes are fitted with a gas tight removable cap and will be protected by a steel, lockable cover. The boreholes have been installed by a suitably experienced and qualified contractor/drilling company.
- 3.1.5 Gas monitoring boreholes will be inspected during monitoring for any indications of damage. If any damage has been identified repairs and replacements will be carried out as soon as reasonably possible in accordance with the Management System.
- 3.1.6 A copy of the gas monitoring results will be kept by the Operator and will be made available for inspection to authorised Environment Agency officers.

4 Waste Types

- 4.1.1 Only strictly inert waste materials will be accepted at the Site.
- 4.1.2 Material will originate only from projects undertaken in the Kent area and wastes that require laboratory testing will only be accepted at the Site where a copy of the analysis is submitted to the Operator for inspection to ensure that only suitably authorised materials are accepted.
- 4.1.3 Waste delivered will also be required to comply with the Duty of Care, as required by the Waste (England and Wales) Regulations 2011. Written information will be required about the specific details of the type of process producing the waste (source), the type of waste and the quantity of waste. An assessment will be made to ensure that the waste is suitable for deposit at the Site and use in the works.
- 4.1.4 Only wastes which have been subject to the above checks will be accepted at the Site.
- 4.1.5 A visual inspection of the contents of waste loads will be made by Site staff on deposit of the waste load.
- 4.1.6 Any discrepancies found, i.e. suspect, non-conforming and/or random loads, as a result of the checks detailed above will result in the vehicle being detained whilst some, or all, of the following supplementary management decisions are taken:
- Referral to the Site Manager;
 - Referral to the waste producer to confirm the nature of the waste load;
 - Referral to the Environment Agency;
 - Redirection of delivery vehicle off site, to a suitably authorised facility; and
 - If the waste has been discharged, removal of the waste to a secure quarantine area, prior to off-site removal either to the waste producer or suitably authorised facility.
- 4.1.7 Any waste materials dispatched off site to an authorised facility will be in accordance with the Duty of Care.
- 4.1.8 Due to the inert nature of the waste material accepted at the Site, no leachate or contaminated water will be produced as a result of the activity and therefore it is not anticipated that there will be any short term or long term changes in water quality over time.

5 Waste Quantities

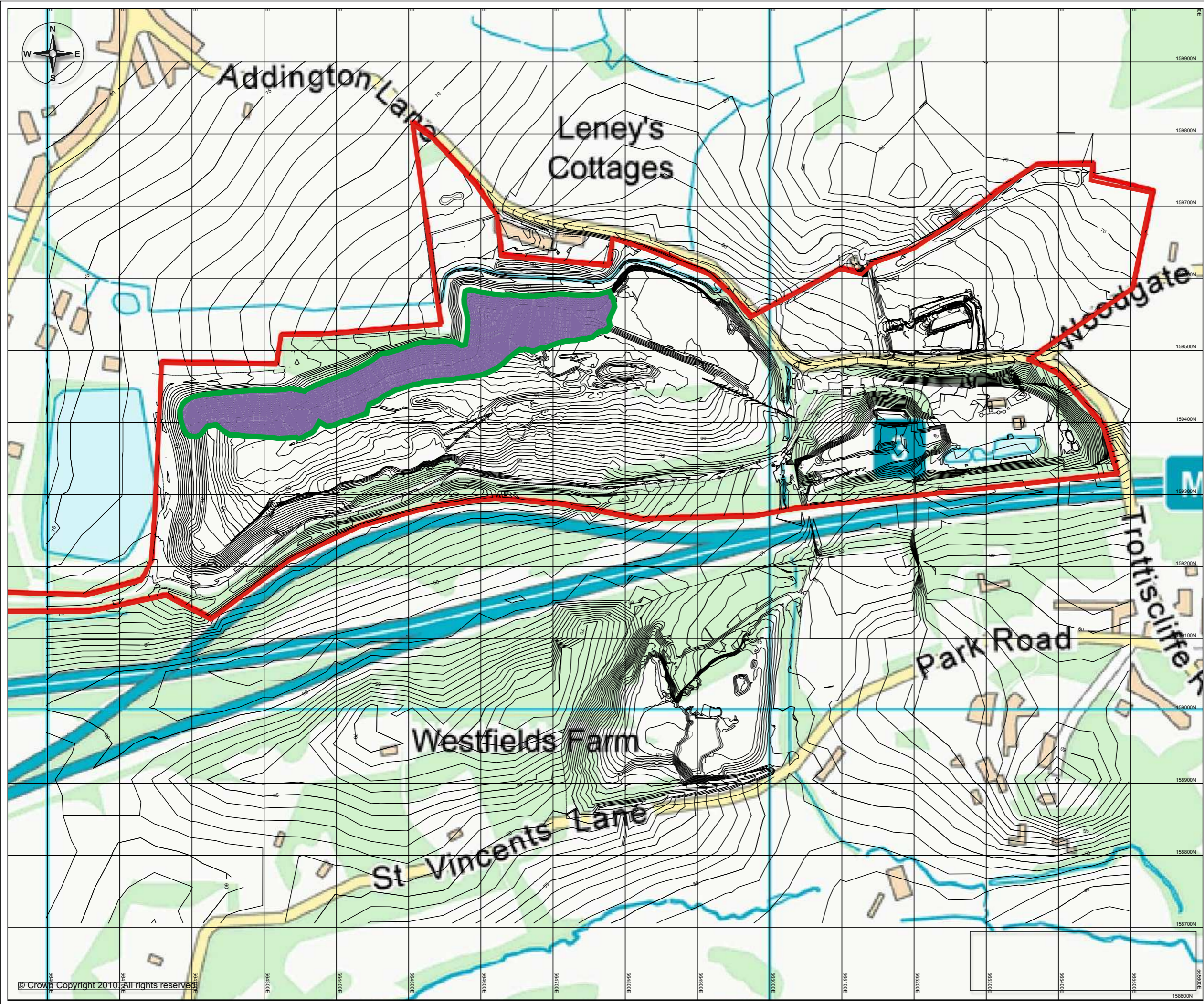
- 5.1.1 The amount of inert material required to safeguard the reservoir, ensure the long-term stability of the faces and restore/regrade the Site has been calculated based on current site levels and the restoration contours detailed in the Restoration Plan produced by DB Landscape Consultancy on behalf of the client.



- 5.1.2 The work shows that, at a minimum, approximately 190,900m³ of inert wastes will be required. This equates to about 229,050 tonnes of inert materials at a conversion rate of 1.5 tonnes/m³. The buttressing design has been assessed as part of the Stability Risk Assessment Report and determined to offer the appropriate stability.

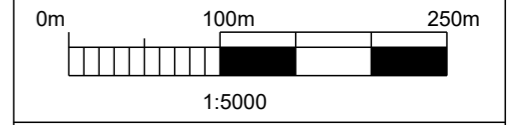
6 Ferns Aggregates Ltd

- 6.1.1 Ferns Aggregates Ltd recognises its need to operate the business in a manner which reflects good environmental management and is aware of the need to protect the local and global environment. The Company operates an Environmental Management System (EMS). A Management System is in force for the Site to ensure operations are undertaken in accordance with all relevant environmental legislation and best environmental practice.
- 6.1.2 The Site will be managed by WAMITAB (Waste Management Industry Training and Advisory Board) accredited staff to ensure compliance with all regulatory requirements and the conditions of the Environmental Permit.
- 6.1.3 The Site will be subject to independent inspections by the Environment Agency as part of the Environmental Permitting process.



Legend:

- Wrotham Quarry Boundary
- Site boundary



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Client:
Quarryplan (GB) Ltd

Site:
Wrotham Quarry

Drawing Title:
Site and OS Base Overlay

Date: 19 Nov 2021	Scale: 1:5000 @ A3	Paper Size: A3 (420x297 mm)
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Drawn By: IS/ AF	Checked By: SB	Status: Final	Final Revision: -
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CAD Ref: CE-WQ1643 - DW01 - FINAL - v1.0	Drawing No. / Client Ref: Figure 1
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