

ELTON 2 RESTORATION ENVIRONMENTAL PERMIT APPLICATION

Non Technical Summary

Prepared for: Ingrebourne Valley Limited

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1.0 Introduction

Ingrebourne Valley Limited (IV) has instructed SLR Consulting Limited (SLR) to prepare a bespoke Environmental Permit application to authorise the deposit of waste as a recovery operation for the restoration of Elton 2 (the Site), located near Warmington, Northants.

Environment Agency (EA) application forms require the submission of a Non-Technical Summary (NTS) which includes an explanation of what is being applied for, a summary of the regulated facility and a summary of the key technical standards and control measures. This report comprises the NTS for the application.

In addition to this NTS, the application includes the following documents:

- Application Forms Part A, Part B2, Part B4 and Part F1;
- Drawings;
- Approved Waste Recovery Plan (WRP);
- Environmental Site Setting and Design (ESSD);
- Environmental Risk Assessment (ERA);
- Hydrogeological Risk Assessment (HRA);
- Site Condition Report (SCR);
- Dust Management Plan (DMP);
- Stability Risk Assessment (SRA);
- Operating Techniques (OT); and
- Noise Assessment.

1.1 Site Location and Setting

The Site lies to the north of the A605 and the village of Warmington, approximately 17 miles to the south-west of Peterborough.

A previous development, Elton 1, lies adjacent to the east of the Site which was restored to open water under a waste recovery permit. Elton 2 will continue to use the existing plant and processing area to the east of Elton 1 for mineral washing, silt settlement lagoons and acceptance of inert waste for restoration. Separate permit applications have been submitted for the relevant waste and mining waste permit operations in the processing area. A haul road and bailey bridge have been constructed within the Site to transport extracted mineral and restoration materials to the separately permitted processing area.

The area of the Site which will be infilled is surrounded on all sides by the River Nene and adjoining water courses and groundwater level is approximately 0.5 – 1m below the surface.

The nearest residential receptors are located 165m to the south and beyond is the A605 road corridor and the Village of Warmington. Water Mill House, located approximately 200m to the south of the Site is the nearest workplace receptor. The Site is crossed by the 'Nene Way' footpath and several other rights of way are located adjacent to the site and processing area.

The site location is shown in Drawing 01 and the Environmental Setting of the site is illustrated on Drawing 03.

A summary of the immediate surrounding land use is provided in Table 1 below.

Table 1 Immediate Surrounding Land Uses

Boundary	Description
North	Adjacent to the north of the site is the River Nene with agricultural land and a public footpath beyond.
East	Adjacent to the east of the site is the River Nene and Elton 1 reservoir, a previous development. Beyond this lies the Elton 2 processing area.
South	Adjacent to the south of the site is the A605 and the village of Warmington lies beyond. There are several public footpaths to the south of the site.
West	Adjacent to the west of the site is the River Nene and associated surface water features. Beyond is predominantly agricultural land.

1.2 Planning status

A planning application, reference 19/00033/MINFUL was submitted to Northamptonshire County Council in April 2019 for the 'Phased mineral extraction, construction of a bailey bridge to cross a branch of the River Nene, importation of reclamation material including ancillary activities, with restoration to agricultural pasture and wet woodland'. Planning consent was granted on 31st March 2021 and the Section 106 Notice agreed on 26th March 2021 is enclosed as Appendix 01 to the Waste Recovery Plan in Section 4 of this application.

The planning permission requires that IV restore the Site to original levels post extraction of mineral, for use as agricultural pastureland and woodland.

1.3 Approved Waste Recovery Plan

A Waste Recovery Plan (WRP) was submitted to the Environment Agency (EA) and approved on 17th May 2021. The approved WRP is provided in Section 4 of this application.

1.4 Pre-application Advice

Enhanced pre-application advice was received from the EA at a meeting held on 30th May 2019.

The pre-application notes from the meeting were received from the EA on 2nd October 2019 and are enclosed in Appendix 01 of this NTS.

1.5 Application Fees

The application fees for the proposed activities are a total of £10,448 consisting of:

- 1.17.9 Deposit of Waste for Recovery £9,207; and
- 1.19.5 Emissions management plan £1,241.

2.0 Proposed Development

The Site is approximately 20 hectares in size and consists mainly of agricultural pasture currently used for livestock grazing. IV propose to extract ca. 850 – 900,000 tonnes of sand and gravel from Elton 2 quarry and

restore the site using in-situ materials and approximately 550,000m³ imported inert waste¹. Mineral will be extracted down to the clay which underlies the sand and gravel seam. The underlying clay forms the natural geological barrier. During extraction of each phase, the clayey overburden will be used to construct an artificial side wall barrier which will be placed to key into the basal clay. The Site will be worked in three phases and the sequence of operations is summarised below:

- A haul road will be constructed to connect the Site to the process area and a bailey bridge will be constructed over the southern arm of the river Nene to allow access to the mineral extraction and restoration area of the site;
- Hydraulic excavators will be used to strip topsoil and subsoil, which will be transported by articulated dump trucks (ADT) for storage in the separately permitted processing area;
- The working of the Site will proceed in 3 phases as illustrated in Drawing 04;
- Dewatering of the Site is not practical given the proximity to the River Nene and high groundwater level. Gravel will be extracted 'wet' from each area and be transported to the processing area for washing;
- Mineral will be extracted down to the clay which underlies the sand and gravel seam. The underlying clay forms a natural geological barrier;
- During extraction of each phase, the clayey overburden will be used to construct an artificial side-wall attenuation barrier against the basal clay;
- Imported inert waste will be transported from the separately permitted processing area and placed directly into water within the void;
- Once the imported restoration materials have been placed to the required level, site-derived subsoil and topsoil will be replaced. Subsoil and topsoil will be transported by ADT from stockpiles in the processing area and a low ground pressure dozer will be used to spread the material loosely and avoid any compaction. The finished topsoil thickness will depend on the original amount removed but is expected to be 0.2m on average.

2.1 Specified Waste Management Activities

The application is for deposit of waste for recovery. The waste management activities that will be carried out at the Site, as specified in Annex I of the Waste Framework Directive, are:

- R5: Recycling / reclamation of inorganic compounds – use of waste for the purpose of restoration of land.

3.0 Key Technical Standards and Control Measures

3.1 Technical Standards

Key technical standards laid out in the following documents will govern the operation of the Site:

- The Environmental Permitting (England and Wales) Regulations 2016;
- Waste Recovery Plans and Permits; gov.uk, 18th October 2016;

¹ Note that the original volume stated in the WRP was 500,000m³, however, more recent calculations carried out to establish the volume of overburden available for restoration indicate that the remaining infill required is likely to be up to 550,000m³.

- Risk Assessments for your environmental permit; gov.uk, updated 10 December 2020;
- Risk Assessments for specific activities: environmental permits; gov.uk, published 2 February 2016; and
- Develop a management system: environmental permits; gov.uk, updated 30 November 2020.

The key technical standards and control measures that are necessary to ensure that the Site does not give rise to significant environmental impact have been determined through the risk assessment process and are summarised below:

- strict waste acceptance procedures will be implemented to prevent the acceptance of unauthorised waste;
- noise impacts will be minimised by speed limits and traffic calming, maintenance of road surfaces, selection and maintenance of plant to minimise noise and daily auditory inspections;
- operations will only be undertaken during the hours authorised by the planning consent;
- measures will be implemented to control fugitive emissions of dust through the implementation of the site-specific Dust Management Plan;
- speed limits of 10mph or less will be implemented;
- wet cleaning methods or mechanical road sweepers will be used on all roads during periods when blown dust arisings are visible;
- a comprehensive programme of operational monitoring will be implemented to include noise, fugitive emissions, mud and litter;
- the proposed waste recovery operation will be engineered with a slow permeability sidewall attenuation layer placed against the natural basal clay layer; and
- monitoring of groundwater and surface water will be undertaken throughout the operational and post closure period.

3.2 Management System & Operating Techniques

The Site will be managed and operated in accordance with IV's Environmental Management System (EMS) which is accredited to ISO14001.

IV's management system 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 EP is complied with.

A summary of the management system and operating techniques is enclosed as Section 11 of this application.

3.3 Waste Acceptance

The Site will only accept inert waste. A full list of the proposed waste types for disposal and recovery (restoration and engineering) including the European Waste Catalogue (EWC) codes can be found in the ESSD in section 5 of the application.

Strict waste acceptance procedures will be in place to ensure that non inert waste is not accepted at the Site. These procedures include the following:

- Pre-acceptance checks prior to accepting waste at the adjacent, separately permitted processing and waste storage area, including source checking of the waste characterisation data provided by the waste producer;
- Waste acceptance checks upon delivery to the adjacent, separately permitted processing and waste storage area, to ensure that the wastes are as described, and as permitted within the Environmental Permit; and
- Actions to be taken if waste not authorised for acceptance is delivered to the separately permitted processing and waste storage area.

3.4 Environmental Risk Assessment

An Environmental Risk Assessment (ERA) has been undertaken to assess the potential impacts from the proposed operations and is enclosed in Section 6 of this application. The ERA lists the potential receptors that may be affected by the operations, details the source – pathway – receptor linkages and summarises the measures in place to mitigate risks. The ERA concludes that with the implementation of risk management measures, potential impacts from the proposed development are not likely to be significant.

A Dust Management Plan has been prepared for the proposed Site which is enclosed as Section 9 of the application. A Noise Assessment has also been carried out and is enclosed in Section 12 of the application.

3.5 Environmental Setting & Site Design

An ESSD report has been prepared in support of this application and is enclosed in Section 5 of this 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 Site will not be dewatered and a low permeability sidewall attenuation barrier using in-situ material will be placed into each phase before infilling with inert waste. The base of the extraction void below the mineral deposits is located on natural clay which will form a low permeability basal attenuation layer.

3.6 Stability Risk Assessment

A Stability Risk Assessment has been prepared in support of the application and is enclosed as Section 10 of this application. This SRA incorporates analyses including side slope subgrade and attenuation barrier stability and demonstrates that the proposed temporary waste slopes maintain an adequate factor of safety in all modelled conditions and that the factor of safety is acceptable under both short (peak) and long term conditions.

3.7 Hydrogeological Risk Assessment

The modelling undertaken in the HRA has demonstrated that the proposed restoration will not result in the release of Hazardous Substances, and the release of Non-Hazardous Pollutants is sufficiently limited as to avoid pollution of the aquifer. This confirms that the proposed restoration of Elton 2 would remain compliant with the Environmental Permitting Regulations 2016 subject to technical precautions including site specific waste acceptance criteria, engineered barriers and attenuation layers, and the monitoring of groundwater and surface water.

The Hydrogeological Risk Assessment is enclosed as Section 7 of this application.

3.8 Site Condition Report

A site condition report (SCR) has been completed for the area of the Site which is not subject to permanent deposit of waste for recovery. The report has considered the existing status of the permitted area and describes the measures that will be used to ensure that there is no deterioration of the land throughout the life of the permit. The SCR is enclosed as Section 8 of the application.

3.9 Environmental Monitoring

A network of groundwater monitoring boreholes at the perimeter of the Site will be monitored throughout the operational and post closure period to ensure that the site does not impact the surrounding environment.

Daily monitoring will also be undertaken in accordance with operating procedures for amenity issues such as noise and dust in accordance with site management plans.

3.10 Site Closure

The IV accredited Environmental Management System (EMS) will continue to apply to the management of the Elton 2 Site following site closure.

The objective of the EMS procedures during the post closure period will be to ensure that when the Site ceases to operate, it will be closed in accordance with regulatory guidance, that the approved restoration scheme will be implemented and that the site maintenance and environmental monitoring will be continued until no longer necessary.

4.0 Conclusion

The overall conclusion from the studies undertaken as part of the application is that there is unlikely to be a significant environmental impact as a result of the proposed waste recovery operations at the Elton 2 Site.

IV is fully committed to ensuring the highest standards are met and will undertake its activities in a manner consistent with best industrial practices and in accordance with the company's environmental policy and management system.

It is therefore considered that the Environmental Permit should be issued as detailed in the application.

APPENDIX A

Enhanced Pre-application Advice



Maggie Dutton

Elton 2 Quarry
Warmington
Peterborough
PE8 6SN

Our Ref: EA/EPR/HB3206MC/A001

Date: 02 October 2019

Dear Madam

Pre application checks – Basic service

I am pleased to provide you with your basic level of pre application advice for Ingrebourne Valley Limited as requested.

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

Application Reference(s) number(s)	EA/EPR/HB3206MC/A001
Habitats screening	No screening undertaken due to application type
Baseline fee required	<p>The charge for a deposit for recovery activity will be comprised of the following:</p> <ul style="list-style-type: none">- Waste recovery plan or variation or revision of a waste recovery plan charge of £1,231.00 (reference 1.19.1);- Desposit of waste for recovery charge of £9,207.00 (reference 1.17.9). <p>The charge for the proposed treatment of non-hazardous waste (subject to there being no appropriate standard rules for this activity):</p> <ul style="list-style-type: none">- Physical treatment of non-hazardous waste charge of £7,930.00 (reference 1.16.13). <p>The charge for a Mining Waste Facility will depend on the facility you apply for but the list of all charges can be found in table 1.11 of our charging scheme. As an example:</p>

	<p>- An Inert mining waste operation would be charge at £2,767.00 (reference 1.11.2).</p> <p>Our full charging scheme can be found via the following link: https://www.gov.uk/government/publications/environmental-permitting-charging-scheme-2019.</p>
Forms required to be submitted	<p>You will need to submit the following forms:</p> <ul style="list-style-type: none"> - A1 - B2 - B4 (waste operations) - B5 (mining waste operation) - B6 (if a water discharge regulated facility is required) - F1 <p>These forms can be found via the following link: https://www.gov.uk/government/collections/environmental-permit-application-forms-for-a-new-bespoke-permit.</p>
Additional documents required	<p>You will need to submit the following information with all of your applications:</p> <ul style="list-style-type: none"> - summary of your Environmental Management system; - non-technical summer of the activity; - site plan; - a site specific risk assessment; - a site condition report. <p>You will need to submit the following for your Deposit for Recovery application:</p> <ul style="list-style-type: none"> - evidence of technical competency; - Environmental Setting and Site Design (ESSD) report; - a Waste Recovery Plan <p>You will need to submit the following information with your mining waste operation application:</p> <ul style="list-style-type: none"> - Waste Management Plan; - Estimated expenditure plan (Category A facility only); - External Emergency Plan (Category A facility only).
Additional information	<p>Pre-application meeting: permit applications for Ingrebourne Valley Limited Elton 2 Restoration (completed 30/05/2019 between 13:00 and 15:00).</p> <p>Attendees: Environment Agency (hereafter EA):</p>

- Guy Price (GP)
- Roland Evans (RE)
- Greg Williams (GW)
- Kim Maynard (KM)

Ingrebourne Valley (hereafter IV):

- James Sutton (JS)
- Maria Anton-Garcia (M A-G)

SLR:

- Geoff Keenan (GK)
- Maggie Dutton (MD)

What are the key priorities for this type of facility:

Advice sought from EA

1. Confirmation of the planned approach to demonstrate that the proposal is recovery, prior to submission of a Waste Recovery Plan to EA for formal approval;
2. Whether the planned approach to demonstrate that the proposal is recovery is acceptable (subject to submission of a Waste Recovery Plan to EA for formal approval);
3. Acceptability of the engineering approach described:
 - a) Level of detail required for the HRA; and
 - b) advice on methods accepted by EA to demonstrate stability/integrity of the AGB
4. Application documents and supporting information required for the waste storage and mining waste activities in the processing area;
5. Application fees and merits of consolidation in one permit or keeping separate.

Overview:

MD / JS provided an outline of the proposals which include:

- A waste recovery application for the restoration of the Elton 2 site post extraction of mineral;
- Mining waste settlement lagoons and inert waste crushing plan to be located in the process area; and
- An abstraction licence for mineral washing.

Recovery Permit:

There was a group discussion of evidence required to demonstrate recovery by submission of a waste recovery plan. We confirmed that both planning permission and any S106 agreement could be contributory evidence to a specific obligation that would require that the work would go ahead with non-waste if waste was not available also highlighting the evidence requirements for specific obligations

include in our online guidance.

We confirmed it would be preferable for all evidence to be submitted with the waste recovery plan. GP said there is no planned change to DfR guidance so to follow that on gov.uk. Based on the approach being taken here – that there is a specific obligation to complete the work - a waste recovery plan with need to provide evidence of the obligation, plans / cross sections, suitability of waste.

For example, if the scheme were to rely on planning permission to demonstrate a specific obligation then not including evidence of this with a waste recovery plan submission may limit our response to “not yet satisfied to agree recovery” with advisory comments confirming what further evidence would need to be provided; in this example the approved planning permission.

When discussing the final restoration layer IV confirmed that the growing medium would comprise in-situ materials rather than waste.

GP confirmed you can add his name when submitting the plan so the permitting officer assessing the plan can discuss the application.

Site setting and design:

JS discussed hydrogeological setting, main point was that upstream / downstream groundwater boreholes will be difficult to determine due to surrounding water bodies. Upstream / downstream may change depending on water levels surrounding site. Six groundwater monitoring boreholes have been installed, which is above the minimum requirement of one up two down.

However, we noted that given the size of the site (borehole spacings several hundred metres) and sensitivity, there may be merit to installing additional boreholes to increase coverage. This will be considered by the applicant prior to submission of the application.

Discussed issue of tipping into water and need for a geological barrier.

We can authorise the placement of waste into water as a recovery activity where the applicant can show an equivalent level of protection to groundwater and surface water receptors, as set out in the technical guidance.

Consultant stressed project is recovery and therefore not covered by landfill directive so no regulatory requirement for a barrier however acknowledged that providing one would offer more protection.

Base of site has a natural clay layer and will be a suitable barrier.

Possible to construct sidewalls from clay or other suitable material to prevent lateral migration of pollutants into surrounding watercourses.

EA stressed the need for a hydrogeological risk assessment the findings of which would help determine the need for side barriers or not. The HRA should specify whether or not any attenuating layer is required, and the waste acceptance criteria that would be required in the context of the environmental setting. Waste acceptance criteria would also need to ensure only subsoils would be accepted at the site under 17 05 04 and 20 02 02.

More stringent waste acceptance criteria may be required where materials are being tipped directly into water.

Some discussion on how to CQA the barrier. This needs to be agreed with the area team, but the details will depend on the quality of the materials used to construct the sidewall liner, and whether or not it is constructed by tipping into water.

There was a suggestion of using clay from the base of the quarry to form a sidewall barrier though this may not be possible to extract due to the groundwater present in the void space. However a combination of dewatering and over-digging the clay materials at the base to use as the sidewall should at least be considered. The alluvial materials at the surface may not have the quality of the natural clay at the base.

Noise:

Noise was briefly discussed, nearest sensitive receptor 500 – 700m from site.

Noise not thought to be an issue though permit will have standard condition to require a noise survey should problems arise.

A noise survey has been conducted for the planning application and this could be used to support the assessment that no Noise Impact Assessment is required.

Permitting approach:

Confirmed that timing for inert recovery operations could be up 6 – 12 months.

Discussion of pros / cons to include all activities in one permit.

Given that quarrying will start much sooner than restoration it may be sensible to apply for the water abstraction and mining waste first and then apply for the recovery permit at a later date.

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 a full technical check during duly making and determination, and additional information may be required based on your detailed submission and site specific requirements.

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

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

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.

If you decide you would prefer our enhanced service (this service requires a fee) please visit GOV.UK where you can complete an online referral form.

We look forward to working with you on this project.

If you have any questions please find my contact details below.

Yours sincerely,
Guy Price
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