MANTON QUARRY RESTORATION

Waste Recovery Plan

Prepared for: Brianplant (Humberside) Limited

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1.0 Introduction

1.1 Background

Brianplant (Humberside) Limited (Brianplant) has instructed SLR Consulting Limited (SLR) to prepare a Waste Recovery Plan (WRP) in support of an environmental permit application for the restoration of Manton Quarry (the site). The site is situated in the village of Manton, with the postcode DN21 4JT.

This WRP has been drafted in accordance with the specific requirements laid down in the Environment Agency (EA) guidance on Waste Recovery Plans and Permits[1] (EA Waste Recovery Guidance). The WRP seeks agreement from the EA that the proposed activity satisfies all the principles of recovery.

This WRP is being submitted for approval ahead of the subsequent environmental permit application for the Manton Quarry Restoration. The area to be restored through waste recovery is identified on Drawing 001.

1.2 Site Location and Setting

The site is situated approximately 510m southeast of the village of Manton within a predominantly agricultural area. Kirton in Lindsey is located approximately 3.5km south of the site and Scunthorpe is approximately 9km to the northwest. The site is centred on National Grid Reference SE 93976 02420, with the postcode DN21 4JT. The site location and site boundary are shown on Drawings 0726-1-8 and 001 respectively.

The site forms part of the wider Manton Quarry which covers an area of approximately 51 hectares. Quarrying operations have taken place throughout the wider site with the only remaining area to be quarried situated in the north eastern section. Only the eastern area of Manton Quarry is to be restored through waste recovery. The site boundary and therefore area to be restored through waste recovery is shown on Drawing 001.

The entire site is designated as a geological SSSI called Manton Stone Quarry SSSI. It is considered to be a key exposure of the more northerly development of the Lincolnshire Limestone. Four other SSSIs are located within close proximity. These include Cleatham Quarry which lies approximately 640m south, Cliff Farm Pit which is situated approximately 1170m south, Manton & Twigmoor which is located approximately 1290m north, and Messingham Sand Quarry which lies approximately 2490m northwest.

The majority of the land surrounding the site is occupied by open/agricultural ground with a few quarries located within the surrounding area including Kirton Quarry to the southeast, approximately 50m from the eastern site boundary.

Access to the site is provided by Manton Lane which runs approximately 130m from the site's northern boundary. This in turn provides access to the B1398 which lies approximately 30m from the site's eastern boundary.

The closest residential properties are Manton Place and Newlands Farm which lie approximately 350m west and 470m east respectively. Cleatham Hall is situated approximately 680m southwest of the site. Further residential properties are located in Manton Village, approximately 510m to the northwest. A covered reservoir is situated approximately 670m to the south. The environmental setting of the site is illustrated in Drawing 003.

The site is part of a wider restoration scheme which includes creating areas of low-level calcareous grassland, scrub, retained geological faces and a water body as shown on Drawing 0726-1-13.

The site location is shown in Drawing 0726-1-8, the permit boundary in Drawing 001 and the Environmental Setting of the site is illustrated on Drawing 003.

[1] Guidance: Waste recovery plans and permits; gov.uk; published 18th October 2016.

1.3 Historical Overview and Planning History of the Site

Planning permission was originally granted by Glanford and Brigg Rural District Council for limestone quarrying at Manton in 1971 (Ref: GB/99/71) and covers an area which extends to 51 hectares. This permission required the site to be restored "to a condition suitable for agricultural use". This requirement has been carried through to the most recent planning permission (MIN/2016/556) from 2016. However, due to part of the wider site being designated as a geological SSSI, only the area illustrated on Drawing 001 must be restored to agricultural land in accordance with the approved restoration concept illustrated on Drawing 0726-1-13. Further details are explained in Section 2.1 below. The initial review of the original consent (Ref: GB/99/71) was undertaken in 1997 (Ref: 1997/1527).

In 2001 enquiries were made regarding the recycling of construction, demolition and excavation wastes on site to create soil products. North Lincolnshire Council confirmed that no planning application was required for the continuation of recycling activities.

The first periodic review of the permission was due in 2013 however North Lincolnshire Council failed to serve notice. Therefore, an extension was granted until April 2016 to prepare an application for the periodic review.

Across significant areas of the quarry all economic mineral has been worked out, with the partial restoration of the northern and north western area of the site aiming to provide a range of calcareous grassland, exposed quarry faces and other habitats. Much of the south eastern area of the quarry has also been backfilled using materials from the ongoing quarrying operations but its' final restoration to agriculture remains incomplete.

The site's most recent planning permission from 2016 (Ref: MIN/2016/556) supersedes previous planning permissions.

Table 1 – Recent Planning History

Application Reference No.	Description of Proposed Development	Date	Outcome
MIN/2016/556	Application for the determination of conditions to which a mining site is to be subject. First periodic review of mineral planning permission at Manton Quarry (original planning reference GB/99/71, previously subject to initial review under reference number 1997/1527).	9 August 2016	Granted with Conditions

2.0 Waste Recovery Criteria

The EA guidance describes three main ways of providing evidence that waste is being used in place of non-waste, namely:

- Obligations to do work;
- Financial gain; or
- Availability of funding to use non-waste.

Only one of these is required to demonstrate that the activity is recovery. In the case of Manton Quarry, the planning consent requires restoration to be completed in accordance with the restoration scheme, to create an area of land suitable for agricultural use in keeping with the surrounding landscape. Therefore, there is a clear obligation to do the work. This is described in further detail below.

2.1 Obligations to do work

As specified in the EA guidance, evidence of an obligation to do the work could be that a regulator has imposed a requirement, such as planning conditions, to complete work in accordance with an approved plan.

A condition of the original planning permission, granted in 1971, for limestone quarrying at the site (Ref: GB/99/71) required the site to be restored *"to a condition suitable for agricultural use"* has been carried through to the most recent planning permission (MIN/2016/556). However, due to part of the wider site being designated as a geological SSSI, only the area illustrated on Drawing 001 can be restored to agricultural land. The Environmental Statement states that 'whilst restoring much of the site to original land levels and returning it to agricultural uses at the earliest opportunity, the overall proposals will also protect and enhance the geological SSSI'.

Information provided by Natural England explains that the Manton Stone Quarry SSSI was designated in 1986, after the original planning permission was issued. The whole quarry was designated to ensure that the interest features would still fall within the legal protection that the SSSI status provides as it was expected, at the time of designation, that the interest features would 'move' across the site due to the extraction of the rock.

The restoration scheme has therefore been redesigned to protect the open rock face of the quarry whilst still restoring an area to its original use, agricultural land.

The first periodic review of the planning permission (Ref: MIN/2016/556) approved 9th August 2016 laid out the restoration concept for the site.

The approved restoration concept is presented in Drawing 0726-1-13 and the restoration cross sections are presented in Drawing 002.

Conditions 1, 3, 28, 29 and 30 of the first periodic review of the planning permission (Ref: MIN/2016/556) state the restoration requirements on site.

Condition 1 states:

"*The winning and working of minerals shall cease and the land shall be restored in accordance with a scheme submitted under the provisions of Conditions 28, 29 and 30 not later than 24 February 2042".*

Condition 3 states:

"Unless otherwise required by conditions attached to this planning permission, the development hereby permitted shall be carried out strictly in accordance with the details contained in the application dated 21 April 2016, including the Environmental Statement and the accompanying drawings."

Condition 28 states:

"*Within five years of the cessation of working in Phase 2, the area of proposed agricultural land, as shown on drawing number 0726-1-13, shall be restored in line with details contained within the Environmental Statement dated 21 April 2016 and shown on drawing number 0726-1-13"*.

Condition 29 states:

"*Within five years of the commencement of the development in Phase 3, written approval of the Mineral Planning Authority shall be secured for full details of the final scheme of restoration and aftercare based on drawing number 0726-1-13 and the Environmental Statement dated 21 April 2016. The details shall provide for:*

- *The provision of areas of calcareous limestone grassland, including method of establishment, the retention of representative geological faces and the creation of an area of wetland, to be based on the overall concept as shown on drawing number 0726-1-13;*
- *Details of any planting, seeding, cultivating, fertilising, watering, draining, fencing and other maintenance; and*
- *Aftercare of the land and details of any faces to be retained to reflect the site's geological interest.*

The details shall thereafter be implemented as approved with each restoration phase maintained for an aftercare period of 5 years following the completion of restoration within that phase. The development shall be carried out in accordance with the approved scheme unless otherwise agreed in writing by the Mineral Planning Authority."

Condition 30 states:

"All plant, machinery, buildings and equipment erected or stationed at the site shall be removed within 12 months of the cessation of mineral working and the land restored and maintained in accordance with the approved restoration scheme and aftercare requirements".

The Environmental Statement states that:

"Following the completion of landforming works the area will be re-soiled with up to 2m of soil products produced from the recycling operations".

For these reasons, Brianplant is obliged, as an enforceable requirement of the planning consent, to restore the site in accordance with the scheme presented in this WRP using appropriate materials, whether or not these are waste or non-waste. Therefore, it is considered that this satisfies the required criteria to demonstrate that the restoration is a recovery activity.

3.0 Purpose of the proposed development

This section describes how the restoration of Manton Quarry will be carried out and completed, why the work is needed and how the work will meet that need.

3.1 How the work will be carried out and completed

The area of the quarry to be restored is approximately 7 hectares in size and, prior to development, consisted of agricultural fields.

It is proposed that approximately 7 hectares of agricultural land will be created through the restoration of the central, eastern and southern areas of the quarry. This will re-integrate the site into the surrounding landscape which consists mostly of agricultural land. The south eastern section of the quarry has already been returned to close to original levels and this area only requires final profiling and re-soiling to complete restoration.

Condition 1 of the first periodic review of the planning permission (Ref: MIN/2016/556) states that all site works must be completed, and the site must be restored in accordance with the approved restoration concept by 24 February 2042[2].

3.1.1 Sequence of Operations

The restoration will be undertaken over five phases. The first phase shall commence at the southern corner of the site, with infilling in the southern and central areas. Subsequent phases will follow as the first phase is completed with phases 4 and 5 infilling the area where the weighbridge currently sits.

Infilling will be carried out progressively, based upon the availability of suitable waste materials.

3.2 Why the work is needed and how the work will meet that need.

It is a requirement of the Planning Permission that the quarry is restored in line with the approved restoration concept and the Environmental Statement therefore re-soiling the area using 2m of soil products and returning the land to a condition suitable for agricultural use which will integrate into the surrounding landscape.

The site will be infilled to between 66m and 68m AOD and profiled to drain to the east with a slope of less than 1 in 50. This will achieve the planning requirement to restore the site in line with the approved restoration concept and in accordance with details in the Environmental Statement.

The Environmental Statement also requires the wider site to be restored to minimise the visual intrusion of the quarry by integrating the final landform into the surrounding landscape whilst maximising ecological and conservation potential by creating new habitats and enhancing the quarry's geological interest by retaining and allowing access to faces of geological interest.

The central, eastern and southern areas of the quarry will be restored to agricultural land. The majority of the existing hedgerows will be retained with over 550m of new, species rich hedgerow being planted along the western and northern boundaries of the agricultural land.

The approved restoration concept is illustrated in Drawing 0726-1-13.

In summary, there is a genuine need to carry out the proposed infilling to achieve the planning requirement and it is clear that the approved restoration scheme will meet that need for the following reasons:

- The quarry must be infilled and restored to land suitable for agricultural usage, to provide for the integration of the site back into the surrounding landscape, to minimise visual intrusion, as required by

[2] Condition 1 of Planning Permission MIN/2016/556.

the Environmental Statement for the first periodic review of the planning permission (Ref: Min/2016/556). If the site is not infilled and restored as per the approved restoration concept (Drawing 0726-1-13) it will not be in keeping with the wider landscape which consists of mostly agricultural land; and

- The site must be restored in accordance with the approved restoration concept (Drawing 0726-1-13) and the environmental statement, as detailed in the first periodic review of the planning permission (Ref: MIN/2016/556). This will integrate the site back into the surrounding landscape, minimising the visual intrusion of the quarry whilst maximising the ecological and conservation potential by creating new habitats and enhancing the quarry's geological interest by retaining and allowing access to faces of geological interest. If the site is not restored to agricultural land as per the approved restoration concept it will be unfinished in accordance with the relevant planning permissions.

3.3 Quantity of waste used

The area of the quarry to be restored is approximately 7 hectares in size and, prior to development, consisted of agricultural fields.

The restoration concept aims to minimise the visual intrusion of the quarry by integrating the final landform into the existing landscape whilst maximising the ecological and conservation potential by creating new habitats and enhancing the quarry's geological interest by retaining, and allowing access to, faces of geological interest.

As stated in condition 3 of the first periodic review of the planning permission (Ref: MIN/2016/556):

"the development must be carried out strictly in accordance with the details contained in the application dated 21 April 2016, including the Environmental Statement and the accompanying drawings."

The Environmental Statement stipulates that:

"Following the completion of landforming works the area will be re-soiled with up to 2m of soil products produced from the recycling operations".

Therefore, to restore the site in keeping with the Environmental Statement and the restoration concept approximately 146,000m^3 of material will be required at a depth of 2m. This will consist of:

- 1.7m of waste material; and
- 0.3m of waste topsoil created from recycled soils and stones.

This equates to approximately 321,200 tonnes at an assumed density of 2.2t/m^3. A density of 2.2 was used to calculate the tonnage as an overly cautious figure to ensure Brianplant are permitted to accept enough material for the required compaction rate. Direct Replacement of non-waste material

The planning consent places an obligation on Brianplant to restore the quarry to agricultural land and calcareous grassland in accordance with the approved restoration concept. The use of suitable wastes to achieve this outcome will directly replace non-waste virgin materials which the site would otherwise use to complete the restoration.

3.3.1 Minimum Amount of Waste needed to achieve the restoration obligation

The restoration of Manton Quarry will return the site to an area of land suitable for agricultural usage. This will be achieved using waste to re-soil the area with 2m of soil products.

Planning requires the site to be restored in accordance with the approved restoration concept (Drawing 0726-1-13) and in accordance with details in the Environmental Statement therefore, the final restoration profile must minimise the visual intrusion of the quarry by integrating the final landform into the existing landscape.

To achieve a restoration profile of between 66m and 68m AOD, with the entire area re-soiled with 2m of soil products, approximately 146,000m^3 of material will be required. This equates to approximately 321,200 tonnes at an assumed density of 2.2t/m^3.

The site will therefore be subject to a 2m restoration layer across the entire area. This will be subdivided into:

- 1.7m of waste material;
- 0.3m of waste topsoil created from recycled soils and stones.

Therefore, the minimum amount of imported waste material is being used to provide a final restoration that integrates into the existing landscape and minimises visual intrusion by restoring the site to land suitable for agricultural usage in accordance with the approved restoration concept and as required by planning permissions.

3.3.2 Consideration of Alternative Proposals

There are no possible alternatives available for consideration as it is a condition of the planning that the site is restored in accordance with the approved restoration concept and in line with details in the Environmental Statement.

3.4 Meeting Quality Standards

The recovery activity at Manton Quarry will be carried out and implemented in strict accordance with the planning permission.

Operations at the site will be undertaken in accordance with Brianplant's Environmental Management System (EMS). The EMS will ensure procedures are implemented to achieve appropriate standards for managing environmental impacts.

In addition, the recovery activities will be supervised by technically competent persons who hold the necessary Certificate of Technical Competence (CoTC) under the Waste Management Industry Training and Advisory Board (WAMITAB).

Furthermore, the proposed development will be carried out in accordance with the conditions of an Environmental Permit application issued and regulated by the EA under the provisions of the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

Strict waste acceptance procedures will ensure that only suitable materials are accepted at the site.

Restoration operations will be conducted in accordance with an approved method statement and risk assessment, to ensure that the work is carried out to an appropriate standard and in accordance with the requirements set out in part VI of the 1999 Quarry Regulations for formation and compaction.

An earthworks methodology will be set out in detail in an engineering specification that will be completed prior to undertaking any works. This will set out requirements for:

- Material acceptance testing and classification;
- Requirements for placement trials;
- Material placement and compaction requirements (method or end product placement);
- Requirements for in-situ testing during and following placement of materials;
- Procedures to be followed where materials or compaction are deemed not to have met the specification; and
- Requirements for any monitoring of the compaction / engineering works.

Following completion of the works a Construction Quality Assurance (CQA) Report will be prepared summarising the works undertaken and presenting the results of laboratory and in-situ testing carried out during or following the works. Details of any remedial works undertaken will also be presented.

The finished re-profiling layer will be engineered to ensure that it is suitable for its intended purpose as agricultural land in keeping with the surrounding landscape.

The finished scheme will be designed and operated to ensure that it does not result in any environmental problems such as soil erosion, pollution or increase the risk of flooding in the surrounding area.

It is considered that the foregoing factors will ensure that the proposal will be completed to an appropriate standard.

4.0 Waste Suitability

It is confirmed that only waste material that is suitable for the intended purpose and will not cause pollution will be used for the restoration of Manton Quarry Landfill.

4.1 Waste Sources

Waste will be primarily sourced from the Construction, Demolition and Excavation sector of the construction sector consisting mainly of naturally occurring soils, stones, clay or sandy clay or soils. The proportion of recycled material within these waste streams is low and, as such, it is anticipated that the infill will consist predominantly of uncontaminated, naturally occurring soils and stones. Imports will be taken over time from both local and regional areas.

4.2 Waste Types

The waste types which will be used for the development are detailed in Table 3 below with their associated European Waste Catalogue (EWC) code. These waste types have historically been accepted by the EA as being potentially suitable for recovery (and are listed as acceptable in the Standard Rules SR2015 No39 Use of Waste in a Deposit for Recovery Operation and the Check if Your Waste is Suitable for Deposit for Recovery Guidance).

4.2.1 General Fill

The waste categories which will be accepted on site as general fill are detailed in Table 2 below.

Table 2 List of Waste Types to be Accepted for General Fill

EWC Code	Description
17	CONSTRUCTION AND DEMOLITION WASTE
17 05	Soils Stones and Dredging Soil
17 05 04	Soil and Stones
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 12	Wastes from the mechanical treatment of waste
19 12 12 [3]	Other Wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATEY COLLECTED FRACTIONS
20 02	Garden and Park Wastes

[3] This will exclude metal from reinforced concrete and fines from treating any non-hazardous waste or gypsum from recovered plasterboard and no hazardous waste or dangerous substances will be included in accordance with EA Guidance *Check if your waste is suitable for deposit for recovery, 21 April 2021*.

EWC Code	Description
20 02 02	Soil and Stones

4.2.2 Topsoil

The waste categories which will be accepted on site as topsoil are detailed in Table 3 below.

Table 3 List of Waste Types to be Accepted for Topsoil

EWC Code	Description
17	CONSTRUCTION AND DEMOLITION WASTE
17 05	Soils Stones and Dredging Soil
17 05 04	Soil and Stones
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATEY COLLECTED FRACTIONS
20 02	Garden and Park Wastes
20 02 02	Soil and Stones

Strict acceptance procedures will be implemented at the site to ensure only uncontaminated materials that are suitable for infill are used in the recovery operation. Procedures will be in place to inspect imported materials at the weighbridge as they enter the site, and again when the materials are tipped in the landfill site.

No contaminated materials will be accepted at the site. Documentation will accompany all waste material accepted, which will be reviewed in accordance with the site's waste pre-acceptance and acceptance procedures, included within the EMS, to ensure any materials used are suitable for use in the restoration operations.

A description of the material acceptance procedures for the restoration of the site, including basic characterisation and on-site verification will be included in the environmental permit application. These procedures will ensure that only materials that are both chemically and physically suitable for use in the recovery activity will be accepted at the site.

5.0 Conclusion

In view of the foregoing details it is concluded that the proposed restoration of Manton Quarry using waste satisfies all the requirements of a recovery operation as the main aim is to replace a non-waste material that would have been used in the operation, with a waste material that performs the same function. Furthermore:

- There is an enforceable obligation to do the work under a planning consent;
- The waste is suitable for the intended purpose;
- There are clear benefits to the restoration and consequently there is a genuine need to do the work;
- Alternative proposals that could use a smaller amount of waste are not viable to ensure compliance with the planning permission; and
- The proposal will be completed to an appropriate standard.

Brianplant has identified a legitimate opportunity to use waste materials in a sustainable fashion to achieve significant environmental benefits at Manton Quarry and has demonstrated that the proposed scheme satisfies all 'recovery' criteria.

APPENDIX A

Planning Permission

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