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Non-Technical Summary

v1.0

Environmental and sustainability solutions provided to
Brockley Wood Ventures Ltd

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CONTENTS

1.0	INTRODUCTION	1
1.1	Overview	1
1.2	Definitions	2
2.0	SITE LOCATION AND BACKGROUND	4
2.1	Introduction.....	4
2.2	NGR	4
2.3	Site location	4
2.4	Topography	5
2.5	Previous land use	6
2.6	Site description	6
3.0	ABOUT THE ACTIVITY	8
3.1	Overview.....	8
3.2	Site restoration purpose.....	9
4.0	SITE PLANS.....	11
4.1	Overview.....	11
5.0	MANAGEMENT SYSTEM	12
5.1	Overview.....	12
5.2	Management structure and responsibilities	12
5.3	Technical competence and training	12
5.4	Site permit.....	13
5.5	Site security	13
5.6	Managing documentation and records.....	14
5.7	Reporting non-compliance and taking corrective action	14
5.8	Compliance checking	15
5.9	Operational control, preventative maintenance and calibration.....	15
5.10	Design and constructions	15
6.0	ACCIDENT MANAGEMENT PLAN.....	16
6.1	Introduction.....	16
6.2	Hazard identification	16

6.3	Unauthorised waste receipt and processing	16
6.4	Equipment fire	17
6.5	Loss of containment – Spillage and leakage	17
6.6	Security and vandalism	18
7.0	OPERATIONS.....	20
7.1	Introduction.....	20
7.2	Operational hours	20
7.3	Phasing plan	20
8.0	PROCESS DESCRIPTION AND MATERIAL IMPORT	22
8.1	Overview.....	22
8.2	Clay.....	22
8.3	Subsoil.....	22
8.4	Topsoil.....	23
8.5	Suitable imported materials.....	23
9.0	WASTE CHARACTERISATION.....	24
9.1	Overview.....	24
9.2	Import of materials for direct use.....	25
9.3	Import of manufactured soils	25
10.0	SOIL REPLACEMENT	26
10.1	Overview.....	26
11.0	FINAL SITE RESTORATION	27
11.1	Ecology and Landscape Management Plan	27
11.2	5-Year Aftercare Plan	28
11.3	Closure	28
Table 1-1 Types of extractive waste generated.....		2
Table 1-2: Operational non-extractive wastes		2
Table 2-1: Surrounding land use		6
Table 3-1: Extraction phase details		8

1.0 INTRODUCTION

1.1 Overview

This Non-Technical Summary explains the application, in non-technical language as far as possible and using images where appropriate, to provide an overview of the proposed operation and its surroundings.

A more detailed explanation of the activity is provided in the accompanying documents along with information that is also provided concerning the key technical standards and control measures that will be used at the site to minimise the environmental risks identified.

This document should be read in conjunction with the rest of this application which also contains:

- Application Forms (A, B2, B4 and F1).
- Operating Techniques Document (Mining Waste Management Plan).
- Environmental Risk Assessment.
- Dust & Emissions Management Plan (DEMP)
- Environmental Management System (EMS) summary
- Waste acceptance procedures
- Director information
- Technical competence details
- Hydrogeological Risk Assessment (HRA)
- Environmental Setting and Site Design Report

Part of this application is a Waste Recovery Plan (WRP) that demonstrates that the deposit of suitable recovered materials, as part of the backfilling process, is a recovery activity for the restoration of Brockley Wood Quarry, near Belstead, Suffolk.

The sand and gravel quarry will be restored, via the deposit of waste for recovery, to approved final contours to provide land suitable for agricultural use in accordance with the site's planning permission. Non-extractive waste materials will be used to supplement the extractive waste generated as part of the quarrying activity.

1.2 Definitions

1.2.1 Extractive waste

Extractive waste arises from the physical activities involved in the winning and processing of sand and gravel resources. These wastes are regulated under the Mining Waste Directive (2006/21/EC), as implemented through the Environmental Permitting (England and Wales) Regulations 2016.

Table 1-1 Types of extractive waste generated

Waste type	Description
Overburden and topsoil	Material stripped and stored prior to mineral extraction. May be reused.
Screening fines	Coarse and fine silt or sand not meeting product spec, from screening.
Wash plant silt	Suspended solids removed from wash water; stored in silt lagoons.
Reject material	Stones, clay balls, or oversize fractions unsuitable for sale.
Interburden	Layers of unusable material between mineral horizons.

Handling and management:

- Overburden and soils are stockpiled separately and reused in site restoration.
- Wash silt is stored in settlement lagoons and may remain in situ post-restoration.
- Fines and reject materials may be used for on-site profiling or engineered infill, subject to risk assessment.

1.2.2. Non-extractive waste

Non-extractive wastes are those not directly resulting from the extraction or processing of mineral resources, and are instead associated with site operations, infrastructure, or restoration activities.

Table 1-2: Operational non-extractive wastes

Waste type	Source/description	EWC
General site waste	Office waste, packaging, canteen waste	20 03 01 (mixed)
Used oils and lubricants	Plant maintenance and servicing	13 02 05*
Waste filters and rags	From plant servicing or oil changes	15 02 02*/03

Batteries	Batteries	16 06 01*
Spill absorbents	Oily sands, pads, booms used in minor spill response	15 02 02*/03
Empty drums/containers	From fuel, oil, or chemical use	15 01 10*111*

These wastes are stored in designated areas, typically within a bunded maintenance compound, and collected by a licensed waste carrier for disposal or recovery at an authorised facility.

Following mineral extraction, the site will be progressively restored using suitable imported waste materials.

This is regulated separately from extractive waste under the Landfill Directive and Environmental Permitting Regulations.

All imported, non-extractive, waste will be:

- Pre-assessed and under Waste Acceptance Protocol.
- Delivered by registered waste carriers.
- Accompanied by appropriate waste transfer documentation.
- Deposited according to the Waste Recovery Plan, Mining Waste Management Plan and site restoration design.

Unacceptable Materials:

- Biodegradable waste (e.g., wood, green waste).
- Hazardous materials (e.g., asbestos, contaminated soils).
- Liquids.

2.0 SITE LOCATION AND BACKGROUND

2.1 Introduction

The sand and gravel quarry will be restored, via the deposit of waste for recovery, to approved final contours to provide land suitable for agricultural use in accordance with the site's planning permission. These non-extractive waste materials will be used to supplement the extractive waste generated as part of the quarrying activity.

The proposed non-extractive wastes for use in the scheme are listed in appendix A of the Waste Acceptance Procedures.

Only suitable inert wastes that meet the Landfill Directive definition of inert will be used to create the subsoil restoration profile, with BS3882:2015 compliant soils used to produce a final topsoil layer suitable for use in agriculture to Grade 3 (3a/3b) classification. Most wastes to be accepted at the site will be excavated materials from local civil engineering and construction works. The wastes arising from each site or process will be adequately characterised by a site investigation or appropriate process analysis. The criteria for the acceptance of wastes have considered the environmental assessments submitted with this application, to ensure that there are no:

- unacceptable emissions to groundwater, surface water or the surrounding environment; and
- unacceptable risks to human health.

2.2 NGR

TM 11757 40312

2.3 Site location

LAND AT BROCKLEY WOOD,
Belstead
Suffolk
IP8 4JW

The entire site is a mainly arable farmland of some 35.8 hectares (88.5acres) set in Suffolk. The site is located primarily within Belstead Parish c.6.5km to the south-west of the town

centre of Ipswich, c.1km south-west of Belstead village, 1km south-east of Copdock village and 3km north of Bentley village. The site is centred at Grid Reference [TM 11757 40312], as shown in Drawing NWA/BWB/100. Access is via an agricultural entrance located on the slip road roundabout off the A12, (for Junction 32B), with the site access to the mineral area located adjacent to the A12 as shown in Plan W22-1 and Plan W22-2.

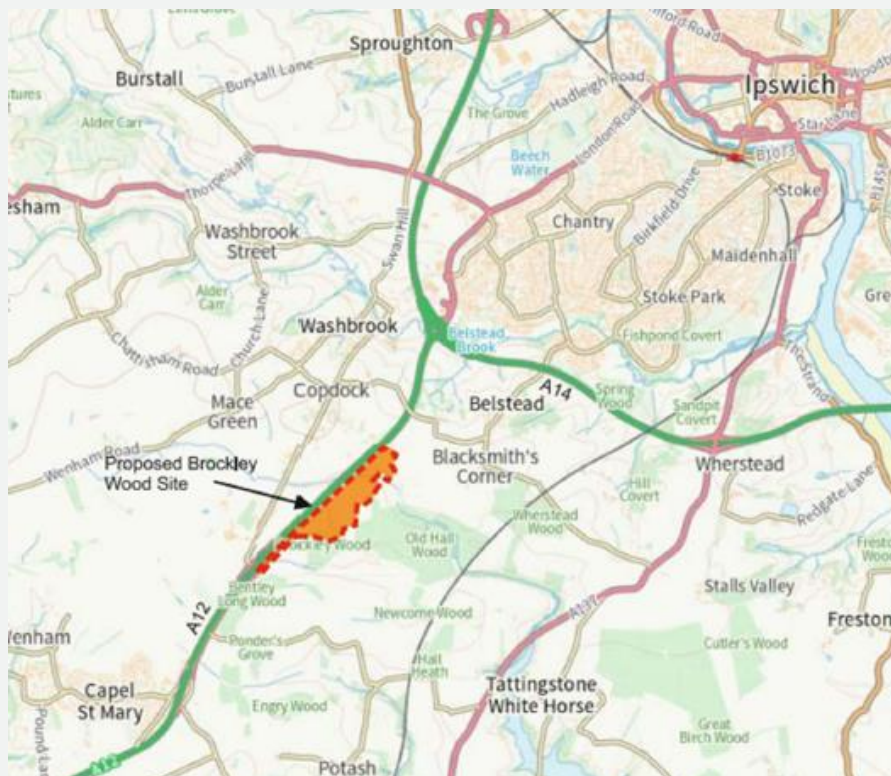


Figure 2-1: General site location

2.4 Topography

The landscape is formed principally by agricultural land divided by hedgerows and tracks, with small copses and areas of woodland around its margins. The site ranges in elevation from about 42m AOD to about 45m AOD. There is stream in the northern part of the site which flows beneath the A12 in a culvert, as shown in BW22-1 Site Plan. The stream flows east towards the Alton water reservoir, about 2km south-east of the site. The north-western boundary of the site is formed by the A12, and the other boundaries of the site are delineated by field boundaries, hedgerows and woodland.

2.5 Previous land use

Prior to commencement of mineral extraction activities under the planning permission proposal, the site wholly comprised arable agricultural land.

Table 2-1: Surrounding land use

Boundary	Land use
North	Mixed. Agriculture, SMEs, A14
East	Mixed. Agriculture and woodland
South	Mixed. Agriculture and woodland
West	A12 major trunk route

2.6 Site description

Planning application SCC/0105/22B sought to change the use of agricultural land for the extraction, processing, sale and distribution of sand and gravel, processing of inert waste materials with associated plant and related sales and distribution, access works and phased restoration, using inert recovered and imported materials, and the required aftercare plan.

Allowing for boundary offsets excavation slopes and other constraints and within the total site area of 38.7ha, an extraction area of about 26.8ha is present which estimates that potential saleable reserves of approximately 2.771 million tonnes are present.

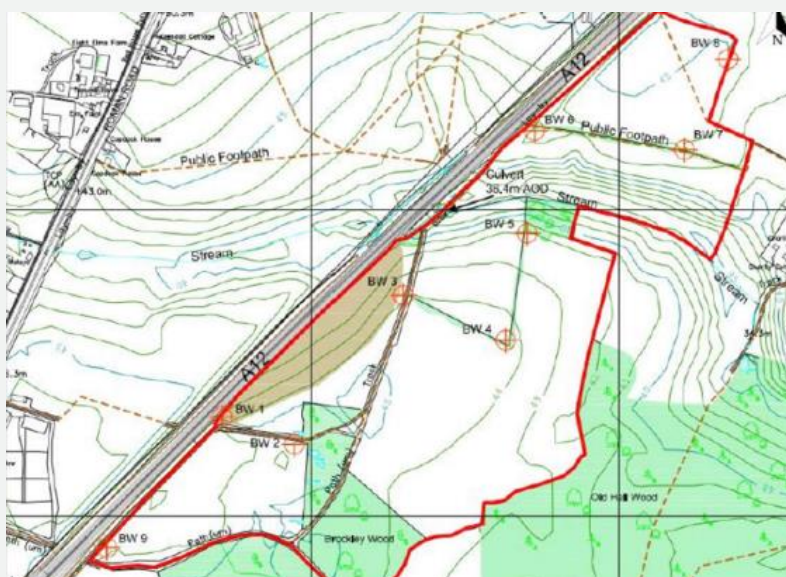


Figure 2-2: Specific site location (Extracted from Greenfield Associates Drawing BW22-1)

The site will be operated on a campaign basis, which will include the following on-site operations:

- Phased excavation, bunding and stockpiling of materials.
- Phased restoration of site to existing site levels using overburden (extractive waste) and suitable recovered materials (non-extractive waste).
- Washing, grading and temporary storage of excavated materials: and
- Processing and temporary storage of suitable waste materials for restoration or recycling.

3.0 ABOUT THE ACTIVITY

3.1 Overview

Based on borehole testing undertaken by Greenfield Enviro it is estimated that the application site contains some 2,771,000t net of saleable sand and gravel deposits. The void created by extraction of those minerals will be partly filled by the overburden, topsoil and subsoil from within each phase but will leave a residual requirement for a total volume of 1,714,000 m³ which, when using a bulk density conversion factor of 1.7t/m³, equates to approximately 2,913,800t of imported fill to backfill the site and achieve the full design agreed finished contours.

The position relating to the volume of sand and gravel, overburden, soils and inert fill in respect of each phase is set out in the agreed Waste Recovery Plan.

Table 3-1: Extraction phase details

Phase	Estimated saleable reserves (t/yr)	Annual estimated extraction rate	Phase life (yrs)	Estimated completion year
1a	189,000	186,626	0.98	1
1b	330,000	186,626	1.8	2
2a	134,000	186,626	0.72	3
2b	333,000	186,626	1.78	4
2c	154,000	186,626	0.82	5
3	978,000	186,626	5.25	10
4	653,000	186,626	3.5	15

Excavation of the mineral extraction site will involve removal and temporary storage or direct placement of around 407,000m³ of soils and overburden, which will be used in the restoration of the site. The restoration of the site will take place progressively during the operation phase of the development and immediately following the final extraction of minerals within Phase 4. Within each phase, replacement of overburden and tipping and compaction will take place as soon as practical following extraction of minerals within that phase.

Replacement of soils will only take place after completion of fill to the required formation levels and when appropriate weather and soil conditions permit in accordance with the submitted Soil Resources Assessment and Soil Movements Scheme. This will provide a suitably free drainage growing medium to allow the land to be returned to agricultural use.

The final profiles within each phase of the development are shown in sections A-A to E-E on Dwg Nos ***** (Proposed Restoration Scheme Cross Sections) and on Dwg No.***** (BRKW 2022 Site Plan Restoration Contours). The proposal provides for the restoration of landform to its current contours adjusted to facilitate post restoration drainage to field edge ditches. The only exception is within the Phase 2a area which was subject to substantial excavation as part of the construction of the A12 diversion in the 1980's resulting in significant lowering of land levels. In this area, the bund and associated landscaping will be retained and levels over the Phase 2a area to the east will be raised to approximate the historic contours within this part of the site as shown in BW22-3A12 X-section.

On completion of mineral extraction within Phase 4, restoration of the area, plant area and haul road will remain to be undertaken. Consequently, there will be a period estimated at 2-3 years when the importation and process of inert waste will continue to enable this to be achieved. Within the plant site, the batching plant will be dismantled and removed after the extraction of minerals ceases. The operation of waste processing and wash plant will continue until the plant site is restored with final filling of the plant site and haul road undertaken by direct tipping and restoration of soils.

3.2 Site restoration purpose

The purpose of the restoration phase is to comply with the planning permission in which the site will be restored back to the original contours prior to extraction taking place along with the original site contours prior to construction of the A12 trunk road to the east of the site.

Furthermore, as the sand and gravel operation is subject to the requirements of a mining waste facility permit, it will not be considered by the Regulator to be in definite closure until they have inspected the mining waste facility, considered a closure report (including the restoration of the land to an appropriate condition) and informed the permit holder that the

closure report has been accepted. Following definite closure, the operator will continue to comply with the requirements of all extant Environmental Permits until the surrender of the permit, i.e. at facility completion, is accepted.

5.0 MANAGEMENT SYSTEM

5.1 Overview

Brockley Wood Ventures Limited will operate their own 'in-house' 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.

The management system will be supplemented by this document which outlines the proposed operating techniques at the site and demonstrates conformance with the requirements of the [Non-hazardous and inert waste: appropriate measures for permitted facilities - Guidance - GOV.UK - Search](#)

5.2 Management structure and responsibilities

The Site Manager (SM) will be responsible for normal day to day operations and ensuring compliance with the environmental permits that cover the activities carried out on site.

Whenever the site is open to receive or dispatch wastes or is operating any of the waste management activities, supervision will be provided by at least one member of staff who is suitably trained and fully conversant with the requirements of the permit regarding:

- Waste acceptance and control procedures.
- Operational controls.
- Maintenance.
- Record-keeping.
- Emergency action plans; and
- Notifications to the EA

5.3 Technical competence and training

The site will be managed by sufficient staff who are competent to operate the site. The management system will ensure that:

- All staff will have clearly defined roles and responsibilities.
- Records will be maintained of the skills required for each post;
- Records will be maintained of the training and relevant qualifications undertaken by staff to meet the requirement of each post; and
- Operations will be governed by standard operating procedures (SOPS).

Operations at the site will be under the overall control of a Technically Competent Manager (TCM) who holds the relevant Certificate of Technical Competence (CoTC) under the Waste Management Industry Training and Advisory Board (WAMITAB) scheme.

An assessment of staff training needs will be carried out to identify the positions for which specific environmental awareness training is needed, and to determine the scope and level of such training. The assessment of training needs will be reviewed on an annual basis.

The training programme will ensure that relevant staff are aware of the following:

- Regulatory implications of the EP for the site and their specific work activity.
- All potential environmental effects from operations under normal and abnormal circumstances.
- The need to report deviations from the permit; and
- Prevention of accidental emissions and action to be taken should accidental emissions occur.

5.4 Site permit

A copy of all site permits, along with the management system will be kept available for reference by all staff and contractors whose work could impact upon the environment.

5.5 Site security

So that unauthorised access is prevented, several site security measures will be in place at the site including:

- Fencing along the site boundary; and
- A gate located at the entrance to the site, which will be locked when the site is closed.

The site will be inspected at the beginning of each working day. Any defects or damage which compromises the integrity of the security measures will be made right by temporary repair by the end of the working day.

Permanent repairs will be fitted within 5 working days.

All inspections, any defects, damage or repairs will be recorded in the site diary.

5.6 Managing documentation and records

Controls will be in place to ensure that all documents are issued, revised and maintained in a standardised arrangement.

The documents that will be included within the scope of the controls are as follows:

- Policies.
- Responsibilities.
- Targets.
- Maintenance records.
- Procedures.
- Monitoring records.
- Results of audits.
- Results of reviews.
- Complaints and incident records; and
- Training records.

Operational records will be made and kept up to date daily to reflect waste movements, both internally and off-site. All records relating to the waste acceptance will be maintained and kept on-site for a minimum of two years.

5.7 Reporting non-compliance and taking corrective action

Procedures in place will ensure appropriate corrective action is taken in response to problems identified at the site. The procedure will ensure that non-conformances are reported, investigated and rectified, and that failures and limitations are prevented. The following aspects will be considered:

- Actual or potential non-compliance.

- System failure discovered at internal audit.
- Suppliers or subcontractors breaking agreed operating rules.
- Incidents, accidents, and emergencies.
- Malfunction, breakdown or failure of plant.
- Other operational system failure; and
- Complaints.

The action taken in response to the non-conformance will include, but not limited to:

5.8 Compliance checking

There will be a formalised internal assessing procedure to ensure the site is reviewed at regular intervals and that the progress of corrective and preventative action is checked.

5.9 Operational control, preventative maintenance and calibration

The management system will work alongside operational procedures to ensure effective control of site operations, the use of approved suppliers and contract services, the maintenance of operational equipment and the calibration of any monitoring equipment.

All plant and equipment will be subject to a programme of planned preventative maintenance which will follow the inspection and maintenance schedule recommended by the manufacturer.

5.10 Design and constructions

All appropriate elements of the site which are not currently constructed will be designed in accordance with recognised standards, methodologies and practices.

The design process will use a risk-based approach and will be appropriately documented using drawings, specifications and method statements to provide an adequate audit trail.

Construction Quality Assurance (CQA) plans will oversee all construction activities necessary in the future. All CQA plans will be prepared by competent and suitably qualified persons.

A competent and suitably qualified person will supervise the construction activities.

6.0 ACCIDENT MANAGEMENT PLAN

6.1 Introduction

Brockley Wood Ventures Limited recognises the significance of the avoidance of accidents that could have environmental impacts and that it is essential to restrict those consequences as far as possible.

An Accident Management Plan [AMP] will be put into operation and maintained at the site to make sure that site staff are fully prepared for any such incidents.

The AMP will be reviewed at least every four years or as soon as practicable after an incident, with any changes made to further reduce the risk of incidence.

The following AMP describes the techniques that will be implemented to minimise the risks posed to the environment. Activities affecting the health and safety (H&S) of operatives, contractors and visitors will be separately managed in compliance with H&S regulations and company H&S Policy.

6.2 Hazard identification

The following hazards were identified in the Environmental Risk Assessment included in the permit application:

- Unauthorised waste.
- Equipment fire.
- Spillage and leakage.
- Security and vandalism; and
- Flooding.

The following sections summarise the processes which will be used to reduce the possible causes and impacts of accidents at the site.

6.3 Unauthorised waste receipt and processing

Accepting unpermitted waste materials to the restoration operation could have detrimental consequences upon the environment. These impacts include risks connected with odour and the potential contamination of land and water.

To control this risk, only those waste that pass the acceptance criteria will be accepted for recovery.

6.4 Equipment fire

In the unlikely event of a fire, the following actions will be taken:

- The site manager will be informed immediately.
- The Fire & Rescue Service will be notified immediately and the EA as soon as practicable.
- The burning item/area will be isolated and attempts to extinguish the fire utilising the on-site fire extinguishers will be made if safe to do so; and
- The site and buildings will be evacuated if the fire is not containable.

6.5 Loss of containment – Spillage and leakage

Loss of containment could lead to spillage and leakage of potentially contaminating liquids, e.g., fuel oil. To stop loss of containment and reduce the risk and impact of releases the following measures will be put in place:

- Containment system: any facilities for the storage of oils, fuels or chemicals will be sited above ground on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound will be at least the equivalent to the capacity of the largest tank plus 10% or 25% of the total tank volume within the bund, whichever is the greater. All filling points, vents and gauges will be located within the bund.
- Storage tanks: storage tanks will be constructed to the appropriate British Standard;
- Inspection: a daily, visual inspection of tanks by site staff to ensure the continued integrity of the tanks and identify the need for any corrective action.
- Spill kits: materials suitable for absorbing and containing minor spillages will be maintained on-site; and
- Monitoring techniques: the site staff will undertake daily monitoring for evidence of spillage and leakage.

In the event of any potentially polluting leak or spillage occurring on-site, the following action will be taken:

- Minor spillages will be cleaned up immediately, using sand or proprietary absorbent. Any contaminated materials will be put into containers and for transfer from site to a suitably permitted facility. The incident will be logged in the site diary.
- Dry wastes dropped on-site will be collected and taken to the appropriate area of the site.

In the event of a major spillage, which is causing, or is likely to cause, polluting emissions to the environment, immediate action will be taken to contain the spillage and prevent liquid from entering surface water or drains.

The spillage will be cleared immediately and placed in containers for off-site disposal. The EA will be informed.

6.6 Security and vandalism

The site will have the following security measures in place to prevent unauthorised access and vandalism:

- *Site perimeter:* the site will benefit from fencing around the perimeter.
- *Inspection:* the gate and fencing will be regularly inspected by the staff to identify any deterioration, damage or the need for any repairs.
- *Maintenance and repair:* the site fencing and access gate will be maintained to ensure their continued operation. Should any damage be detected, repairs will be made by the end of the working day. If this is not possible, suitable measures will be taken to prevent any unauthorised access to the site and permanent repairs will be affected as soon as practicable and within 5 days.
- *Authorised access system:* all visitors to the site will be required to sign in in the visitor's book and then sign out on leaving the site to minimise the risk of unauthorised visitors being present on-site; and
- *Monitoring techniques:* operational procedures, including regular inspections, will ensure continual monitoring of security provision at the site. In the event of a breach of security, the cause will be investigated, and suitable mitigation measures put into effect.

- *Reporting:* records to be maintained include inspections and maintenance of security fencing and the gate, breaches of security, investigations and actions taken.

7.0 OPERATIONS

7.1 Introduction

The landscape restoration plan describes how the quarry will be restored to existing contours once extraction has been completed. A section alongside the A12 will be progressively restored to levels that existed prior to the construction of the trunk road. The restoration of the quarry by the importation of inert backfill to original (predevelopment) contours will ensure that there are no long-term stability issues associated with mineral development following quarrying operations.

7.2 Operational hours

Other than for workshop and maintenance purposes and emergency use, the normal operating hours of the Site will be:

0700 – 1800 Monday to Friday; and

0700 – 1300 Saturday.

The Site will not undertake operations on Sundays, Public or Bank Holidays

7.3 Phasing plan

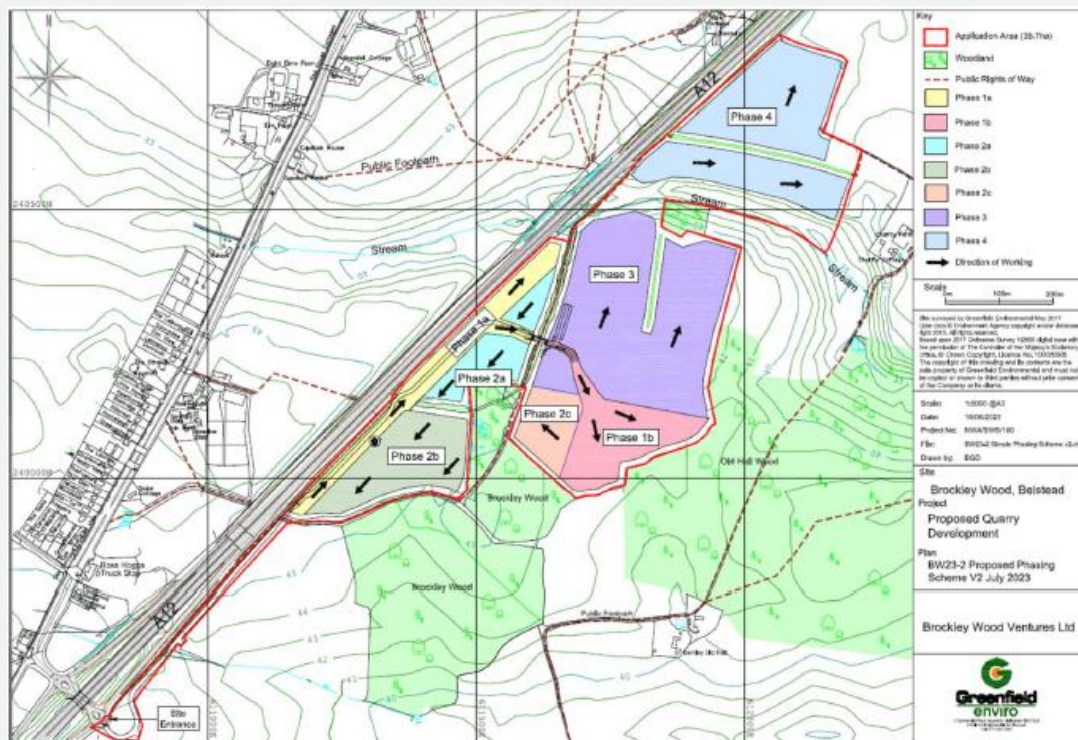


Figure 7-1: Phasing scheme (BW23-2 July 23)

The restoration of the site will take place progressively during the operation phase of the development and immediately following the final extraction of minerals within Phase 4. Within each phase replacement of overburden and tipping and compaction will take place as soon as practical following extraction of minerals within that phase. Replacement of soils will only take place after completion of fill to the required formation levels and when appropriate weather and soil conditions permit in accordance with the submitted Soil Resources Assessment and Soil Movements Scheme. This will provide a suitably free drainage growing medium to allow the land to be returned to agricultural use.

The final profiles within each phase of the development are shown in sections A-A to E-E on Dwg Nos BW22-9 Restoration X-sections (South), BW22-10 Restoration X-sections (North) (Proposed Restoration Scheme) and on Dwg No. BW22-8 Restoration Contours. The proposal provides for the restoration of landform to its current contours adjusted so as to facilitate post restoration drainage to field edge ditches. The only exception is within the Phase 2a area which was subject to substantial excavation as part of the construction of the A12 diversion in the 1980's resulting in significant lowering of land levels. In this area, the bund and associated landscaping will be retained and levels over the Phase 2a area to the east will be raised to approximate the historic contours within this part of the site. The cross sections for this area are shown in BW22-3 A12 X-section.

On completion of mineral extraction within Phase 4, restoration of the Phase 4 area, plant area and haul road will remain to be undertaken. Consequently, there will be a period estimated at 2-3 years when the importation and process of inert waste will continue to enable this to be achieved. The operation of waste processing and wash plant will continue until the plant site is restored with final filling of the plant site and haul road undertaken by direct tipping and restoration of soils.

8.0 PROCESS DESCRIPTION AND MATERIAL IMPORT

8.1 Overview

Agricultural land requires soils with good structure and drainage which can be achieved using SS1 and SS2 as subsoils in the restored profile. Permeable fill should be overlain by at least 700 mm of subsoil (including at least 200 of SS2 as an upper subsoil). TS1 or TS2 should then be laid to a minimum thickness of 300 mm (see below).

This profile would give land of best and most versatile subgrade 3a agricultural quality.



Figure 8-1: Recommended restoration soil profile to 1.2m

8.2 Clay

These subsoils are weakly structured and would be difficult to reuse. They will be used as overburden or in structural landscaping (e.g., in the core of screening bunds) rather than as a soil restoration resource.

8.3 Subsoil

8.3.1 SS1 – Coarse and sandy loams

This resource comprises the subsoils of the coarse loamy soils. They typically comprise moderately stony coarse loamy and sandy soils that are of moderate quality for reuse in restoration. They should be stripped as required until gravel layer is reached, or up to 900 mm thickness.

8.3.2 SS2 – Medium loams

This resource comprises the upper subsoil layer of the medium loamy over gravel soils. They are of high quality for reuse if handled sensitively to avoid structural damage. To maintain resource quality, it is recommended that they be stripped to a standard thickness of 200 mm to avoid inclusion of underlying gravel.

8.4 Topsoil

8.4.1 TS1 – Coarse and medium loams

These are high quality topsoils for reuse in restoration. They will be stripped to a standard thickness of 300 mm and stockpiled separately from TS2/3.

8.4.2 TS2 – Fine loams

These topsoils are moderate quality resources for reuse in restoration due to their high clay content which makes machinery handling relatively difficult. They will be stripped to a standard thickness of 300 mm and stockpiled separately from TS1.

8.5 Suitable imported materials

Suitable inert materials and clean soils will be imported to site at a maximum rate of 250,000 t/yr. All vehicles carrying waste will report to the Site Office/weighbridge for weighing and the following checks and procedures.

- Visual inspection to ensure the load complies with the description provided on the Waste Transfer Note.
- New drivers will be informed of Site safety procedures.
- The relevant paperwork, including Duty of Care, will be inspected; and
- The registration of the carrier will be checked.

At this stage, if the load is compliant, the driver of the vehicle will be directed to the relevant area to discharge their load, with a secondary visual inspection taking place. Random samples of waste will be collected by the site operatives for confirmatory testing.

9.0 WASTE CHARACTERISATION

9.1 Overview

Wastes entering sites will undergo a three-tier testing protocol as detailed below:

Level 1: Basic Characterisation. This is a thorough determination, according to consistent analysis and behaviour testing methods of the short- and long-term leaching behaviour and/or characteristic properties of the waste.

Level 2: Compliance Testing. This is periodical testing by simpler standardised analysis and behaviour testing procedures to establish whether the waste follows permit conditions and any specific restoration material requirements. This assessment will focus on important variables and behaviour identified by basic characterisation and will be carried out at least annually.

Level 3: On-site verification. This establishes rapid check methods to verify that a waste is the same as that which was been subjected to compliance testing and that which is described in the documentation accompanying the waste. It may consist merely of a visual inspection of the waste before and/or after unloading.

A visual inspection to satisfy the Level 3 on-site verification requirements will be carried out on all wastes deposited at the site whether within the LGV or during/after deposit.

All waste accepted for recovery, or treatment at the on-site facility, will be accompanied by a WTN as required by DoC Regulations and checked by the weighbridge operator before the vehicle is permitted to access the site.

A register of the quantities and characteristics of waste accepted at the site will be maintained on a computerised database. A record will also be maintained of all waste that is removed from the facility.

A quarantine area will be located within the operational site area, where any non-conforming loads identified following discharge will be segregated pending additional investigations.

9.2 Import of materials for direct use

Where materials are pre-assessed suitable for direct use in the restoration phase, they will undergo the three-tier testing protocol as detailed in the Waste Acceptance Procedures. They will then be directed to the working area, or to the appropriate, temporary stockpile.

The placement of soils to attain the agreed restoration contours will follow two different methods.

9.2.1 Subsoil

Subsoil is a weathered soil layer extending between the natural topsoil and the little weathered basal layer (e.g., geological parent material) below, or similar material within a landscaping project on to which topsoil can be spread. Subsoil usually has a lower organic matter and plant nutrient content than topsoil.

9.2.2 Topsoil

Upper layer of a soil profile, usually darker in colour and more fertile than the layer below (subsoil), and which is a product of natural biological and environmental processes. The thickness of natural topsoil will vary from only a few centimetres in some sites to more than 0.35m in deeply cultivated agricultural sites.

9.3 Import of manufactured soils

Manufactured soils will be imported under EWC 19 12 12 soil substitutes [A material produced by combining mineral matter and organic matter of suitable quality (and, where appropriate, fertiliser and lime) that provides similar functions to natural topsoil] and will only be accepted from the on-site waste recycling facility.

The specifications below provide the maximum threshold levels of toxic and phytotoxic elements which are allowable within the soils to be placed at the site, to ensure that the placement of soils will not result in environmental pollution or harm human or plant health. They also provide the maximum organic matter content, measured as Loss on Ignition (LOI) and an acceptable range of pH.

10.0 SOIL REPLACEMENT

10.1 Overview

Current government policy is that all reclamation (restoration and aftercare) agricultural schemes should be to high standards. For agricultural after uses, the best available practice (i.e., least risk) is using the excavator dump truck combination in conjunction with the bed system. With the anticipated effects of climate change on soils, it is important the soil resource is safeguarded whatever its quality grading due to the range of ecosystem services it can provide in addition to agricultural production, e.g., water storage, flood mitigation, carbon storage and greenhouse gas regulation etc.

Additional cultivations may be necessary (such as the creation of a seedbed and reduction in the surface stoniness) following the replacement of the soil profile and completion of remedial works for decompaction and stone/artefact removal. It is expected that these would be of a type relevant to the after use.

It is important for a vegetation cover to be established (this could be one of the many commercially available cover crop mixes available) as soon as possible and in sufficient time before the growing season ends to protect the soil surface and minimise slumping of the loosened soil profile, attenuate surface runoff and to initiate soil recovery processes. The extent of soil replacement should not usually exceed the capability of establishing an effective vegetation cover. It should be undertaken progressively as soon as the replacement operations and final cultivations are completed to avoid the soil surface remaining bare and unprotected by vegetation over the winter with the high risk of loss of soil from wind and water erosion and weed colonisation.

11.0 FINAL SITE RESTORATION

The restoration of the site will take place progressively during the operational phase of the development and immediately following the final extraction of minerals within Phase 4. Within each phase, replacement of overburden and tipping and compaction will take place as soon as practical following extraction of minerals within that phase. Backfilling of soils will only take place after completion of fill to the required formation levels and when appropriate weather and soil conditions permit in accordance with the Soil Resources Assessment and Soil Movements Scheme. This will provide a suitably free drainage growing medium to allow the land to be returned to agricultural use.

The final profiles within each phase of the development are shown in sections A-A to E-E on P1946-BW21 Proposed Restoration Scheme Cross Sections and P1946-BRKW 2022 Site Plan Restoration Contours. The proposal provides for the restoration of landform to its current contours adjusted to facilitate post restoration drainage to field edge ditches. The only exception is within the Phase 2a area which was subject to substantial excavation as part of the construction of the A12 diversion in the 1980's resulting in significant lowering of land levels. In this area, the bund and associated landscaping will be retained and levels over the Phase 2a area to the east will be raised to approximate the historic contours within this part of the site.

On completion of mineral extraction within Phase 4, restoration of the Phase 4 area, plant area and haul road will remain to be undertaken. Consequently, there will be a period estimated at 2-3 years when the importation and processing of suitable waste streams will continue to enable this to be achieved. Within the plant site, the operation of waste processing and wash plant will continue until the plant site is restored with final filling of the plant site and haul road undertaken by direct tipping and restoration of soils.

11.1 Ecology and Landscape Management Plan

The Ecology and Landscape Management Plan (E&LMP) sets out measures designed to maintain and enhance biodiversity across the site and adjoining woodland under the control of the applicant company over the life of the quarry and for a period of 5 years following

cessation of quarry operations. It will govern the implementation of the approved landscaping scheme in accordance with a phased programme and measure undertaken annually relating to the cultivation, weeding and management of landscaped areas and the phased introduction of measure to mitigate ecological impacts and to enhance long-term biodiversity across the site.

11.2 5-Year Aftercare Plan

The 5-Year Aftercare Plan will incorporate the E&LMP but will also address those areas of the site intended to be returned to agricultural use. It will be designed to return all areas within the site other than those which form woodland, wooded trackways, field boundaries or agricultural access tracks to arable farmland and will include measure relating to:-

- replacing retained soils and subsoils to appropriate depths and profiles
- facilitating drainage of restored areas by provision of drainage ditches
- maintenance of field profiles
- cultivation, weeding and treatment of restored areas
- monitoring, recording and, where necessary, modifying aftercare measures.

11.3 Closure

After mining waste operations have ceased at the site, the Environmental Permit will continue to be in force to control the ongoing pollution risks associated with the mining waste facility. Monitoring of the mining waste facility, and associated restoration activity, will continue until such time as it is considered that the mining waste facility no longer poses a risk to the environment or human health and the restoration and aftercare has been satisfactorily carried out.

When it is demonstrated that the mining waste facility no longer poses an unacceptable risk to the environment or human health, an application will be made to surrender the permit.