WORKING PLAN FOR THE RESTORATION OF THE WESTERN QUARRY USING INERT FILL AT LA GIGOULANDE QUARRY, JERSEY

Report reference: BGL/JE/PF/5699/01/WP
November 2023

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1. Introduction

1.1 Granite Products (C.I.) Limited (Granite Products) are applying for a Waste Management Licence for La Gigoulande Quarry, Jersey to authorise the operation of an inert waste landfill for the purposes of a restoration of the deeper western part of the quarry.

1.2 The Working Plan provides a detailed overview of the proposed operations on site, the infrastructure and wastes to be accepted, risks and safety measures, timescales and management procedures put in place to ensure that the operations do not negatively impact the surrounding environment or human health.

1.3 This document has been completed in association with the Government of Jersey guidance '*Guidance Notes for Applying for a Waste Management Licence*' May 2017 (the May 2017 guidance) and '*Guidance Notes on the New Waste Management Licensing System*' January 2007 (the January 2007 guidance). It should be read in conjunction with the 'Conceptual Model, Environmental Setting and Installation Design Report for the Restoration of the Western Quarry using Inert Fill at La Gigoulande Quarry, Jersey' (ref. BGL/JE/PF/5699/01/ESID) (ESID) produced by MJCA and included with the Waste Management Licence application.

1.4 The January 2007 guidance lays out what is required of a Working Plan and states that it should correspond where possible to the corresponding Licence Conditions. This document follows the structure suggested in Appendix 4 of the January 2007 guidance and includes all suggested topics where relevant. There is overlap between the Working Plan and the ESID but both documents have been included in the Waste Management Licence application. The ESID presents information on the site setting on which the risk assessments which also form part of the Waste Management Licence application are based.

Proposed activities

1.5 The proposal comprises the restoration of the deeper western quarry void to agriculture and woodland through infilling with inert wastes. Granite Products' intention is to recycle as much incoming waste as possible to produce soils, soil substitutes and secondary aggregates with only residual waste materials and wastes

for which treatment is not technically possible to be landfilled as part of the quarry restoration operations.

1.6 Up to 200,000 tonnes per annum of inert waste materials will be imported to La Gigoulande Quarry for processing. It is anticipated that the majority of the waste imported to the site will be directed to the recycling facility at the site which is the subject of Waste Management Licence WML026. Residues from the recycling operation together with wastes for which treatment is not technically possible will be directed to the deeper western quarry for landfilling to restore the deeper western quarry. It is anticipated that up to 60% of the waste material delivered to the site will be recycled, leaving up to approximately 80,000 tonnes per annum of inert waste to be used in the restoration of the deeper western quarry. The western quarry will have a void volume of approximately 1,040,000 m^3 once extraction of the mineral has been completed. As explained in Paragraph 7.4 below it is proposed that initially waste materials are deposited only to the level of the land surrounding the deeper western quarry void which ranges between approximately 55mAMSL and 61mAMSL. Waste will not be placed above that level without the prior agreement of the Government of Jersey.

1.7 The deeper western quarry will have a final restoration layer comprising subsoil and topsoil materials to provide a growing medium. Throughout its restoration, the deeper western quarry will be dewatered from sumps cut into benches, enabling a dry restoration. Water will be transferred to a settlement lagoon prior to discharge to the La Gigoulande Mill Stream. The discharge to La Gigoulande Stream is the subject of Discharge Permit DP(B)2000/11/03.

Application area

1.8 The area the subject of the Waste Management Licence application for landfilling (hereinafter referred to as 'the site') is situated in the deeper western quarry area of La Gigoulande Quarry in St Peter's Valley, Jersey. La Gigoulande Quarry is an operational hard rock quarry in St Peter's Valley which is surrounded by a mosaic of woodland, residential and agricultural land. The site location is shown on Figure WP 1. The site and surrounding area including the area the subject of the application for the Waste Management Licence is shown on Figure WP 2. Authorised waste

management activities comprising the landfill disposal of inert waste will only be undertaken within the application area. The application area comprises the deeper western quarry void, the proposed surface water management lagoon and the proposed access route from the main road.

2. Site setting

Site setting and receptors

2.1 La Gigoulande Quarry is located in St Peter's Valley on the Parish Boundary of St Peter and St Mary (Figure WP 1). La Gigoulande Quarry is located on the southern side of a valley known as La Vallee. The road La Rue de la Vallee B26 runs in a north east to south west direction adjacent to and defining the northern boundary of La Gigoulande Quarry. La Gigoulande Quarry is accessed directly from La Rue de la Vallee B26. La Gigoulande Quarry is bounded to the west and south by Mont Remon and La Rue Bechervaise. Internal haul roads facilitate access between the current working faces and the plant. The mineral processing plant is located in the base of the central part of the quarry and the ready mixed concrete plant is located immediately north of the mineral processing plant. The block plant and associated administrative and maintenance and welfare facilities are located in the west and north west of the quarry.

2.2 La Gigoulande Quarry is in a generally rural setting. The quarry is bounded to the north east, east, south and south west by soil storage and screening bunds which are generally vegetated. There are several properties located within 500m of the site. The closest properties to the quarry are Les Chasses which is approximately 50m to the north of the northern boundary of the extraction area. La Dimerie(a), Creg Ny Baa and adjacent properties are located approximately 115m north west and west of the western boundary of the extraction area and Les Perquages Cottage is located approximately 115m south west of the western boundary of the extraction area. Hillside is located approximately 125m to the north east of the eastern boundary of the extraction area.

2.3 The quarry generally is rectangular in shape and is orientated in a north east to south west direction. Mineral extraction operations are at their deepest in the western part of the existing quarry. The deeper western area of the quarry is dewatered. Although groundwater is maintained currently in the base of the deeper western quarry at approximately 24m Above Mean Sea Level (AMSL) the base of the deeper western quarry area is at a level of approximately 22m AMSL. The deeper western quarry will be extracted to a depth of approximately 11mAMSL. In the central and eastern

parts of the quarry the lowest level of extraction will be approximately 55m AMSL which is referred to as the 'self draining' level. Along the southern boundary of the quarry ground levels range between approximately 97m AMSL at the eastern end of the southern boundary and 68m AMSL at the western end of the southern boundary.

2.4 There are no public footpaths that cross La Gigoulande Quarry or are in the vicinity of La Gigoulande Quarry. Cycle route 3 runs in a generally east west direction along La Rue Bechervaise to the south of the quarry. Cycle Route 6a runs generally to the south from the south western corner of the field to the south of La Gigoulande Quarry on Rue l'Aleval to Mont de l'Ecoloe.

2.5 La Gigoulande Mill Stream flows generally from the north east to the south west through La Vallee. The stream runs parallel to the northern boundary of La Gigoulande Quarry at a distance of between approximately 10m to 150m from the quarry boundary. The stream enters La Gigoulande Quarry and flows in a culvert for a short distance at the mid northern boundary. The stream flows to the La Hague Reservoir approximately 150m south west of La Gigoulande Quarry.

Geology, hydrology and hydrogeology

2.6 Details of the site's geology, hydrology and hydrogeology can be found in the ESID.

Ecology

2.7 A review of the Government of Jersey Natural Sites website[1] and protected tree website[2] has identified the following:

2.8 No part of La Gigoulande Quarry or the land surrounding it is subject to a nature conservation designation.

Sites of Special Interest

2.9 There are no Sites of Special Interest within 2km of La Gigoulande Quarry.

[1] Available at https://www.gov.je/citizen/Planning/Pages/NaturalSites.aspx
[2] Available at https://www.gov.je/PlanningBuilding/TreesHedges/pages/protectedtreelist.aspx

Protected species

2.10 There are records of several protected species in the local area including hedgehog, red squirrel, various species of bat and a number of notable plants.

2.11 There are no protected trees at the site or in the immediate vicinity of La Gigoulande Quarry.

Culture and heritage

2.12 A review of the Listed Buildings or places website[3] indicates that there are a number of designated heritage assets within 2km of the La Gigoulande Quarry.

2.13 The closest of these are the:

- Grade 2 The Elms. National Trust for Jersey HQ located approximately 510m to the north east of the boundary of the area the subject of the Waste Management Licence application.
- Grade 2 Gigoulande Mill Ruins located approximate 80m to the west-north west of the boundary of the area the subject of the Waste Management Licence application
- Grade 3 Hillside located approximately 470m to the east-north east of the boundary of the area the subject of the Waste Management Licence application.
- Grade 3 Listed Valley Farm located approximately 110m to the west of the boundary of the area the subject of the Waste Management Licence application.
- Grade 3 Listed Les Chasses located approximately 160m to the east of the boundary of the area the subject of the Waste Management Licence application.

[3] Available at https://www.gov.je/citizen/Planning/Pages/HistoricEnvironments.aspx

- Grade 4 La Cheve Rue Cottages located approximately 495m to the east-north east of the boundary of the area the subject of the Waste Management Licence application.

- Grade 4 Stuart Farm located approximately 500m to the east of the boundary of the area the subject of the Waste Management Licence application.

3. General considerations

Waste types and quantities

Waste types – landfill

3.1 The landfill will accept only inert waste for which treatment is not technically possible and waste residues from the inert recycling process the subject of Waste Management Licence WML026.

3.2 The inert wastes that will be accepted onto site for disposal at the landfill are detailed in Table WP 1.

Waste quantities

3.3 The maximum quantities of waste that will be accepted at the site are 200,000 tonnes per annum, 28,000 tonnes per month and 1,260 tonnes per day.

Waste acceptance guidance

3.4 Waste acceptance procedures will be in accordance with Granite Products management system procedure 'JSY42 Operation of Granite Products Inert Landfill' and 'JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities'. Table WP 2 presents the proposed waste acceptance criteria that have been assessed in the Hydrogeological Risk Assessment[4]. The proposed waste acceptance criteria are consistent with the liquid to solid ratio 10 l/kg leaching and solid concentration limit values for inert wastes specified in the EU Council Decision of 2002 in accordance with the Landfill Directive 1999. It is concluded in the Hydrogeological Risk Assessment that the proposed waste acceptance criteria will not present a significant risk that the predicted concentrations of contaminants which may reach controlled waters will result in pollution of groundwater or harm to human health.

[4] Hydrogeological risk assessment for the restoration of the western quarry using inert fill at La Gigoulande Quarry, Jersey. October 2023. (Report reference BGL/JE/PF/5699/01/HRA)

Hours of operation

3.5 Granite Products has planning permission (ref. P/2012/0121) to operate the recycling and landfilling facilities between the hours of 07:30 and 18:00 Monday to Friday and 08:00 and 13:00 on Saturdays. Operation of the inert landfill and restoration of the deeper western quarry will take place during these hours.

Commencement of activities

3.6 Mineral extraction is currently taking place in the deeper western quarry. Upon completion of extraction, landfilling will commence in the deeper western quarry.

Manning and management plan

Environmental management system

3.7 Granite Products (C.I.) Limited implements the Brett Group's Quality, Health, Environment, Safety Sustainably Together Management System (QHEST) which is accredited to the following standards:

- ISO 14001 Environmental Management Systems;
- ISO 9001 Quality Management Systems;
- QSRMC Quality and Product Conformity Regulations 2003 (EN 206-1);
- ISO 45001, Occupational health and safety management systems;
- BES 6001 Responsible Sourcing of Construction Products.

3.8 Granite Products specifically hold certification for ISO 14001, ISO 45001 and QSRMC.

3.9 QHEST has three levels of procedures. These include:

- Group procedures;
- Business specific procedures;

- Site specific procedures.

3.10 A copy of the QHEST management system, including the procedures specifically referred to in this Working Plan, will be maintained in the Site Manager's Office with associated records.

Management structure

3.11 The management structure, responsibilities and resources will be in accordance with the following QHEST procedure:

- BG2.1 Structure, Responsibility and Resources.

Staff Training and Development Systems

3.12 Staff training and development will be in accordance with the following QHEST procedure:

- BG2.2 Training, Awareness and Competence.

Staff Numbers and Job Titles

3.13 Staff responsibilities are defined in the following procedure:

- BG2.1 Structure, Responsibility and Resources.

3.14 The landfilling operations will be under the overall control of a suitably qualified landfill site manager. If the landfill site manager is not available, a deputy will be appointed to hold the authority and perform the duties.

Emergency procedures

3.15 Granite Products will have the following emergency and reporting procedures in place to manage circumstances such as fire/explosion on site or failure of pollution control systems:

- BG5.1 Emergency Preparedness and Response;

- BG5.2 Reporting and Investigation of Accident, Incident and Complaint;

- BG5.3 Near Miss Reporting;
- BG5.4 Managing Injury Absence.

3.16 A copy of the above QHEST procedures and the site Emergency Action Plan will be kept in the Site Manager's Office, the latter will also be displayed on key noticeboards.

4. Site infrastructure

4.1 The Site Layout is illustrated on Figures WP 3 and WP 4.

Site access

4.2 The site is accessed directly from La Rue de la Vallée B26 which runs in a north east to south west direction adjacent to the northern boundary of the quarry. The site access is shown on Figure WP 3. Vehicles accessing the site will be directed to the recycling area. Wastes will either be treated in the recycling area with the residues sent to landfill or, if treatment of the waste is not technically possible, wastes will be sent to the landfill. Initially, road going HGVs will not have direct access to the landfill. Wastes will be transported to the landfill in dump trucks. As the landfilling operations progress and when the waste level in the landfill is at a higher elevation, road going HGVs will have direct access to the landfill. As explained below, wheel cleaning facilities will be installed prior to road going HGVs having direct access to the landfill unless otherwise agreed with the Government of Jersey. The additional wheel cleaning facilities will be agreed with the Government of Jersey including the location, specification, maintenance and breakdown cover.

Control Procedures for Persons and Vehicles Arriving and Departing From Site

4.3 There are various control procedures in place, including a strict speed limit on site to minimise the impact in terms of noise, dust, local capacity and accidents.

4.4 Traffic will be controlled in accordance with the following QHEST procedure:

- BG3.7 Traffic Management.

4.5 Visitors must report to the weighbridge office. Pedestrian routes are clearly marked.

Site Security

4.6 The quarry benefits from mixed perimeter security comprising natural barriers and fencing.

4.7 Gates will be provided at the main site access and these will be closed and locked shut outside of operating hours of either the landfill or the wider quarrying operations.

Where necessary for security purposes, some lighting may be switched on outside of operating hours.

4.8 Gates and fences will be inspected and maintained in accordance with the following QHEST Procedure:

- BG4.1 Monitoring and Inspection.

Wheel Cleaning

4.9 The internal access roads are part concrete but mostly compacted granular material on a rock base. The access roads are also shared with the quarrying operations. The roads are cleaned using water sprays, a road sweeper and loading shovel bucket as conditions require and to date a formal wheelwash has not been necessary. Unless road going HGVs are directly accessing the landfill it is considered unlikely that they will require any additional/different wheel cleaning to the aggregate and recycling vehicles. However, should this prove not to be the case then additional/different cleaning facilities will be constructed on site if necessary. Prior to installation, details would be provided to the Government of Jersey including the location, specification, maintenance and breakdown cover. As explained above, wheel cleaning facilities will be installed prior to road going HGVs having direct access to the landfill unless otherwise agreed with the Government of Jersey. The additional wheel cleaning facilities will be agreed with the Government of Jersey including the location, specification, maintenance and breakdown cover.

4.10 Procedures are in place for the management of amenity issues as follows:

- JSY43 Amenity Management – Prevention of Mud, Dust and Noise Emissions;

- BG4.1 Monitoring and Inspection.

Noticeboards and Signs

4.11 The site is currently well signposted to avoid confusion or accidents amongst drivers and pedestrians. The site entrance will be labelled appropriately and noticeboards

will be provided at the reception area and along the route to the recycling operations and landfill.

4.12 A new noticeboard will be erected at the site entrance showing the following details relevant to the licence:

- Site Name;
- Licence number;
- Daytime/emergency contact telephone numbers;
- Name and contact number for Government of Jersey Department of the Environment.

4.13 The notice board will show these details in respect of both the recycling and the landfilling operations.

Internal Roads

4.14 Prior to landfill operations commencing on site, it is proposed that new internal roads are built from the recycling facility into the western quarry landfill area. Internal haul roads will be constructed from suitable granular materials and will be regularly maintained to ensure a safe and even running surface for vehicles.

4.15 Car parking areas are provided elsewhere within the overall quarry site and are not necessary in the areas of operational waste activities.

Fuel Tanks and Bunding

4.16 Unless otherwise agreed with the Government of Jersey, there will be no fuel tanks located within the proposed licence boundary. Any fuel used by site vehicles serving the landfill facility will be stored outside the proposed licence boundary.

Weighing and Measuring of Loads

4.17 Unless otherwise agreed with the Government of Jersey, prior to landfill operations commencing weighbridge facilities will be installed at the site entrance. Following the

commencement of landfill operations and unless otherwise agreed with the Government of Jersey waste delivered for either recycling or disposal will be weighed at the weighbridge. The location of the weighbridge facilities are clearly shown on Figure WP 4.

4.18 The weighbridges will be surface mounted with a CCTV camera system that enables weighbridge personnel to see into the vehicles both entering and exiting the site.

4.19 Weighbridges will be operated in compliance with the following QHEST Procedure:

- BA7 Operation of a Weighbridge.

4.20 Inspection and maintenance of the weighbridges will be carried out in accordance with the following QHEST Procedures:

- BG4.2 Plant and Equipment Maintenance;
- BG4.3 Instrument and Equipment Calibration.

4.21 The provision of two weighbridges will ensure that vehicles can be weighed when one is undergoing maintenance. In the unlikely event that neither weighbridge is operational, waste will only be accepted where a suitable alternative means of measurement is available.

4.22 Residues from the recycling facility will be transported to the landfill by self-weighing dumper trucks which will be loaded by self-weighing loading shovels. Both the loading shovels and the dumper trucks will provide for weighing the residues from the recycling facility which will be deposited in the landfill.

Secure Compound

4.23 All waste accepted onto site will be inert. Any quarantining of waste that is required in the landfill area will take place in a dedicated container (skip or other suitable container) located close to the operational area.

Hardstanding/Parking

4.24 There will be no hardstanding or parking within the landfill area.

Laboratory

4.25 There is an on-site laboratory which currently services the quarrying and associated operations at La Gigoulande Quarry however this does not have the necessary accreditations to undertake waste acceptance criteria testing or water quality analysis. As such, and in the absence of the on-site laboratory having the necessary accreditations and suitably qualified staff, samples will be sent off-site for analysis at a UKAS accredited laboratory.

4.26 Groundwater monitoring samples and waste samples have to date been sent to Element Laboratory, Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside CH5 2UA however Granite Products may send samples to alternative, accredited laboratories for analysis.

Drainage

Groundwater Management

4.27 Groundwater dewatering is being undertaken in the western quarry in order to facilitate quarrying operations. Dewatering will continue during landfill operations to enable the deposit of waste materials in dry conditions. The water table will be managed to be below the level of working. When infilling rises above the natural groundwater level, dewatering will no longer be required. Sumps will be positioned and groundwater drainage blankets will be installed as necessary based on operational experience and practical considerations. A series of schematic cross sections which show the principles of the proposed landfill in the western quarry are presented in the ESID report.

4.28 Water from the dewatering operation will continue to be discharged to on-site drainage ditches prior to discharge into the La Gigoulande Mill Stream via a settlement lagoon, as detailed in Discharge Permit DP(B)2000/11/03. On the commencement of infilling in the western quarry water pumped from the western quarry will be discharged to an enlarged settlement facility adjacent to and west of the western quarry. Surface water and groundwater from other areas of the site also will be pumped to the enlarged settlement facility. Consistent with the current site

operations the enlarged settlement facility will drain by gravity to La Gigoulande Mill Stream.

4.29 Regular inspection and maintenance of the pumps, drainage ditches and settlement lagoon will be undertaken in accordance with the following QHEST Procedures:

- BG4.1 Monitoring and Inspection;
- BG4.2 Plant and Equipment Maintenance.

4.30 Management and sampling of the site water system and discharge is undertaken in accordance with:

- JSY07 Management and Monitoring of Site Water Effluent and Discharges**.**

Surface Water

4.31 The planting of vegetation and trees upon restoration is designed to limit the potential for surface water runoff and the silt content in surface water runoff. The restoration proposals are shown on Figure WP 5.

4.32 Any remaining surface water run-off on-site will be collected in a surface water drainage system prior to its discharge into the La Gigoulande Mill Stream. The surface water will run off the crest of the landfill into ditches which surround it, as illustrated on Figure WP 5.

4.33 The water will drain from the ditches into the settlement lagoon. Once in the settlement lagoon the water will discharge via the discharge point at La Gigoulande Mill Stream, as detailed in Discharge Permit DP(B)2000/11/03.

4.34 The surface water drainage system is designed to support the restoration scheme, in particular the creation of Wet Woodland to the west, by the settlement lagoon.

4.35 As illustrated in Figure WP 5, some clean surface water will be directed away from the surface water drainage system into an internal quarry drainage system. This water will be utilised for internal functions such as dust suppression.

4.36 Construction of the surface water drainage system will take place during the final restoration phase once final restoration soils have been placed.

4.37 The surface water drainage system will be regularly inspected and maintained where necessary. Regular sediment collection will take place to ensure full flow rate through the ditches and to minimise flood risk. Inspection and maintenance of the ditches will be undertaken in accordance with the following QHEST Procedures:

- BG4.1 Monitoring and Inspection;
- JSY07 Management and Monitoring of Site Water Effluent and Discharges.

Haul Road Drainage

4.38 Internal haul roads will have an appropriate camber where possible maintained to promote the drainage of surface water to the existing quarry drainage system. All roads will continue to be maintained to minimise the generation of dust or mud that could make its way into the drainage systems and stream.

Bays and Bins

4.39 Due to the nature of the proposed operation there are no storage bays proposed as part of the landfilling operation. The only storage bin will be a container (skip or other suitable container) located near the operational area which will be used for the temporary storage of any quarantined waste prior to off-site disposal.

Site Office

4.40 Administration and welfare facilities for staff will be provided by the existing La Gigoulande Quarry infrastructure, outside of the proposed licence boundary. A weighbridge office will be provided as part of the weighbridge facilities.

5. Site preparation

Protection of Stripped Soil

5.1 It will not be necessary to strip any soils as part of the proposals the subject of the Waste Management Licence application. Soils used in the restoration will be sourced either from soil stored in bunds around La Gigoulande Quarry or imported restoration soils or soil forming materials sourced from waste.

Surface Water Management

5.2 See Paragraphs 4.31 to 4.37 above.

Groundwater Management

5.3 See Paragraphs 4.27 to 4.30 above.

Design of Containment Systems: Landfill

5.4 Due to the inert nature of the wastes to be deposited in the landfill, it is expected that there will be no significant generation of polluting leachate.

5.5 Based on the results of the Hydrogeological Risk Assessment[4] it is considered that basal and side slope lining systems comprising artificially established attenuation layers or other artificial barriers in the western quarry are not needed. There is also no considered need for a capping system, drainage blanket or surface water drainage layer.

Leachate and Landfill Gas Control System

5.6 Due to the inert, non-biodegradable nature of the waste no significant landfill gas or polluting leachate will be generated. It is therefore considered that there is no need to install Leachate and Landfill Gas Control Systems.

Installation of Monitoring Facilities

Gas

5.7 It is proposed that confirmatory landfill gas monitoring will be carried out during the operational period. The programme of gas monitoring is presented in Table WP 3. Proposals for landfill gas monitoring following closure of the site which may include the installation of in waste landfill gas monitoring boreholes will be agreed in advance with the Government of Jersey. The programme of landfill gas monitoring will be the subject of conditions of the Waste Management Licence.

5.8 Gas monitoring equipment will be inspected and maintained in accordance with the following QHEST procedures:

- BG4.1 Monitoring and Inspection;
- GB4.2 Plant and Equipment Maintenance;
- BG4.3 Instrument and Equipment Calibration.

Groundwater

5.9 Groundwater will be sampled in accordance with QHEST procedure 'JSY07 WI02 Groundwater Monitoring and Sampling' and 'JSY07 WI03 Water Sampling Dispatching Samples to the Lab'. The monitoring is summarised in Table WP 4 and the monitoring locations are shown on Figure WP 6.

5.10 Groundwater monitoring facilities will be inspected and maintained in accordance with the following QHEST procedures:

- BG4.1 Monitoring and Inspection;
- GB4.2 Plant and Equipment Maintenance;
- BG4.3 Instrument and Equipment Calibration.

5.11 In summary the monitoring infrastructure is inspected upon each monitoring visit. Notes regarding each borehole's condition are made in the returns to the Safety,

Health and Environment Department in the event they are damaged, lost or missing etc. Where an issue is noted, the issue is investigated and action taken as appropriate to ensure the issue is fixed or the monitoring point replaced, if required, in time for the next round of scheduled monitoring where possible.

Surface Water

5.12 Surface water will be sampled in accordance with QHEST procedure 'JSY07 WI01 Surface Water Monitoring and Sampling' and 'JSY07 WI03 Water Sampling Dispatching Samples to the Lab'. The monitoring is summarised in Table WP 5 and the monitoring locations are shown on Figure WP 6.

5.13 Monitoring facilities will be inspected and maintained in accordance with the following Brett QHEST procedures:

- BG4.1 Monitoring and Inspection;
- BG4.2 Plant and Equipment Maintenance;
- BG4.3 Instrument and Equipment Calibration.

5.14 A copy of the procedures will be kept in the Site Manager's office.

5.15 In summary the monitoring locations are inspected upon each monitoring visit. Notes regarding the discharge pipe's condition are made in the returns to the Safety, Health and Environment Department in the event they it is damaged etc. or where potentially contaminating material is present in or near stream monitoring points. Where an issue is noted, the issue is investigated and action taken as appropriate to ensure the issue is fixed, if required, such that the discharge of water from the site is maintained and monitoring locations remail accessible.

6. Waste reception

Checking Loads

6.1 All loads will be subject to pre-acceptance checks and inspected as far as practicable upon reception at the weighbridge, to ensure compliance with licensed waste types.

6.2 Waste inspection and acceptance will be carried out in accordance with the following QHEST procedures and forms:

- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- JSY40 WI01 Receipt and Pre-Approval of Customer Waste Enquiries;
- JSY40 WI02 Receipt of Pre-Approved Wastes for Recycling and Inert Landfill;
- JSY40a Allocated Waste Acceptance Roles and Responsibilities in Granite Products;
- JSY40b Waste Enquiry form;
- JSY40c Waste Enquiry Site Visit Form;
- JSY40d Pre-Approval List EXAMPLE;
- BA7 Operation of a Weighbridge;
- JSY42 Operation of Granite Products Inert Landfill.

6.3 All staff assigned a role, or having a responsibility, under this and associated procedures receive relevant training in accordance with the QHEST procedure 'BG2.2 Training, Awareness and Competence'.

Recording Loads

6.4 All loads of waste received at or removed from the landfill will be recorded. Records kept as a minimum will include date, time, type(s) of waste, weight/volume, source site address and carrier details.

6.5 Waste records will be created and maintained in accordance with the following QHEST procedures:

- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- BG2.5 Records and Records Management.

Inspection of Wastes: Deposit

6.6 All wastes will be inspected upon deposit to ensure compliance with the permitted waste types.

6.7 Waste inspection will be carried out in accordance with the following procedures:

- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- JSY40 WI02 Receipt of Pre-Approved Wastes for Recycling and Inert Landfill.

Rejection of Loads

6.8 All non-conforming wastes will be rejected. Non-conforming loads identified on deposit will be isolated and stored within a dedicated container (skip or other suitable container) while arrangements are made for the transfer of the materials off-site to a suitably licensed facility.

6.9 Waste rejection will be carried out in accordance with the following QHEST procedures and forms:

- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- JSY40 WI02 Receipt of Pre-Approved Wastes for Recycling and Inert Landfill
- JSY40f Waste Rejection Form;
- JSY40 WI05 Responding to Non-Compliant Test Data;

6.10 Waste sampling and analysis will be carried out in accordance with the following QHEST procedures and forms:

- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- JSY40 WI04 Sampling and Testing of Waste;
- JSY40 WI05 Responding to Non-Compliant Test Data;
- SY40h Analysis Request Form.

Handling, Segregation and Storage

6.11 Vehicles accessing the site will be directed to the recycling area which is the subject of Waste Management Licence WML026. Wastes will either be treated in the recycling area with the residues sent to landfill or, if treatment of the waste is not technically possible, wastes will be sent to the landfill. Initially, road going HGVs will not have direct access to the landfill. Wastes will be transported to the landfill in dump trucks. As the landfilling operations progress and when the waste level in the landfill is at a higher elevation, road going HGVs will have direct access to the landfill. Residues from the recycling operation will be tested and only directed the landfill where chemical results meet the site Waste Acceptance Criteria, otherwise alternative disposal arrangements will be made.

7. Site operations

Sequence of Filling: Landfill

7.1 The restoration of the quarry will be progressively achieved by working in lifts from the base of the quarry.

7.2 When the landfill deposits approach ground level a 5m high screening bund will be constructed temporarily on the western boundary of the site at the location shown on Figure WP 4 to provide noise screening. This will be removed upon completion of infilling.

7.3 The final layer will comprise restoration soils which have been previously stripped from the quarry prior to mineral extraction, supplemented as necessary by soils and soil forming materials generated at the recycling facility.

7.4 The site will then be restored to agricultural land and woodland. The proposed final levels and landform are illustrated on Figure WP 5. It is proposed that initially waste materials are deposited only to the level of the land surrounding the deeper western quarry void which ranges between approximately 55mAMSL and 61mAMSL. Waste will not be placed above that level without the prior agreement of the Government of Jersey.

Plant and Machinery

7.5 The plant and machinery that will be used at the site comprise the following:

- Dump trucks and loading shovel to load/transfer wastes from the recycling facility;
- Landfilling plant comprising tracked bulldozer and blade.

7.6 Inspection and maintenance of plant and machinery will be carried out in accordance with the following QHEST procedures:

- BG4.1 Monitoring and Inspection;
- BG4.2 Plant and Equipment Maintenance;

- BG4.3 Instrument and Equipment Calibration.

7.7 In the event of plant breakdown, alternative machines will be sourced as soon as practicable, either from elsewhere on the quarry site or from off-site.

Method of Placement

7.8 The restoration of the quarry will be worked in lifts, with waste placed in layers not exceeding 2.5metres in height. It will be compacted using a tracked bulldozer and blade.

7.9 Vehicles accessing the site will be directed to the recycling area which is the subject of Waste Management Licence WML026. Wastes will either be treated in the recycling area with the residues sent to landfill or, if treatment of the waste is not technically possible, wastes will be sent to the landfill. Initially, road going HGVs will not have direct access to the landfill. Wastes will be transported to the landfill in dump trucks. As the landfilling operations progress and when the waste level in the landfill is at a higher elevation, road going HGVs will have direct access to the landfill. Residues from the recycling operation will be tested and only directed the landfill where chemical results meet the site Waste Acceptance Criteria, otherwise alternative disposal arrangements will be made.

Emergency Tipping Area

7.10 In the event that site conditions make access to the landfilling tipping area problematic, landfilling operations will either be temporarily suspended until site conditions improve or waste will only be transported to the operational landfill by dumper trucks from the recycling area. Given that the recycling area will provide a facility for the transfer of waste from HGVs to dumper trucks and the temporary storage of waste, there will therefore be no requirement for an emergency tipping area.

Cell Sizing

7.11 The site will only accept inert waste and accordingly there are no proposals to construct discrete cells. Landfilling activities will be restricted to one operational area at any one time with landfilling progressively advancing across the quarry.

Cover Materials

7.12 Due to the inert nature of the materials to be deposited at the site, there will be no requirement to cover the waste at the end of each working day.

7.13 Topsoils and subsoils will be placed on top of the final landform. The soils may be derived from the site or from soils and soil forming materials husbanded from the inert waste stream that will be recycled at the site.

Compatible Wastes

7.14 Only inert wastes that are not biodegradable will be accepted onto site. Inert waste is waste that will not undergo any significant physical, chemical or biological transformation or reaction, or give rise to environmental pollution or harm human health.

7.15 It is therefore considered that all wastes accepted onto site will be compatible.

Special Waste Management Procedures

7.16 There are no special waste management procedures required on site due to the nature of the proposed operations and inert nature of the proposed materials.

Residues

7.17 It is anticipated that the majority of the waste imported will be directed to the recycling facility which is the subject of Waste Management Licence WML026. Residues from the recycling operation together with wastes for which treatment is not technically possible will be directed to the landfill. It is anticipated that up to 60% of the waste material delivered will be recycled, leaving up to approximately 80,000 tonnes per annum of inert waste to be landfilled.

7.18 Residues from the recycling operation will be tested and only directed the landfill where chemical results meet the site Waste Acceptance Criteria, otherwise alternative disposal arrangements will be made.

Leakages or Spills

7.19 The use of static and mobile plant and vehicles has the potential to cause leakages or spills on site. Preventative maintenance will be undertaken in accordance with manufacturer's recommendations to minimise the likelihood of leaks or spills.

7.20 Minor spillages will be cleaned up immediately using sand or proprietary absorbent to clean up liquids and placed in suitable containers for disposal off site. Materials suitable for absorbing and containing minor spillages will be maintained on site and staff trained in their use.

7.21 Site staff will undertake daily monitoring for evidence of spillage and leakage.

7.22 The Site Manager will be responsible for implementing risk management measures in accordance with the following QHEST procedures:

- BG4.1 Monitoring and Inspection;
- BG4.2 Plant and Equipment Maintenance;
- BG3.8 Housekeeping, Litter, Pest and Vermin Control;
- BG5.1 Emergency Preparedness and Response;
- BG5.2 Reporting and Investigation of Accident Incident and Complaint;
- BG5.3 Near Miss Reporting.

Tidiness

7.23 The site will be monitored and kept tidy with storage areas maintained within capacity in accordance with the following QHEST procedures:

- BG3.8 Housekeeping, Litter, Pest and Vermin Control;
- BG4.1 Monitoring and Inspection;
- JSY43 Amenity Management – Prevention of Mud, Dust and Noise Emissions.

7.24 Significant quantities of windblown material are not anticipated at the site due to the inert nature of the wastes. Notwithstanding this, inspections will be carried out by the nominated site staff on a daily basis and any necessary remedial action will be taken to ensure the site is maintained in a tidy condition.

7.25 Any loose materials will be collected and placed in designated stockpile areas or in skips for off-site disposal.

Process

7.26 The process the subject of the Waste Management Licence will be the landfill disposal of inert waste. It is anticipated that the majority of the waste imported will be directed to the recycling facility which is the subject of Waste Management Licence WML026. Residues from the recycling operation together with wastes for which treatment is not technically possible will be directed to the landfill. Wastes will only be accepted into the landfill after satisfactory testing.

8. Pollution controls

Leachate Control

8.1 Due to the inert, non-biodegradable nature of the waste no significant polluting leachate will be generated. It is therefore considered that there is no need to install a Leachate Control System.

Landfill Gas Control

8.2 Due to the inert, non-biodegradable nature of the waste no significant landfill gas will be generated. It is therefore considered that there is no need to install a Landfill Gas Control System.

Dust

8.3 For the majority of the infilling operations working will take place at a level which is screened by quarry faces and soil storage bunds together with local vegetation. The following measures will be implemented in accordance with QHEST procedures including 'JSY43 Amenity Management - Prevention of Mud, Dust and Noise Emissions'to control and minimise emissions of dust from the site:

- Speed limits will be implemented for vehicles using the site;
- Traffic calming measures will be implemented to enforce speed limits and reduce emissions of dust;
- Site access and haul roads and operational areas will be maintained and repaired to minimise emissions of dust due to uneven and poor surfacing;
- All roads and operational areas will be swept where necessary to reduce dust emissions;
- All vehicles delivering waste to the site shall be advised to sheet and cover wastes to minimise emissions of dust;
- Water bowsers will be used as necessary to minimise the risk of the generation of unacceptable emissions of dust;

- Daily, visual inspection at all areas of the site and site boundary will be carried out by site personnel;
- In the event that significant visual dust is observed at the boundaries of the operational areas and landfilling operations are found to be the cause action will be taken to suppress the dust through the use of dust suppression;
- A record of the inspection findings and remedial action taken will be made in the site diary.

Noise/Vibration

8.4 The following measures will be implemented as required to keep noise and vibration to a minimum, in line with QHEST procedure 'JSY43 Amenity Management - Prevention of Mud, Dust and Noise Emissions':

- Speed limits will be implemented for vehicles using the site;
- Traffic calming measures will be implemented to enforce speed limits;
- Site access and haul roads and operational areas will be maintained and repaired to minimise emissions of noise due to uneven and poor surfacing;
- All site plant and equipment are maintained in accordance with a planned preventative maintenance schedule in line with 'BG4.2 Plant and Equipment Maintenance' reflecting manufacturers requirements as a minimum;
- Auditory inspections will be carried out daily and in response to complaints;
- A record of the inspection findings will be made in the site diary.

Odour

8.5 Only inert waste will be accepted at the site. Accordingly the site is unlikely to generate unacceptable odours. Notwithstanding this the following measures will be implemented to keep odours from the site to a minimum:

- No putrescible or readily degradable wastes will be accepted at the site;

- No odorous wastes will be accepted at the site;
- The site will be monitored for odours by site personnel throughout the working day;
- In the event that odours are detected, investigations will be undertaken to determine the cause and appropriate remedial action taken in accordance with QHEST procedure 'BG3.8 Housekeeping, Litter, Pest and Vermin Control';
- In the event that odorous waste is delivered to site it will be rejected at the earliest opportunity;
- The Site Manager will be responsible for implementing risk management measures in accordance with QHEST procedures.

Vermin/Insect/Bird Control

8.6 Only inert waste will be accepted at the site. Accordingly the site is unlikely to attract birds, vermin and insects. Notwithstanding this, the following suitable control measures will be implemented to manage vermin, insects and birds:

- Waste acceptance procedures will ensure that only inert wastes are accepted;
- In the event that birds, vermin and insects are identified at the site, a specialist pest control contractor will be employed to undertake remedial measures in accordance with QHEST procedure 'BG3.8 Housekeeping, Litter, Pest and Vermin Control';
- The Site Manager will be responsible for implementing risk management measures in accordance with QHEST procedures.

Litter

8.7 Only inert waste will be accepted at the site. Accordingly the waste is unlikely to generate litter. Notwithstanding this the site will be managed in accordance with QHEST procedure 'BG3.8 Housekeeping, Litter, Pest and Vermin Control'.

8.8 The following suitable control measures will be implemented to ensure that no litter is allowed to escape beyond the site boundary:

- Waste acceptance procedures will ensure that only inert wastes are accepted;
- The Site Manager will be responsible for implementing risk management measures in accordance with QHEST procedures.

9. Monitoring

9.1 All monitoring will be carried out in compliance with the following QHEST procedures:

- JSY07 Management and Monitoring of Site Water Effluent and Discharges;
- JSY07 WI01 Surface Water Monitoring and Sampling;
- JSY07 WI02 Groundwater Monitoring and Sampling;
- JSY07 WI03 Water Sampling – Dispatching Samples to the Lab;
- BG2.5 Records and Records Management;
- BG4.3 Instrument and Equipment Calibration.

9.2 All staff assigned a monitoring role, or responsibility, receive relevant training in accordance with the QHEST procedure 'BG2.2 Training, Awareness and Competence'.

Surface Water

9.3 During the operation of the landfill surface water monitoring will be undertaken in accordance with the above QHEST procedures, the site's Discharge Permit DP(B)2000/11/03 and recommendations arising from the Hydrogeological Risk Assessment[4]. The monitoring regime is presented in Table WP 5 and the monitoring locations are shown on Figure WP 6. Proposals for surface water monitoring following closure of the site will be agreed in advance with the Government of Jersey.

9.4 Investigation and action will be taken in the event of a significant difference between downstream and upstream surface water quality, a breach of any discharge limits, or a trending deterioration of the quality of the discharge where there is potential for a significant effect on the environment to be caused. The following actions and investigations may be taken as appropriate:

- Notify the Government of Jersey;
- Increase the sampling frequency/take repeat samples;

- Undertake investigate work to identify the source of contaminants;
- Report to the Government of Jersey on the re-appraisal of risks and options for corrective measures;
- If the risk are acceptable re-evaluate the assessment criteria;
- If the risks are unacceptable implement agreed corrective measures.

Groundwater

9.5 During the operation of the landfill groundwater monitoring will be undertaken in accordance with the above QHEST procedures and recommendations arising from the Hydrogeological Risk Assessment[4]. The monitoring regime is presented in Table WP 4 and the monitoring locations are shown on Figure WP 6. Proposals for groundwater monitoring following closure of the will be agreed in advance with the Government of Jersey.

9.6 In the event of the compliance limits presented in the Hydrogeological Risk Assessment[4] being exceeded, the following actions may be taken as appropriate:

- Notify the Government of Jersey;
- Increase the sampling frequency/take repeat samples;
- Undertake investigate work to identify the source of contaminants;
- Report to the Government of Jersey on the re-appraisal of risks and options for corrective measures;
- If the risk are acceptable re-evaluate the assessment criteria;
- If the risks are unacceptable implement agreed corrective measures.

Landfill Gas

9.7 It is proposed that confirmatory landfill gas monitoring will be carried out during the operational period. The programme of gas monitoring is presented in Table WP 3. Proposals for landfill gas monitoring following closure of the site which may include the installation of in waste landfill gas monitoring boreholes will be agreed in advance with the Government of Jersey. The programme of landfill gas monitoring will be the subject of conditions of the Waste Management Licence.

9.8 Investigation and action will be taken in the event of landfill gas is detected and there is potential for a significant effect on the environment to be caused. The following actions and investigations may be taken as appropriate:

- Notify the Government of Jersey;
- Undertake repeat monitoring;
- Investigate potential sources of the elevated concentration;
- Continue monitoring to establish whether a trend exists;
- Identify cause; and
- Take remedial actions as appropriate to prevent a significant impact on receptors.

Void Space

9.9 An annual topographic survey will be undertaken to provide a detailed plan at an appropriate scale of the site and enable volumetric and settlement plans to be produced.

Dust, Noise and Vibration

9.10 The measures detailed in Paragraphs 8.3 and 8.4 will be implemented to keep noise and vibration to a minimum and control and minimise emissions of dust from the site. Notwithstanding this, the following monitoring will be undertaken at the site:

- Daily, visual inspection at all areas of the site and site boundary will be carried out by site personnel;
- Auditory inspections will be carried out daily and in response to complaints;
- A record of the inspection findings will be made in the site diary.

9.11 Monitoring will be implemented in line with the following QHEST procedures:

- BG4.1 Monitoring and Inspection;
- JSY43 Amenity Management - Prevention of Mud, Dust and Noise Emissions.

Odour

9.12 Only inert waste will be accepted at the site. Accordingly the site is unlikely to generate odour. The measures detailed in Paragraph 8.5 will be implemented to keep odours from the site to a minimum. Notwithstanding this, the site will be monitored for odours by site personnel throughout the working day. Monitoring will be implemented in line with the following QHEST procedure:

- BG4.1 Monitoring and Inspection.

10. Records

10.1 Records will be kept in accordance with the following QHEST procedure:

- BG2.5 Records and Records Management.

Wastes Received and Removed

10.2 Records will be kept of all wastes received and removed from the site in accordance with the following QHEST procedures:

- BA7 Operation of a Weighbridge;
- JSY40 Waste Acceptance Procedure for GP Recycling and Inert Landfill Facilities;
- JSY40 WI01 Receipt and Pre-Approval of Customer Waste Enquiries;
- JSY40 WI02 Receipt of Pre-Approved Wastes for Recycling and Inert Landfill;
- JSY40 WI04 Sampling and Testing of Waste;
- JSY40 WI05 Responding to Non-Compliant Test Data;
- JSY40b Waste Enquiry form;
- JSY40c Waste Enquiry Site Visit Form;
- JSY40d Pre-Approval List EXAMPLE.

10.3 The Weighbridge Operator will keep a full computer record of the details of each delivery including date and time, weight, type of waste, source site address and haulier details.

10.4 Records will be maintained in the site control office.

Rejected Wastes

10.5 Records will be kept of all wastes rejected from the site. The record will be made utilising QHEST form: JSY40f Waste Rejection Form.

10.6 If any non-conforming waste does make it onto site a record will be kept of every rejection occurrence and details will be kept of the type of waste, the isolation method and who collected it, or if managed directly by Granite Products, where it was sent.

10.7 Regular submissions of the records will be provided to the Government of Jersey as required.

Site Diary

10.8 A site diary will be maintained on site in the Site Manager's office for use by all staff including the Weighbridge Clerk, Plant Operatives and Site Manager to record specified events. It will be updated as necessary by the Site Manager and Weighbridge Clerk. It will also be available during site audit and inspection.

Monitoring Data

10.9 All monitoring results for gas, surface water and groundwater will be recorded and kept in the Site Manager's office as well as on the monitoring and analysis database managed by Brett Group SHE department. Results will be submitted to the Government of Jersey on a quarterly basis unless there has been agreement between Granite Products and the Government of Jersey to vary the submission frequency.

Waste Analysis

10.10 The results of all waste analysis will be maintained at the Site Manager's office as well as on the monitoring and analysis database managed by Brett Group SHE department.

Site Inspections

10.11 The site will be inspected daily in accordance with the appropriate Brett QHEST procedures. Records of site inspections will be maintained in the Site Manager's office.

Annual Report

10.12 On an annual basis a report on the activities carried out at the site in the previous year will be submitted to the Government of Jersey. The report will include a review of the results of the monitoring carried out in the previous year including an assessment of the results of the monitoring against the assumptions used in the risk assessments, the topographical survey and volumetric calculations including the void consumed in the previous year and the void remaining. The report of the activities carried out in the previous years will be submitted to the Government of Jersey by 31 January or other date agreed with the Government of Jersey.

11. Site completion

Finished Levels

11.1 The post-settlement restoration contours are identified on Figure WP 5. Due to the inert nature of the waste to be deposited at the site there will be no significant settlement. As such, no drawing showing pre-settlement contours is provided. As explained in Paragraph 7.4 it is proposed that initially waste materials are deposited only to the level of the land surrounding the deeper western quarry void which ranges between approximately 55mAMSL and 61mAMSL. Waste will not be placed above that level without the prior agreement of the Government of Jersey.

Settlement

11.2 Due to the inert nature of the waste that will be accepted at the site there will be no significant settlement of the landfilled waste. The annual topographical surveys will be used to monitor settlement of materials.

Seeding/Planting of Vegetation

11.3 Once the sub and topsoils have been placed to the final landform, seeding and planting of vegetation will be carried out in accordance with the restoration scheme agreed with the Government of Jersey under the planning consent (ref. P.2012.0121).

11.4 Trees will be planted in the areas to be restored to woodland and a mixture of soil enriching plants will be planted in areas to be restored to agriculture. Seeding and planting of vegetation will be undertaken during the first planting season following completion of infill.

Drainage

11.5 Following completion of the landfill a network of ditches will be installed on and around the perimeter of the landfill area in order to minimise erosion and solid suspension, intercept run off and divert it to either the wet woodland area or the quarry drainage system.

11.6 Discharge via the wet woodland area will prevent uncontrolled silt laden run-off, and provide for settlement of fines prior to discharge to La Gigoulande Mill Stream, as detailed in Discharge Permit DP(B)2000/11/03.

11.7 The ditch network will be cleaned out regularly to reduce sediment build up and maintain efficient flow. The drainage system for the restored site is illustrated on Figure WP 5.

Capping

11.8 Due to the inert nature of waste to be deposited at the site an engineered capping system is not considered necessary. Restoration soils will be placed above the deposited waste to achieve the final contours.

Post Closure and Aftercare

11.9 Upon completion of infilling, the site will continue to be monitored under the Waste Management Licence. Proposals for monitoring following closure of the will be agreed in advance with the Government of Jersey.

TABLES

Table WP 1 - List of wastes

	Permitted waste types and quantities
Maximum quantity/other limitations	**Maximum Quantities** The total quantity of waste accepted at the site shall not exceed 200,000 tonnes a year.
	Exclusions Wastes having any of the following characteristics shall not be accepted: - Wastes consisting solely or mainly of dusts, powders or loose fibres - Hazardous wastes - Wastes that are in a form which is either sludge or liquid
Waste Code	**Description**
01	Wastes resulting from exploration, mining and quarrying and physical treatment of minerals
01 01	Wastes from mineral excavation
01 01 02	Wastes from mineral non-metalliferous excavation
01 04	Wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	Waste gravel and crushed rocks
01 04 09	Waste sand and clays
01 04 12	Waste tailings – limited to sediment removed from the on-site silt settlement lagoon
01 04 13	Wastes from stone cutting and sawing
10	Wastes from thermal processes
10 11	Wastes from manufacture of glass and glass products
10 11 12	Clean glass
10 12	Wastes from the manufacture of ceramic goods, bricks, tiles and construction projects
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)
10 13	Wastes from manufacture of cement, lime and plaster products and articles and products made from them
10 13 14	Waste concrete products and reject concrete products
15	Waste packaging
15 01	Packaging
15 01 07	Clean glass only
17	Construction and demolition wastes
17 01	Concrete, bricks, tiles and ceramics
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles and ceramics
17 02	Wood, glass and plastic
17 02 02	Clean glass only
17 05	Soil and stones

17 05 04	soil and stones
17 09	Other construction and demolition wastes
17 09 04	Mixed construction and demolition wastes
19	Wastes from waste management facilities
19 12	Wastes from the mechanical treatment of waste (for example, sorting, crushing, compacting, pelletising) not otherwise specified
19 12 05	Clean glass excluding high lead glass from WEE treatment
19 12 09	Minerals (for example sand, stones)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	Separately collected fractions
20 01 02	Glass [clean glass only]
20 02	Garden and park wastes
20 02 02	Soil and stones [only from garden and parks waste; excluding topsoil and peat]

Table WP 2 - Waste acceptance criteria

Limits of the constituents of leachate produced from a waste using the BS EN 12457:2002 test for wastes that may be accepted at an inert landfill		
Component	**Symbol**	**L/S = 10 l/kg mg/kg dry substance**
Arsenic	As	0.5
Barium	Ba	20
Cadmium	Cd	0.04
Total Chromium	Cr_{total}	0.5
Copper	Cu	2
Mercury	Hg	0.01
Molybdenum	Mo	0.5
Nickel	Ni	0.4
Lead	Pb	0.5
Antimony	Sb	0.06
Selenium	Se	0.1
Zinc	Zn	4
Chloride	Cl^-	800
Fluoride	F^-	10

Sulphate[1]	SO_4^{2-}	1,000
Phenol index	PI	1
Dissolved organic carbon[2]	DOC	500
Total dissolved solids[3]	TDS	4,000
Limit values for the total content of organic parameters in inert wastes		
Component		**Value (mg/kg)[4]**
Total organic carbon (TOC)[5]		30,000
BTEX compounds (benzene, toluene, ethyl benzene and xylenes)		6[6]
Polychlorinated biphenyls (PCBs) (7 congeners)		1

[1] This limit value for sulphate may be increased to 6,000mg/kg, provided that the value of Co (the first eluate of a percolation test at L/S = 0.1 l/kg) does not exceed 1,500 mg/l. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions.

[2] If the waste does not meet this value for Dissolved Organic Carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg.

[3] The value for Total Dissolved Solids can be used alternatively to the values for sulphate and chloride.

[4] As presented in Section 2.1.2.2. of the Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to the Directive 1999/31/EC unless stated otherwise.

[5] In the case of soils, a higher limit value may be permitted provided a Dissolved Organic Carbon value of 500mg/kg is achieved at L/S 10 l/kg at the pH of the soil or at a pH value of between 7.5 and 8.0.

[6] In the unlikely event that a particular sample exceeds these criteria, speciated analysis could be carried out. This may demonstrate that there is no risk to the environment if no single substance is highly elevated.

PAHs (Polycyclic aromatic hydrocarbons) (total of 17)	100[6,7]
Mineral oil (C10 to C40)	500[6]

[7] Section 2.1.2.2. of the Council Decision of 19 December 2002 states that Member States will set a limit value for PAHs. The limit value of 100mg/kg is set in Paragraph 7.(f) to Schedule 10 of The Environmental Permitting (England and Wales) Regulations 2016.

Table WP 3 – Gas monitoring during the operational period

	Location	Frequency	Determinands
Gas (impact searcher bar technique)	Minimum 2 points per ha in the landfilled area	6 monthly	CH_4, CO_2, O_2, meteorological and ground conditions

Table WP 4 – Groundwater monitoring during the operational period

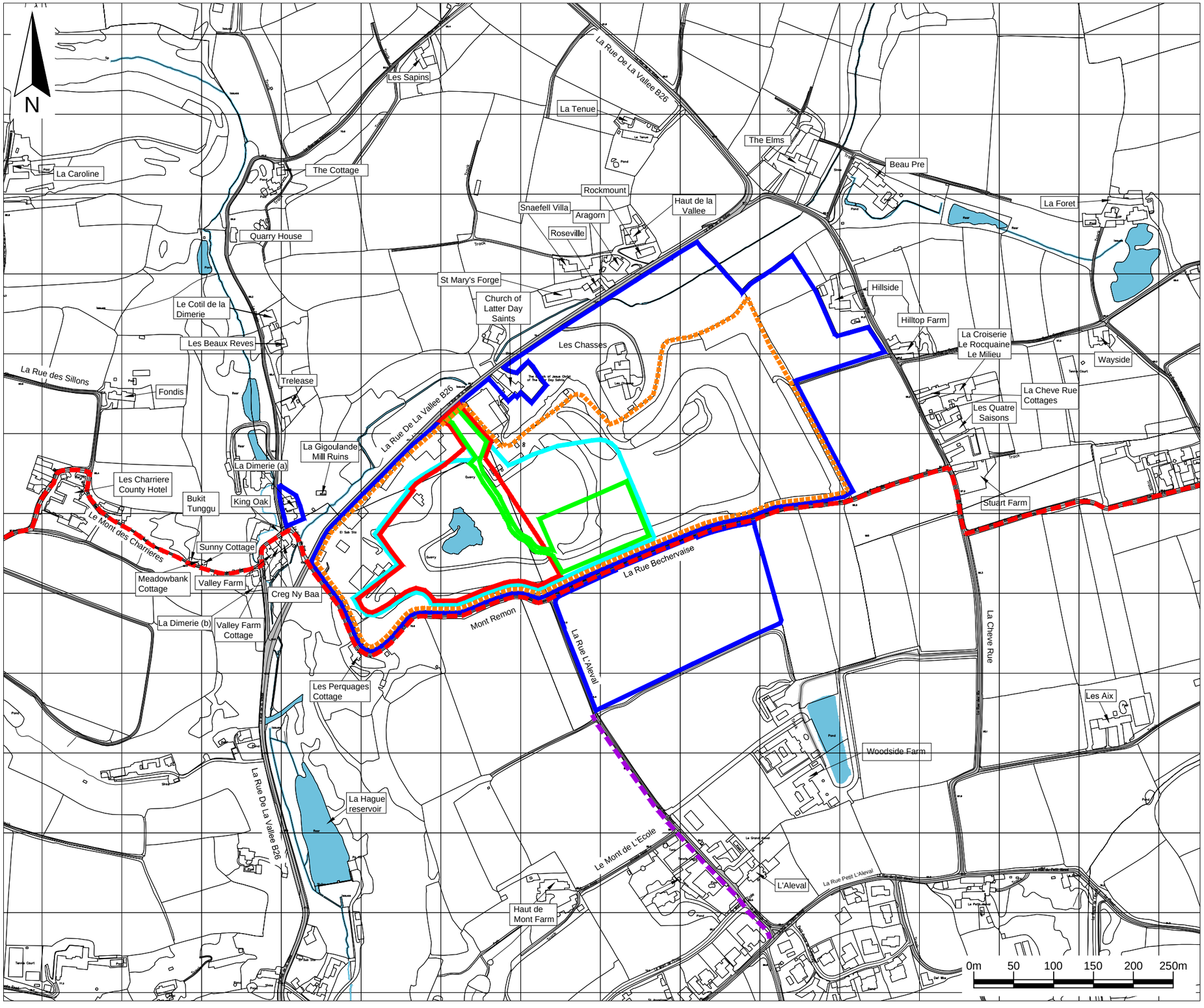
	Location	Frequency	Determinands
Groundwater	Boreholes BH1, BH2, BH3, BH5, BH6, BH7, BH9 and BH10 and BH11 and groundwater in the quarry dewatering sump	While dewatering is ongoing at the site groundwater level monitoring will be undertaken monthly. The frequency of groundwater level monitoring will be reviewed following cessation of dewatering pumping.	Water level in boreholes and the quarry sump[1]. Record whether groundwater is being abstracted from pumping wells Pump 1, Pump 2, Pump 3 or Pump 4 at the time of monitoring.
	Water collected in the quarry dewatering sump	Monthly	pH, electrical conductivity, chloride, ammoniacal nitrogen, biochemical oxygen demand (BOD), sulphate, suspended solids and speciated petroleum hydrocarbons.
	Boreholes BH1, BH2, BH3, BH5, BH6, BH7, BH9, BH10 and BH11	Quarterly	pH, electrical conductivity, alkalinity ammoniacal nitrogen, chloride, copper, fluoride, lead, iron, manganese, nitrate, sulphate, magnesium, potassium, calcium, sodium, chromium, nickel, arsenic, cadmium, mercury, selenium, fluoride, zinc, polycyclic aromatic hydrocarbons (PAH) and benzene, toluene, ethylbenzene and xylene (BTEX).
	Water collected in the quarry dewatering sump		As above plus BOD, speciated petroleum hydrocarbons and suspended solids

[1] The water level in the dewatering sump is maintained by float switches controlling the pump between 20m above Mean Sea Level (mAMSL) and 23mAMSL currently. Whenever the sump is relocated the new sump location will be surveyed to Mean Sea Level and the new water level in the dewatering sump at which water level are maintained will be recorded in mAMSL and reported in the monitoring records.

Table WP 5 – Surface water monitoring during the operational period

	Location	Frequency	Determinands
Surface water	SW1	Monthly	pH, electrical conductivity, chloride, ammoniacal nitrogen, biochemical oxygen demand (BOD), sulphate and suspended solids
	SW2, SW3 and discharge		As above plus speciated petroleum hydrocarbons
	Blockyard sump		Speciated petroleum hydrocarbons
	SW1, SW2, SW3 and discharge	Quarterly	As monthly plus alkalinity, magnesium, potassium, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese, arsenic, cadmium, mercury, selenium, fluoride and nitrate
	Settlement lagoon and blockyard sump		Speciated petroleum hydrocarbons and suspended solids

FIGURES



Key / Notes

- Land under the control of Granite Products Limited
- Boundary of the area the subject of the Waste Management Licence application
- Boundary of planning permission reference P/2006/1273 dated 12 March 2007 and planning permission reference P/2012/0121 dated 27 September 2016
- Boundary of Waste Management Licence WML026
- Approximate boundary of La Gigoulande Quarry
- Cycle route 3
- Cycle route 6a
- La Gigoulande Mill Stream
- Surface waterbody

Rev	Status	Drn	App	Chk	Date
	Final	KR	GT	GT	13/10/23

Site: LA GIGOULANDE QUARRY

Client: GraniteProducts – QUALITY LOCAL STONE SINCE 1946

Title: The site and surrounding area

Figure WP 2

Scale: 1:5,000@A3

Drawing Ref: BGL/JE/02-23/23569

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Key / Notes

- Boundary of the area the subject of the Waste Management Licence application
- Boundary of Waste Management Licence WML026
- Approximate boundary of La Gigoulande Quarry
- Contour (m AMSL)
- Building
- La Gigoulande Mill Stream
- Crest of quarry face
- Toe of quarry face
- Crest of safety bund
- Toe of safety bund
- Crest of rock
- Toe of rock
- Crest of stock
- Toe of stock
- Crest of batter
- Toe of batter
- Fence

Note:
Survey base data taken from GPLAGSV 15MAR23 BEST FIT GOVT JERSEY GRID

Rev	Status	Drn	App	Chk	Date
	Final	KR	GT		

Site: LA GIGOULANDE QUARRY

Client: GraniteProducts – QUALITY LOCAL STONE SINCE 1946

Title: The site topography

Figure WP 3

Scale: 1:2,500@A3

Drawing Ref: BGL/JE/02-23/23570

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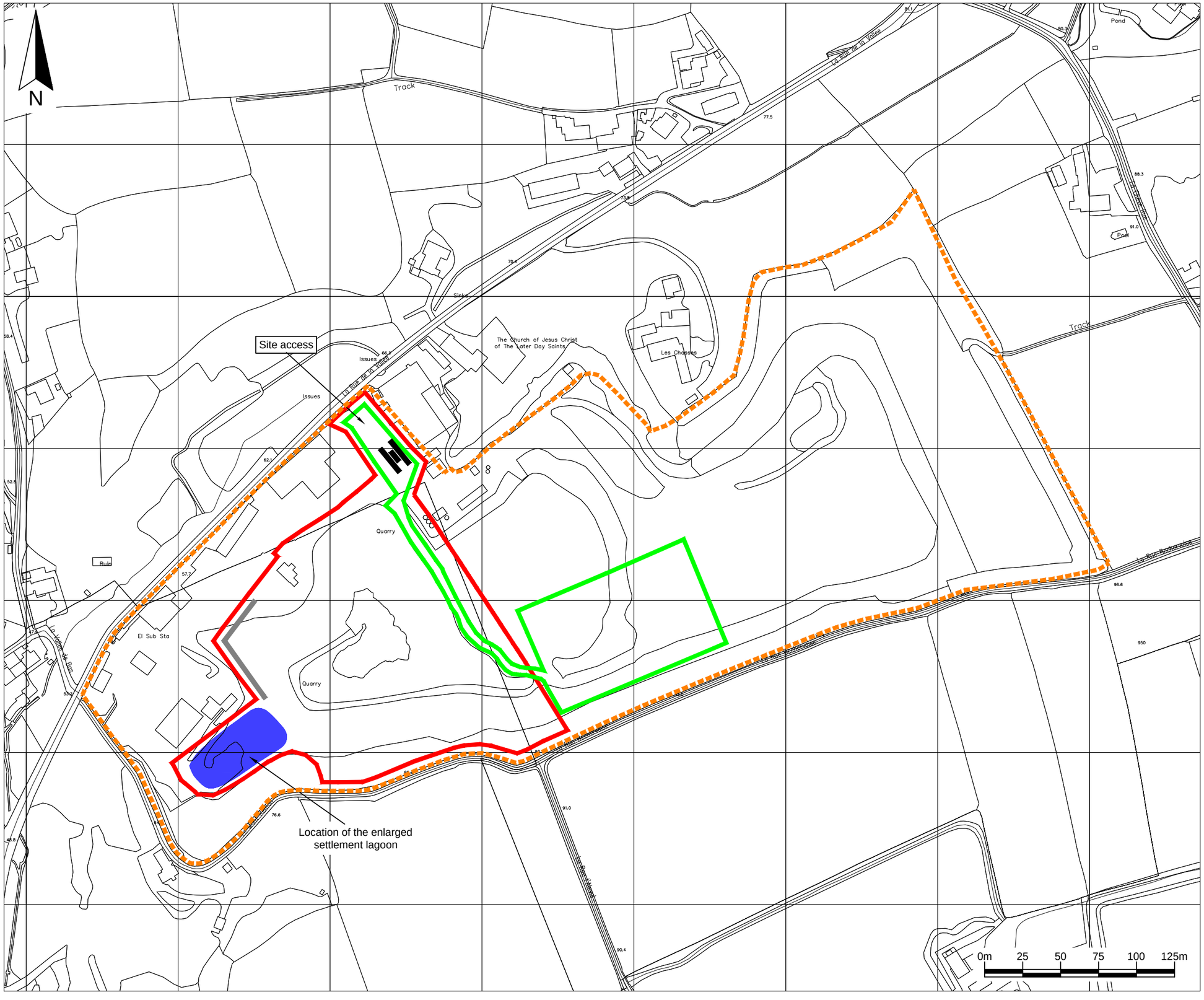

Key / Notes

- Boundary of the area the subject of the Waste Management Licence application
- Boundary of Waste Management Licence WML026
- Approximate boundary of La Gigoulande Quarry
- Approximate location of the proposed 5m high temporary noise screening bund
- Proposed weighbridge/ weighbridge office

Rev	Status	Drn	App	Chk	Date
	Final	KR	CJG	GT	13/10/23

Site
LA GIGOULANDE QUARRY

Client
GraniteProducts
QUALITY LOCAL STONE SINCE 1946

Title
The site infrastructure

Figure WP 4

Scale
1:2,500@A3

Drawing Ref
BGL/JE/10-23/23954

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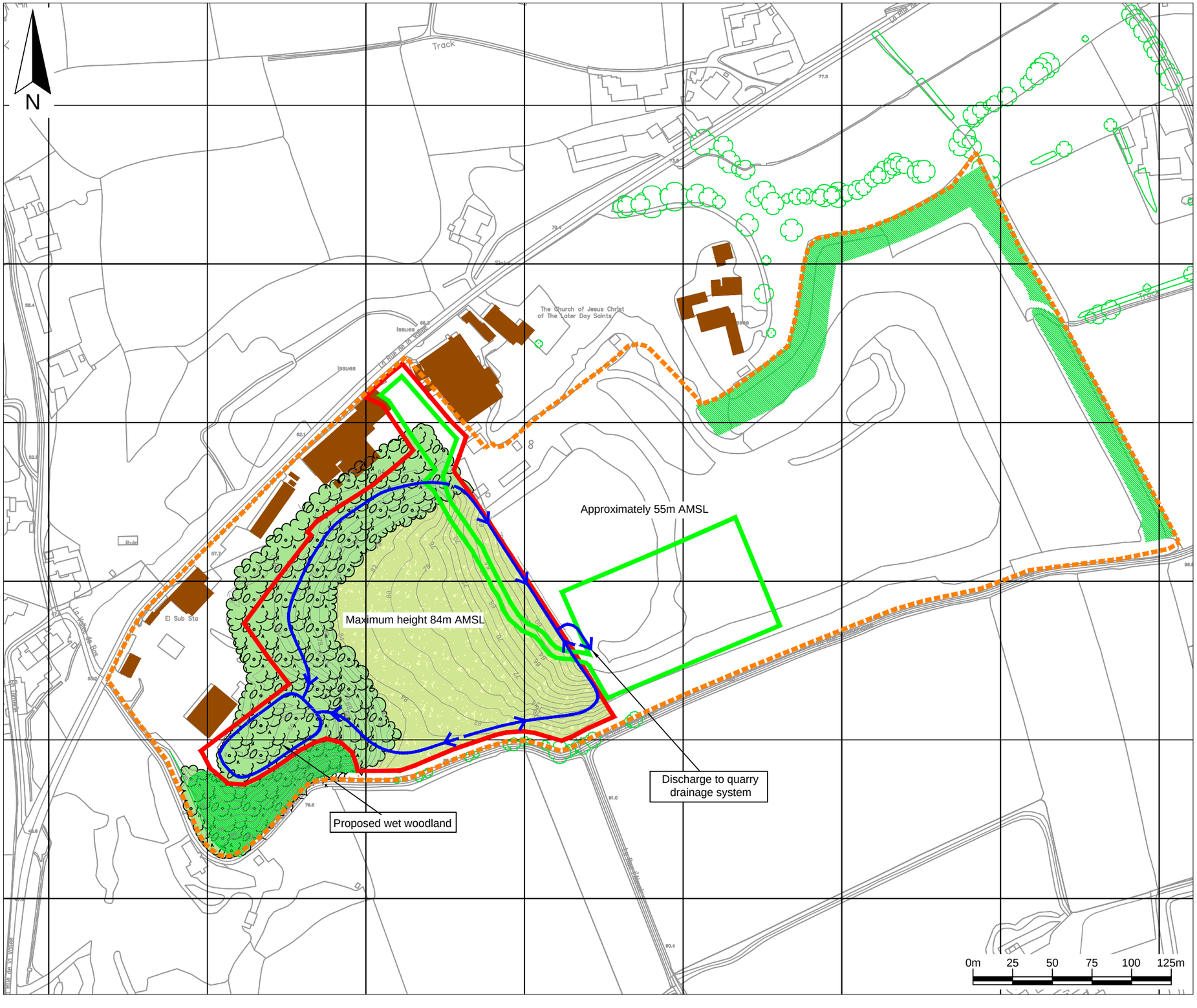

Key / Notes

- Boundary of the area the subject of the Waste Management Licence application
- Boundary of Waste Management Licence WML026
- Approximate La Gigoulande Quarry boundary
- Restoration contours (m ASL)
- Building
- Vegetated bund
- Proposed agricultural land
- Proposed tree planting
- Proposed perimeter ditch and direction of flow

Rev	Status	Drn	App	Chk	Date
	Final	KR	GT	GT	13/10/23

Site: LA GIGOULANDE QUARRY

Client: GraniteProducts

Title: The proposed restoration of the western quarry

Figure WP 5

Scale: 1:2,500@A3

Drawing Ref: BGL/JE/02-23/23571

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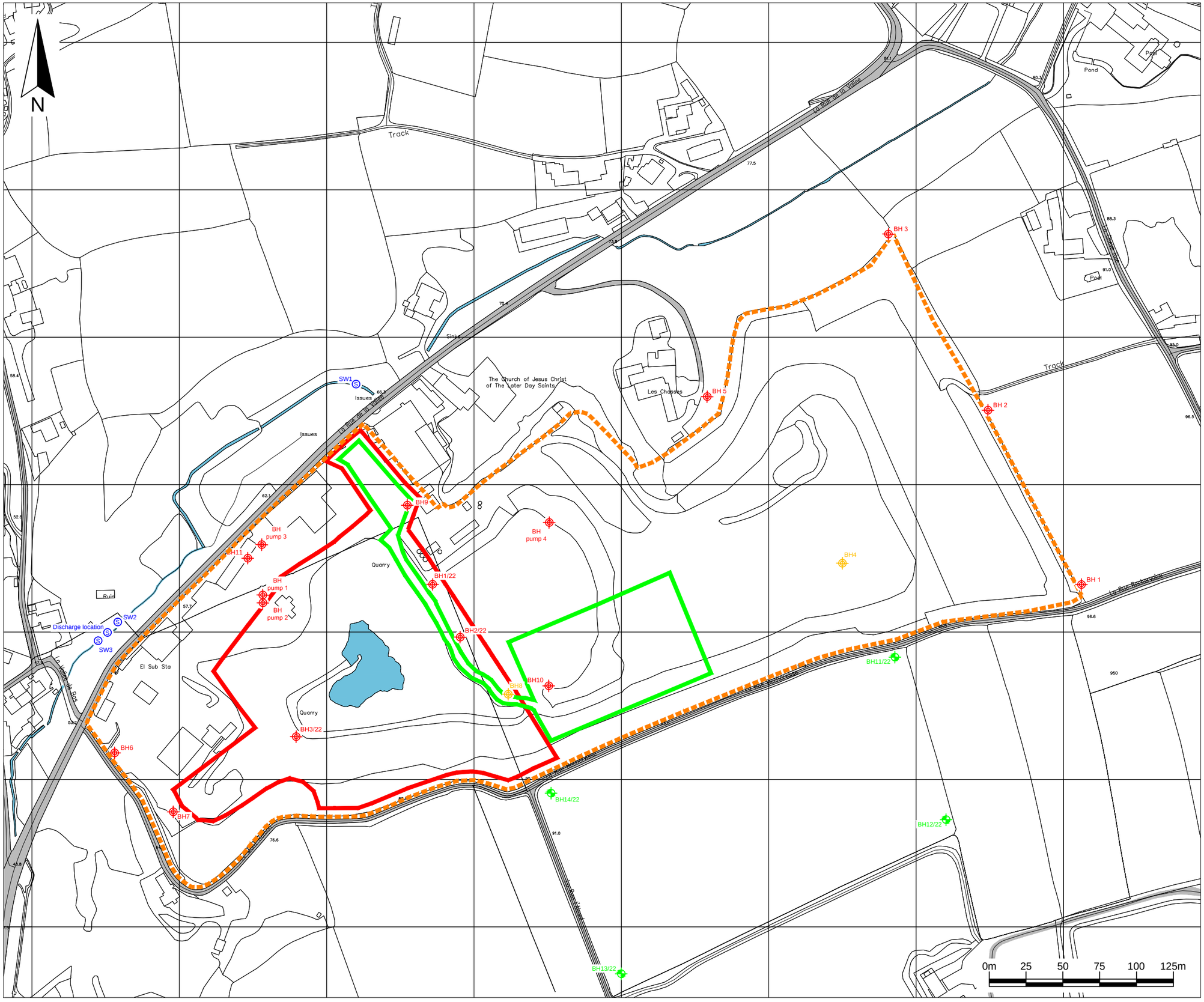

Key / Notes

- Boundary of the area the subject of the Waste Management Licence application
- Boundary of Waste Management Licence WML026
- Approximate boundary of La Gigoulande Quarry
- La Gigoulande Mill Stream
- Culverted watercourse
- BH1 — Approximate location of a borehole in the granite
- SW1 — Approximate location of a surface water monitoring point
- BH4 — Approximate location of a borehole that has been lost
- BH11/22 — Approximate location of a groundwater monitoring borehole

Rev	Status	Drn	App	Chk	Date
	Final	KR	CJG	GT	03/11/23

Site: LA GIGOULANDE QUARRY

Client: Granite Products — QUALITY LOCAL STONE SINCE 1946

Title: The locations of groundwater and surface water monitoring points

Figure WP 6

Scale: 1:2,500@A3

Drawing Ref: BGL/JE/11-23/24019

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