

**PROMOTION OF AN EXTENSION TO THE MINERAL
EXTRACTION OPERATIONS AT LA GIGOULANDE
QUARRY, JERSEY**

**AN APPRAISAL OF THE PROPOSED SOUTHERN
EXTENSION**

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1. Introduction

- 1.1** La Gigoulande Quarry is an operational mineral extraction site and multi product manufacturing facility located in St Peter's Valley in the parishes of St Peter and St Mary on the Island of Jersey (referred to in this report as the Island) (Figure 1). La Gigoulande Quarry (referred to as the existing quarry or La Gigoulande Quarry) has been operated by Granite Products Limited (GPL) since 1946 and is one of two significant stone quarries on the Island. At La Gigoulande Quarry up to 125,000 tonnes per annum (tpa) of granite is extracted and processed using on site plant into aggregate for external sale and for use in the onsite ready mixed concrete plant and block making plant. In excess of 1 million blocks per annum are manufactured at La Gigoulande Quarry. All aggregates are produced to BSEN 12620 and uniquely for Jersey the aggregates produced are non-alkali-silica reactive which is the preferred choice for many new housing sites on the Island and for concrete used in many high profile contracts on the Island.
- 1.2** The faces of the existing quarry are worked in a series of benches by drilling and blasting. The stone is crushed, screened and graded on site. Stone is either sold directly or used in the on-site plants to manufacture products. The current restoration principles for the existing quarry are to agriculture and woodland as shown on the conceptual restoration plan presented at Appendix A. The output of the existing quarry and associated plants accounts for a significant proportion of the Island's supply of stone, aggregate, concrete and blocks providing essential building materials supporting the economy and the quality of life on the Island and contributing to employment on the Island. La Gigoulande Quarry is operated without unacceptable impacts on the environment.
- 1.3** La Gigoulande Quarry is accessed from La Rue de la Vallee (Figure 2). The mineral processing plant is located in the base of the central part of the existing quarry (Figure 2). The ready mixed concrete plant is located adjacent to the middle of the northern quarry boundary. The block plant and associated administrative facilities are located to the west of the existing quarry. La Gigoulande Quarry is bounded to the north by La Rue de la Vallee, to the west and south by Mont Remon and La Rue Bechervaise. Mont Remon and La Rue Bechervaise is also Cycle Route 3. La Cheve Rue is to the east of La Gigoulande Quarry (Figure 3). There are no rights of way which cross La Gigoulande Quarry.

- 1.4** La Gigoularde Quarry has the benefit of a number of extant planning permissions for mineral extraction operations and product manufacture which firmly establish the site as a major source of mineral and mineral products on the Island. Mineral extraction in the eastern part of the existing quarry is the subject of planning permissions references 1398/M granted in June 1989, P/1999/0493 granted in December 1999 and P/1996/1041 granted in July 2001. Planning permission for mineral extraction in the western area of the existing quarry was granted in March 2007 (planning permission reference P/2006/1273). Other planning permissions have been granted for the associated operations at La Gigoularde Quarry including more recently an inert waste recycling facility and the restoration of the western part of the existing quarry using inert materials (planning permission reference P/2012/0121 dated September 2016) and the installation of a new ready mixed concrete plant and associated infrastructure (planning permission reference P/2016/1437 dated December 2016). Mineral extraction operations and associated mineral processing and product manufacturing operations are well established at the site by the extant planning permissions which include restrictions on depth, methods of working and environmental controls. The principle of restoration of the existing quarry has been established and consent has been granted for the restoration of the western part of the existing quarry using inert materials (Appendix A). On 21 December 2020 Waste Management Licence reference WML026 was granted for the operation of the inert waste recycling facility.
- 1.5** The currently consented remaining reserve of mineral at La Gigoularde Quarry is approximately 900,000 tonnes which equates to a 7 year supply of mineral based on an extraction rate of 125,000 tpa. In order to provide for the future continued supply of mineral from La Gigoularde Quarry consideration has been given by GPL to opportunities to extend the existing quarry. Early consideration was given to northern and western extensions to the quarry, but due to the site topography and the presence of boundary features and infrastructure extensions to the north or west of the existing quarry are not feasible. An eastern extension is not feasible as the land is not available to GPL. Consideration was also given to deepening the quarry under the plant site. Deepening the quarry under the plant site would not be feasible as it would necessitate the demolition of the mineral processing plant. It was concluded by GPL that a southern extension to the quarry should be progressed.

- 1.6 Jersey has a plan-led planning system and guidance on planning related decision making is provided currently in The Revised 2011 Island Plan. There is a legal requirement under the Planning and Building (Jersey) Law 2002 to review The Island Plan every 10 years. The review process has commenced including the early stages of consultation for a future Island Plan, however due to the Covid 19 pandemic the States of Jersey have determined that a 3 year 'bridging' plan is necessary prior to the preparation of the next 10 year Island Plan:

*"...it is no longer possible – or right – to deliver an Island Plan Review as originally envisaged. To best respond to the current context, it is proposed that the next Island Plan should serve as a shorter – term 'bridging' plan between two longer-term plans (i.e. the current Island Plan 2011 to 2021 and a future Island Plan 2025 – 2034)."*¹

The Minister for the Environment is preparing new legislation to deal with the process of developing the bridging Island Plan. The bridging plan is expected to be in place for the period 2022-2024, before the longer-term plan is brought forward for 2025-2034. The States of Jersey have determined that:

*"Infrastructure provision is identified as a topic of consideration for the new Island Plan and may need to be dealt with in the short -term and provision made in the bridging Island Plan. It is acknowledged that this may also apply to securing a supply of minerals to support the construction industry and to identify new routes for solid waste disposal in the short term."*²

During the plan making process it is crucial to evaluate up to date information on development on the Island to ensure that policy provides appropriate guidance on the future development on the Island. It is fully acknowledged by the States of Jersey that the bridging plan needs to be based on sound and robust evidence so that it can best meet the Island's future needs and aspirations. The States of Jersey have already published several evidence base studies, with more being finalised. The evidence base studies will be completed prior to the launch of the draft bridging plan consultation in Spring 2021 and are being taken into consideration as the draft

¹ States of Jersey (July 2020) Island Plan Review : In Committee Debate, presented by the Minister for Environment.

² States of Jersey (July 2020) Island Plan Review : In Committee Debate, presented by the Minister for Environment.

bridging plan is developed. The supply of minerals is an area of evidence currently being determined by the States of Jersey and in which the currently consented reserves on the Island together with the options for the future supply of essential materials are being considered.

- 1.7** Information was submitted to the States of Jersey in February 2020 regarding La Gigoulande Quarry and the promotion of an extension to the quarry as part of the Call for Sites exercise. Further discussions have been held over the Summer and Autumn of 2020 with the States of Jersey regarding La Gigoulande Quarry and the potential for an extension to the quarry.
- 1.8** This report has been prepared on behalf of GPL to provide background information on La Gigoulande Quarry and to promote a southern extension to La Gigoulande Quarry into Field 966. A preliminary design and information in respect of securing access and the timing of the integration of the extension with the quarry is provided. It is intended that it will be used by the States of Jersey as evidence to support the preparation of the 3 year bridging plan with the objective that a southern extension to La Gigoulande Quarry will be allocated for mineral extraction. A high level assessment of the environmental constraints associated with mineral extraction in the southern extension area is presented. The southern extension would provide an essential contribution to the future supply of minerals to support the construction industry on the Island.

2. Proposed Southern Extension to La Gigoulande Quarry

- 2.1** As stated in Section 1 the planning permissions currently in place for the mineral extraction operations at La Gigoulande Quarry provide for the extraction of the remaining mineral reserves of approximately 900,000 tonnes which equates to approximately 7 year supply of mineral from La Gigoulande Quarry based on an extraction rate of 125,000 tpa. The remaining mineral reserves are located in the eastern area of the quarry and the deeper western area of the quarry. As described in further detail in Section 3 there is a need for the Island to provide a land bank for minerals. The landbank for crushed rock aggregate of 10 years should be available during the life of the plan period including at the end of the plan period, i.e. a rolling landbank.
- 2.2** It is recognised in the existing Island Plan and in respect of mineral extraction operations generally that there are benefits to extending an existing quarry rather than establishing a new quarry in circumstances where infrastructure such as access, services, processing plant, manufacturing plant and reception facilities are established at a well-run site. In this section a description of the proposed southern extension into Field 966 is described. The boundary of Field 966 is shown on Figure 3. La Rue Bechervaise runs in an east to west direction between the quarry and Field 966 with the quarry to the north and Field 966 to the south.
- 2.3** In 2020 access to the mineral in Field 966 has been secured by GPL hence it is considered that the proposed southern extension is a deliverable source of mineral to contribute to the Island's needs. It is estimated that there will be up to 3 million tonnes of rock accessible which based on an extraction rate of 125,000 tpa is equivalent to 24 years supply.

Preliminary design

- 2.4** GPL have prepared a preliminary design to conceptualise the way in which Field 966 could be worked to optimise the available mineral reserves. The preliminary design is presented at Appendix B. In developing the preliminary design it has been identified by GPL that not only is the timing of the commencement of operations in Field 966 critical but also that it is only feasible to extract the available mineral reserves in Field 966 with the diversion of La Rue Bechervaise around the southern

and eastern boundaries of Field 966. We have the following further comments in respect of each of these issues.

The timing of the commencement of operations in Field 966

- 2.5** A description of the proposed mineral extraction operations in Field 966 is provided with the preliminary design at Appendix B. The main access to Field 966 will be a ramp constructed in the existing quarry from overburden stripped from Field 966. The only way in which this overburden can be stripped and transported to the existing quarry is via a temporary haul road constructed from the north eastern corner of Field 966 to an area of an existing overburden mound in the east of the existing quarry. The temporary haul road is shown on Figure 2 at Appendix B.
- 2.6** In the event that mineral extraction operations in the east of the existing quarry progress further east than that shown on Figure 2 at Appendix B then the creation of the temporary haul road will be impractical and it may then not be possible to extract the overburden from Field 966 for use in the construction of the main access ramp to Field 966. This may preclude access to Field 966. GPL will seek to preserve this access option for as long as possible, within the confines of the site planning permission. However, it is estimated that there is approximately 2 years of mineral reserves remaining in the deeper western quarry area at the site and 1 year of mineral extraction in the east of the existing quarry before the existing overburden mound and the rock beneath it will need to be removed in the eastern area of the existing quarry to maintain production. Consequently after this time construction of the temporary haul road and access to Field 966 may be precluded. On the assumption that a planning application for the extraction of mineral in Field 966 is prepared in 2021 and submitted at the end of 2021, that the planning application takes one year to determine and that a further year is required for the discharge of any planning conditions, site preparation works, overburden stripping and construction of the Field 966 access ramp, then it is evident that the planning application should be prepared in 2021 and submitted by the end of 2021. Not to do so may preclude access to Field 966 unless production from the quarry was heavily curtailed prior to or ceased at the end of 2023. On this basis work to prepare a planning application has commenced with the objective of submitting the planning application for the southern extension by the end of 2021.

Diversion of La Rue Bechervaise

- 2.7** The proposals by GPL involve the continued access and use of La Rue Bechervaise albeit along a purpose built diversion route. The proposals do not include the stopping up or severing of the route. Clearly if La Rue Bechervaise is not diverted then the mineral which sits beneath La Rue Bechervaise will be sterilised and access to the eastern reserves in the current quarry will be prevented whilst work is underway in Field 966. As explained above the only way in which the overburden in Field 966 can be accessed for stripping is via a temporary haul road constructed from the north eastern corner of Field 966 to an area of an overburden mound in the east of the existing quarry. This road will only be suitable for use by the smaller tucks used for overburden removal, due to its width and gradient. The only way in which the mineral can be accessed is via a new access ramp constructed from the overburden stripped from Field 966. To access Field 966, this quarry haul road will have to cross over La Rue Bechervaise. With the road diverted, this can be undertaken at an elevation of about 81mAOD. If La Rue Bechervaise is not diverted prior to the commencement of operations then not only will it be necessary for there to be two permanent crossing points over La Rue Bechervaise but the access ramp up from the quarry will need to rise an additional 15m vertically, be 150m longer (to maintain a safe gradient) and of considerably greater volume in order for dump trucks to reach the elevation of La Rue Bechervaise. This would give rise to considerably greater environmental disturbance as well as wasted fuel in climbing up to the level of La Rue Bechervaise both entering and leaving the Field 966 excavation. Given the geometry of the quarry and the mineral that would remain beneath La Rue Bechervaise it will then be very difficult at a later date to access the remaining mineral.
- 2.8** Whilst it might appear that a tunnel under La Rue Bechervaise to the Field 966 excavation would remove the need for the haul road to rise to the level of the road, this is not the case. There are number of practical problems associated with constructing and using a tunnel. A tunnel would require a number of safety features, including ventilation and fire systems and would need to be at least 7m wide. The tunnel would need to have at least 15m of cover beneath the road for stability, thus the preliminary excavation to access the southern portal in Field 966 will need to be some 23m deep. All the rock removed to form a 23m deep excavation in Field 966 would need to go via a haul road up to the level of La Rue Bechervaise before

crossing it. Clearly a 23m deep excavation of a size sufficient to facilitate access would be extensive and it would be necessary to cross La Rue Bechervaise for many years until a tunnel arrangement could be put in place.

- 2.9** Further detailed consideration is presented in Section 4 of this report in respect of the southern extension including a review of the potential environmental constraints associated with mineral extraction. Restoration options and opportunities for the extension area and wider quarry would be considered in discussion with the States of Jersey and be the subject of design and assessment at the planning application stage.
- 2.10** Consideration also has been given to deepening the mineral extraction operations in the eastern part of the existing quarry consistent generally with design of the deeper mineral extraction operations in the western part of the existing quarry. The southern extension would also increase the footprint of the eastern area of the quarry and provide for the potential release in the future of additional mineral by deepening the eastern part of the existing quarry.

3. Current Mineral Strategy

3.1 To consider the potential future supply of aggregates on the Island and understand the general and environmental constraints/opportunities for aggregates supply in relation to La Gigoulande Quarry a review of current planning policy has been undertaken.

3.2 There is no specific mention of minerals in the States of Jersey Government Plan 2020 to 2023³ but several of the priorities including optimising economic growth and a programme of investment in the Island's Infrastructure including a programme of regeneration in the improvement of St Helier and the Parishes are only deliverable if underpinned by the continued supply of aggregates of the right quality to support the building industry.

3.3 In the Revised 2011 Island Plan⁴ the Modified Mineral Strategy for Jersey is presented at Table 10.1. The Mineral Strategy maintains the reliance on local production where it is environmentally acceptable and the main components are:

1. Ensuring a continuous supply of aggregates for the building industry;
2. Encouraging the greatest possible use of alternatives to primary aggregates;
3. Maximising local production of crushed rock required for the local construction industry, within environmental constraints, including:
 - continued production of aggregate at Ronez Quarry, St. John beyond The Island Plan period and probably well into the long-term;
 - continued production of aggregate at La Gigoulande Quarry, St. Mary in the long-term;
 - careful consideration of proposals to exploit new or extended reserves of crushed rock on the Island, as necessary;

³ States of Jersey (2019) Government Plan 2020 to 2023

⁴ States of Jersey (2014) Revised 2011 Island Plan

4. Winding down Simon Sand and Gravel Ltd in St. Ouen's Bay by 2018 and progressive restoration of the site;
5. Creating appropriate facilities at St. Helier Harbour for importing all the Island's future sand requirements, with sufficient flexibility to allow for bulk importation of some crushed rock, if, as a consequence of future monitoring, this looks a strong likelihood in the longer term;
6. Using La Gigoulande Quarry, St. Mary for landfill with inert waste and for recycled aggregate production, when La Collette Phase II reclamation site has been filled, and restoring the quarry for a suitable end-use; and
7. Restoration of all other existing/approved quarry sites for a suitable end-use.

3.4 The Modified Mineral Strategy is supported by a number of Minerals objectives. The Minerals objectives (Objective MR1) comprise:

1. To secure sufficient and steady supplies of aggregate resources needed by the community and the economy within the limits set by the environment, having regard to anticipated demand over the Plan period to 2020 and beyond.
2. To minimise the consumption of primary aggregates and encourage the increased usage of secondary and recycled aggregates and other substitute materials.
3. To control and mitigate the impacts of mineral operations on the amenities and health of local residents and on the local environment arising over their full life cycle from the extraction, processing, management and transportation of minerals and when restoration has been achieved.
4. To protect Les Mielles, St. Ouen's Bay from adverse effects of mineral working.
5. To maintain a landbank of permitted crushed rock aggregate reserves (equivalent to at least 10 years) at all times over the next 20 years. *[To clarify this point, it has been confirmed in discussions with the States of Jersey that*

the 10 year landbank should be available at all times during the Plan Period including at the end of the Plan Period.]

6. To safeguard existing important aggregate reserves, as far as possible, from unnecessary sterilisation by other forms of development.
7. To make adequate provision for the importation of sand (and crushed rock aggregate as necessary) to compensate for the anticipated closure of Simon Sand and Gravel in 2018 and potential shortfalls in rock quarrying capacity in the longer term.
8. To encourage the production and use of locally sourced high quality building stone for the purposes for which they are most suitable and in order to support local identity.
9. To protect and enhance the overall quality of the environment once extraction has ceased at mineral workings, by promoting the highest standards of restoration and aftercare and ensuring appropriate after use.

3.5 At paragraph 10.27 of The Revised Island Plan 2011 it is stated that if a commitment is made to maintaining a landbank at the end of the Plan Period the total required aggregate provision equates to 5.5 to 6.9 million tonnes of crushed primary rock. At paragraph 10.28 of The Revised Island Plan 2011 it is stated that the landbank of permitted crushed rock reserves at that time was:-

'5.2 million tonnes (at Ronez and La Gigoulande), which significantly exceeds the requirement for at least 10 years extraction during the Plan Period but falls short of the 20 year requirement up to 2030. Guaranteeing the maintenance of the 10 year landbank will be dependent on the industry coming forward with planning applications.'

3.6 This statement was, however, based upon outdated supporting information in respect of La Gigoulande Quarry and the landbank position at the time was in fact much lower. In December 2016 it was stated by SigmaRoc PLC that Ronez had approximately 470,000 tonnes of unconstrained consented reserves with a further 1.43 million tonnes (Mt) of constrained consented reserves located under the onsite

aggregate processing plant⁵. In May 2016 an application was submitted for a western extension to Ronez Quarry which would provide 2.5 Mt of granite over a 15 to 20 year period. This application has yet to be determined. As the Ronez application has yet to be determined there is a shortfall of crushed rock for the 10 year period at the end of the current Plan Period (end of 2020). Even if the extension at Ronez is granted it will still be necessary for further reserves to be permitted on the Island. Based on the production of the three year bridging plan prior to the next 10 year plan it is clear that to ensure long term security for the supply of mineral on the Island it would be prudent to consider the landbank in the bridging plan. As explained in Section 1 of this report La Gigoulande Quarry uniquely provides granite that is non alkali-silica reactive which is the preferred choice of Jersey's construction industry.

3.7 It is stated at paragraph 10.38 of The Revised Island Plan that extensions to crushed rock workings would be preferable to the opening of new mineral sites. At paragraph 10.40 of The Revised Island Plan it is stated that permission will only be granted for new reserves where:

- it is demonstrated they meet a proven need, because production from existing reserves will not maintain landbank requirements;
- existing permitted reserves are unsuitable for a particular proposed use;
- the impact on the environment is acceptable;
- sterilisation of resources will otherwise occur; and
- the proposals comply with required site selection criteria.

3.8 As stated earlier in this section there will be a shortfall in the landbank of crushed rock. Without further allocations being made, the production of the three year bridging plan could increase the shortfall during the next 10 year plan period. It has been demonstrated by the current mineral extraction, processing and manufacturing operations that La Gigoulande Quarry can be operated without an unacceptable impact on the environment. As stated in Section 2 if Field 966 is not developed within approximately 3 years access to Field 966 from the quarry may not be possible which

⁵ SigmaRoc PLC (2016) Press release <https://sigmaroc.com/documents/announcements/06%2012%2016%20-%20Announcement%20Ronez%20Acquisition.pdf>

may result in the sterilisation of valuable and necessary mineral reserves. Information in respect of potential environmental impacts associated with a southern extension to the existing quarry are set out in Section 4 of this report.

3.9 The site selection criteria are specified at paragraph 10.41 in The Revised Island Plan. It is necessary for any extension to an existing mineral extraction to:

- make adequate provision for access into, and vehicle movement within the site;
- safeguard the amenities of nearby dwellings;
- preserve the best and most versatile agricultural land;
- protect ground and surface water flows, levels and quality;
- avoid undue adverse impacts on areas of nature conservation importance;
- avoid undue adverse impacts on areas of landscape importance;
- avoid adversely affecting important archaeological sites; and
- protect historic buildings and their settings.

3.10 The existing access to La Gigoularde Quarry is considered suitable and this has been demonstrated by the grant of the previous permissions for mineral extraction and associated developments. The existing quarry operates without any significant adverse impacts and the planning application for the southern extension to the existing quarry will be supported by a detailed Environmental Impact Statement which will assess the mitigation measures necessary to ensure mineral extraction operations from the southern extension will not have an unacceptable impact on the environment.

4. An Environmental Appraisal of the Southern Extension to La Gigoulande Quarry

- 4.1** A brief description of the proposed extraction operations in the southern extension together with a summary of the potential environmental impacts in relation to water resources, ecology, archaeology and cultural heritage, noise, soil resources and landscape and visibility and potential mitigation is provided in this section. More detailed technical reports prepared by the project team are presented at Appendix C to G. Site visits were undertaken to gather information regarding potential constraints relating to noise, cultural heritage and landscape and visibility. The closest properties are approximately 120m from the southern boundary of the southern extension. Rue l'Aleval runs adjacent to the western boundary of the southern extension. Best practice in respect of the design and operations in the site and extension will be implemented to minimise the risk of unacceptable ground vibration which would also be an issue which would be addressed in the Environmental Impact Statement.
- 4.2** As explained earlier the southern extension would progress mineral extraction operations into Field 966 south of the existing quarry and south of La Rue Bechervaise (Cycle Route 3) and would involve the permanent diversion of La Rue Bechervaise around the eastern and southern boundaries of the southern extension (Figure 3). La Rue Bechervaise would be diverted before mineral extraction operations commenced. Access to the southern extension would be gained from the existing quarry. As described in Section 2 a temporary haul road constructed using overburden will be necessary early in the phasing of the operations. Vehicles from the extension would travel through the quarry to the existing mineral processing plant site. The extension would be worked to a depth of 21m AMSL. A preliminary design and the rationale for the design is presented at Appendix B.
- 4.3** Mineral extraction operations in the southern extension would be undertaken as in the existing quarry. Mineral would be extracted in 10m high benches using drilling and blasting. At this stage the restoration of the southern extension has not been considered in detail and would be subject to detailed discussions with the States of Jersey at the detailed design and planning application stage.

Water resources (Appendix C)

- 4.4** Mineral extraction in the southern extension area would necessitate dewatering approximately 100m from a local irrigation pond excavated into the granite. It is understood that the pond is groundwater fed. There are also known private water abstractions approximately 200m south and south west of the southern extension.
- 4.5** There is the potential for the irrigation pond and abstractions to be affected by dewatering associated with mineral extraction operations in the southern extension. Groundwater levels would be monitored in groundwater monitoring boreholes which would be installed in the area of the southern extension and as close as possible to the private water abstractions and irrigation pond prior to the extraction of granite in the southern extension to assess the seasonal fluctuations of groundwater levels. Groundwater levels at these locations would be monitored also during the extraction operations. In the event that the groundwater abstractions were derogated mitigation would comprise either deepening the private abstraction boreholes to provide continuity of supply or providing a mains supply. In the event that the irrigation pond was derogated mitigation measures including lining the pond and/or pumping water from the southern extension to the pond would be put in place.
- 4.6** The southern extension may bring mineral extraction and dewatering operations closer to some of the sensitive habitats in the La Hague Reservoir Valley however the western part of the currently permitted extraction area is already within 100m of these habitats whereas the southern extension boundary would be approximately 250m from these habitats. Although there is the potential for cumulative impacts in this respect significant impacts are considered unlikely. If it is not possible to demonstrate that the sensitive habitats in La Hague Reservoir Valley are outside the radius of influence of dewatering operations at the quarry, monitoring and mitigation measures would be proposed and implemented as necessary.
- 4.7** In the event that the southern extension is restored using imported inert materials, based on previous hydrogeological studies for the proposals for the restoration of the western part of the existing quarry, it is considered groundwater resources would be protected by using strictly inert restoration materials.

- 4.8** It is considered that with appropriate mitigation there is unlikely to be overriding constraints with respect to water resources which would preclude the development of the southern extension.

Ecology (Appendix D)

- 4.9** The southern extension is not located within 2km of any Sites of Special Interest (SSI). There are no protected species records for the southern extension area although red squirrel was recorded in 2010 in the woodland adjacent to the north east of the existing quarry. The southern extension area is currently under arable use with short sections of hedgerow forming the northern boundary and a belt of scrub/developing secondary woodland on the northern edge of La Rue Bechervaise between the road and the existing quarry. Occasional scattered trees are present on the western and southern boundaries. As a result of the development of the southern extension area the vegetation between La Rue Bechervaise and the existing quarry will be removed. The habitat mix in the southern extension is fairly typical for the area and based on the desk study it is considered unlikely that the habitats would have significant ecological value or conservation interest present to a degree sufficient to represent an overriding ecological constraint. Based on the preliminary design drawings presented at Appendix B opportunities to create compensatory habitats for vegetation loss will be possible as part of the proposals.
- 4.10** Based on the ecological information reviewed it is considered that there is no overriding constraint with respect to ecology which would preclude the development of the southern extension area.

Archaeology and cultural heritage (Appendix F)

- 4.11** There is one designated heritage asset which is located to the north of the existing quarry. There are no known archaeology records within the area of the southern extension and as the southern extension area has been subject to ploughing it is considered that the potential for well preserved archaeology is slight.
- 4.12** There is a low banked boundary present to the south of La Rue Bechervaise to the north of the southern extension. 'Banques' or earth banks can be considered archaeologically significant in a Jersey context. As a result of the development of the southern extension area the banked boundary feature would be removed. The

banked boundary feature is low in comparison to others on Jersey and contains no boundary stones therefore is not a significant constraint.

- 4.13** It is considered unlikely that there will be any overriding constraints with respect to archaeology and cultural heritage which would preclude the development of the southern extension.

Noise (Appendix F)

- 4.14** Mineral extraction operations in the southern extension have the potential to have an effect on properties located to the east, south south east and west of the extension. The closest property would be approximately 130m south south east of the mineral extraction operations. It would be necessary to construct screening bunds and at this stage it is assumed that a 5m high bund would be constructed along the southern boundary and 3m high bunds would be constructed along the eastern and western boundaries of the southern extension area. Preliminary noise calculations have been undertaken which demonstrate that with appropriate mitigation measures in place the noise levels associated with mineral extraction operations in the southern extension would not exceed the current or previous limits set in conditions at La Gigoulande Quarry or exceed the consented noise limit specified in existing planning permissions of 55dB_{LAeq} (1hr). The stripping of soils and overburden and the construction of the screening bunds would not exceed the temporary noise limit of 70dB_{LAeq} (1hr) which is applicable to up to 8 weeks in a year.
- 4.15** It is considered unlikely that there will be any overriding constraint with respect to noise which would preclude the development of the southern extension.

Soil resources

- 4.16** The southern extension is currently under arable cultivation. As part of the environmental studies an agricultural land classification survey would be undertaken to determine the type of soil present in the southern extension. As part of the mineral extraction operations topsoil and subsoil would be stripped from the southern extension and used in the creation of the screening bunds around the perimeter of the mineral extraction area. Mitigation measures to minimise the

impact on soil resources including the use of best practice methods during stripping, movement and storage of the soils would be implemented.

- 4.17** Soils stripped from the southern extension would either be used where necessary in the restoration of the quarry or if appropriate the vegetated bunds integrated into the restoration scheme for the site.
- 4.18** It is considered that with appropriate mitigation there is no overriding constraint with respect to soil resources which would preclude the development of the southern extension.

Landscape and visibility (Appendix G)

- 4.19** The southern extension is generally typical of Character Area E5: Central Plateau-Ridges as it extends over agricultural land and is surrounded by agricultural land. Mineral extraction operations in the southern extension would result in a notable although generally localised adverse effect on landscape character. The screening bunds would introduce limited features into the landscape which are not typical of the character type hence without mitigation would have an adverse effect on landscape character. Opportunities to construct the bunds with shallow outside slopes and plant the bunds with woodland and scrubby species would contribute to offsetting the loss of existing vegetation and provide mitigation of the effects on landscape topography. Opportunities for long term restoration which enhances the landscape character would be considered and discussed with the States of Jersey and included in any planning application.
- 4.20** There is currently no visual intervisibility between the existing quarry and the southern extension. Views of the southern extension are possible from La Rue Bechervaise, Rue L'Aleval and the property to the south southeast of the southern extension. Views of the operations in the southern extension from the surrounding area would be generally screened by intervening vegetation, landform and/or soil storage bunds but the initial soil stripping, the temporary access road and bund construction works would be visible from a number of locations. The extraction operations would be entirely out of view and well below existing ground levels for the majority of the operations in the southern extension hence the most significant effects would occur during the initial establishment of operations in the extension

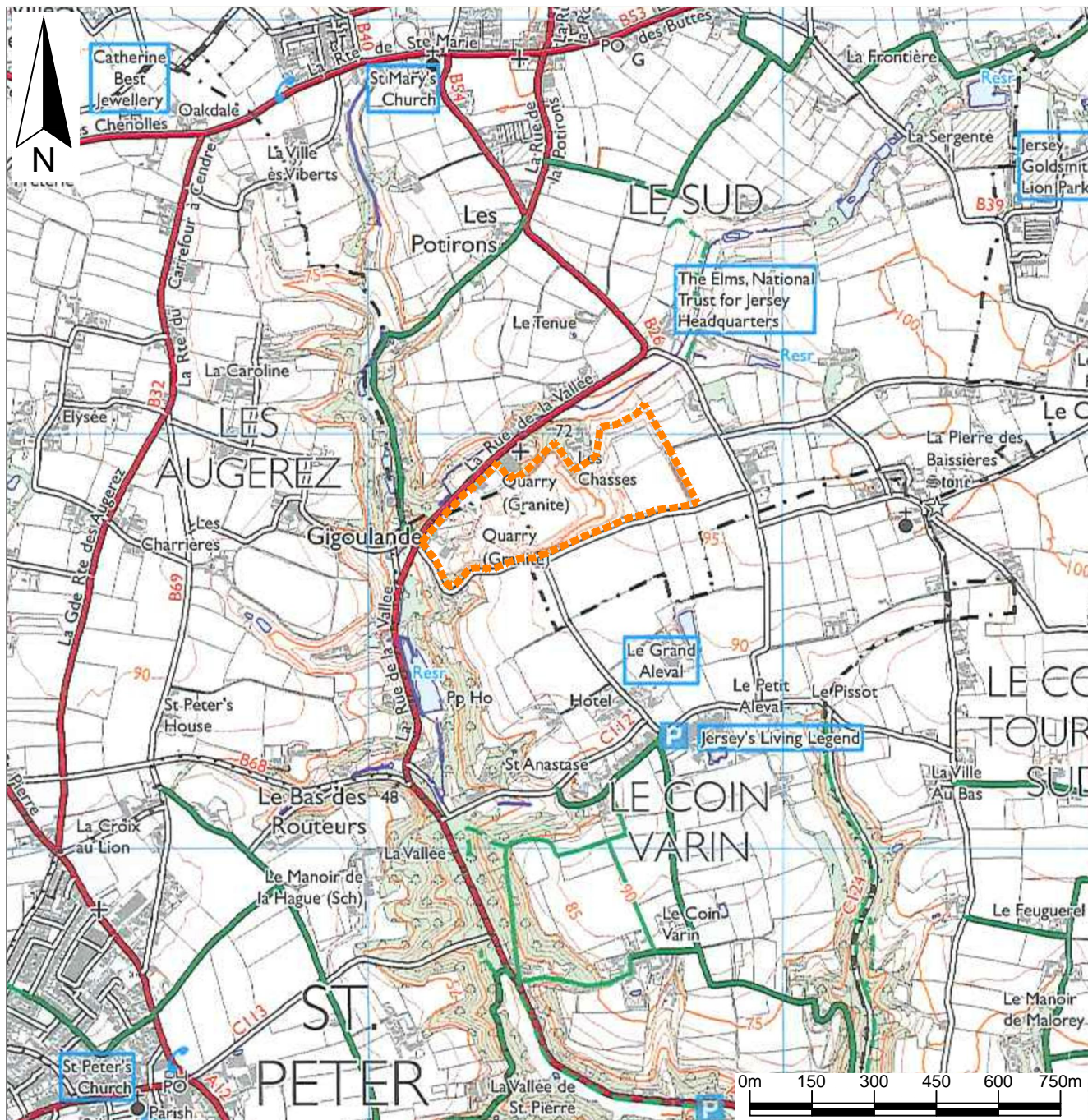
area. Existing views of the current quarry operations would open up at limited locations to the north along La Rue de la Vallee which would be experienced in the context of the existing quarry faces and quarry infrastructure. From lower areas to the northwest, views of early works in the southern extension would be seen in the context of the existing quarry, although due to distance and angle of view combined with intervening vegetation, visual change would be limited.

- 4.21** The permanent diversion of La Rue Bechervaise would result in the removal of scrub and developing secondary woodland south of the existing quarry and may result in potential limited visual disturbance to the property to the south southeast as vehicles travel on the diverted road closer to the property. Based on observations, La Rue Bechervaise has only limited use by vehicles hence it is likely that any visual disturbance by vehicles would be minor.
- 4.22** It is considered that with appropriate mitigation such as screening, planting and a well designed restoration scheme there is unlikely to be overriding constraints with respect to landscape and visibility which would preclude the development of the southern extension.

5. Conclusions

- 5.1** The products produced at La Gigoulande Quarry are essential for the building and repair of roads, homes, workplaces and schools and for other necessary building and infrastructure work on the Island. The mineral from La Gigoulande Quarry is non alkali-silica reactive and is the preferred choice for construction projects on the Island as is demonstrated by numerous projects on the island to which La Gigoulande has supplied materials. Further mineral reserves will be necessary on the Island to meet current and future demand even if further reserves are permitted at Ronez Quarry. In the absence of further reserves there will be a shortfall of mineral against the targets in the current adopted Island Plan of a 10 year landbank. Based on the production of the three year bridging plan prior to the next 10 year plan it is evident that for the long term security of the supply of mineral on the Island it would be prudent to consider the landbank in the bridging plan. As a consequence it is vital that an adequate supply of mineral is identified and allocated and that appropriate guidance and planning policy is provided to secure supply.
- 5.2** This report has been prepared on behalf of GPL to provide background information to the policy preparation process on the future development for mineral extraction operations at La Gigoulande Quarry. This report provides information on the southern extension to La Gigoulande Quarry including information on the timescales for the proposed development. Concurrently with the preparation and submission by GPL of a planning application for mineral extraction operations in the southern extension, it is proposed by GPL that the southern extension is included in the bridging plan to secure the essential long term contribution to the future supply of minerals on the Island.
- 5.3** The opportunity to extend the mineral extraction operations to the south has been considered with respect to the potential environmental constraints associated with water resources, ecology, archaeology, noise, soil resources and landscape and visibility. The southern extension would necessitate the need to permanently divert La Rue Bechervaise which may result in limited impacts on users of La Rue Bechervaise. It is considered that the southern extension provides a deliverable, workable, valuable mineral resource and based on the high-level assessments presented in Appendices C to G there are no overriding environmental constraints with appropriate mitigation.

FIGURES



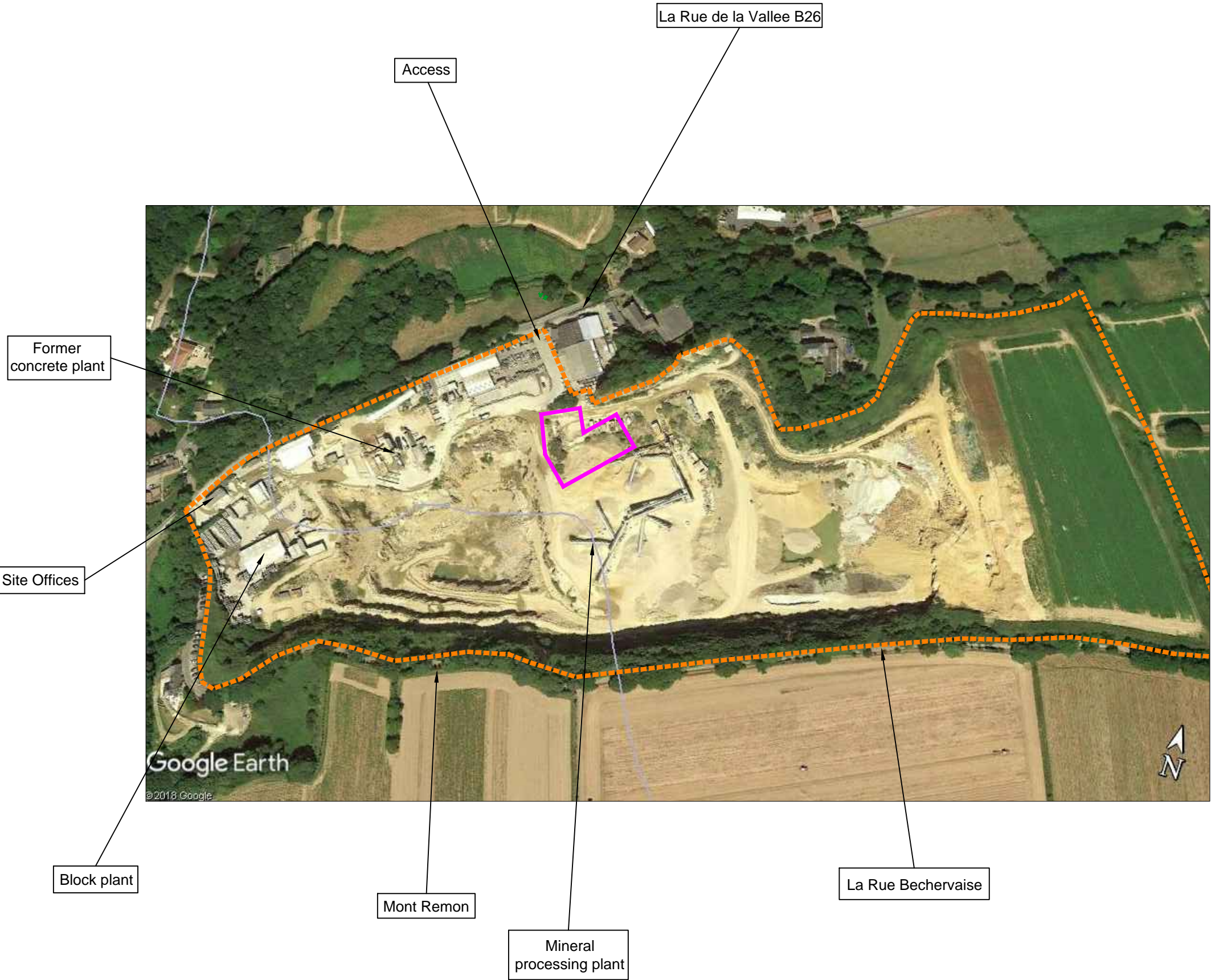
Key / Notes





Approximate location of
La Gigoulande Quarry



	Final	KR	LC	GT	15/01/21
Rev	Status	Drn	App	Chk	Date
Site LA GIGOULANDE QUARRY					
Client <div><div>GraniteProducts</div><div>QUALITY LOCAL STONE SINCE 1946</div><div></div></div>					
Title The site location					
Figure 1		Scale 1:15,000@A4			
Drawing Ref BGL/JE/12-20/22139					

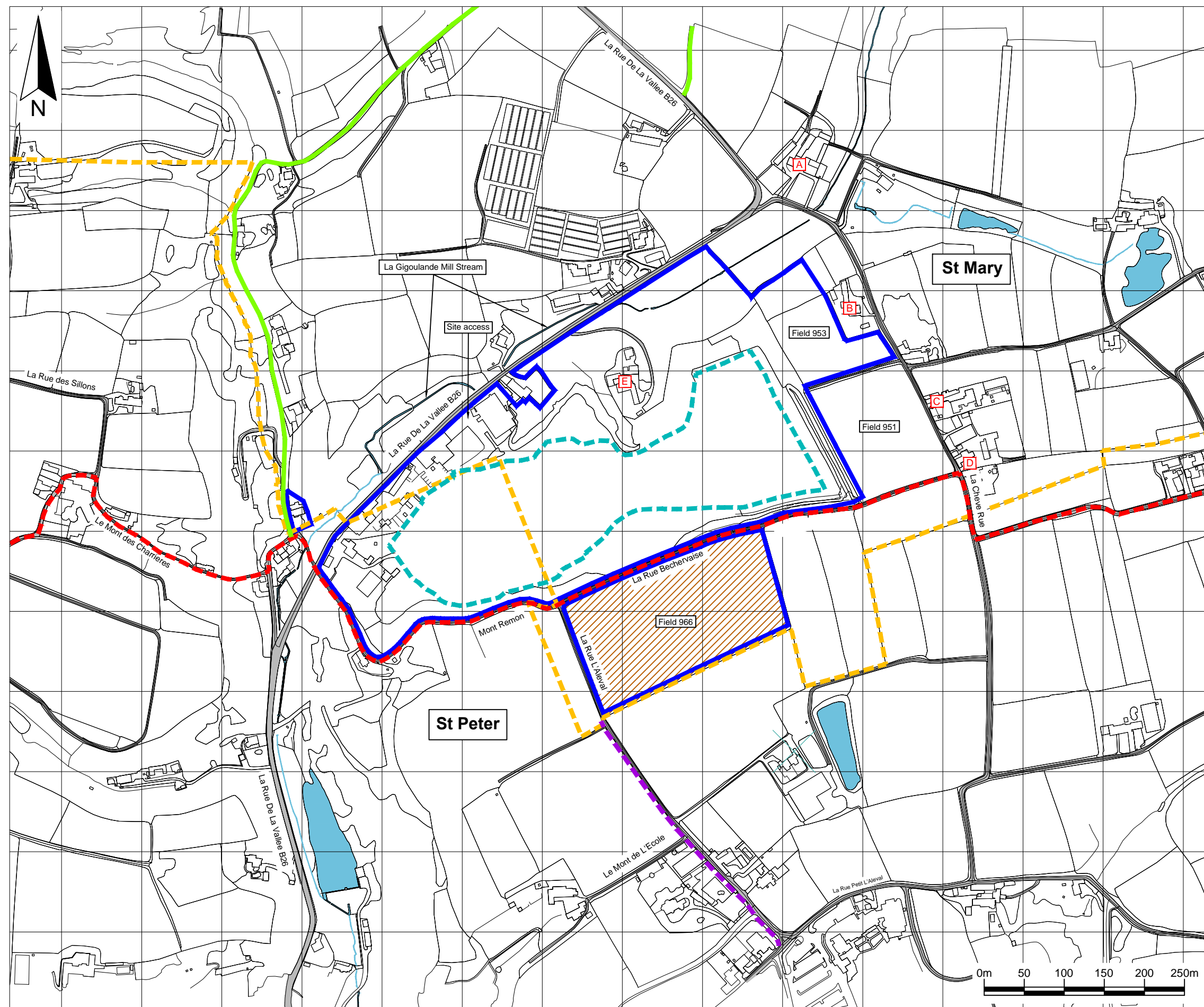
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Key / Notes

-  Approximate location of La Gigoulande Quarry
-  Approximate location of the new concrete plant

Aerial photograph taken July 2014					
	Final	SRW	LC	GT	15/01/21
Rev	Status	Drn	App	Chk	Date
Site LA GIGOULANDE QUARRY					
Client <div>GraniteProducts </div> <div>QUALITY LOCAL STONE SINCE 1946</div>					
Title Aerial photograph and layout of the current site					
Figure 2		Scale Not to scale			
Drawing Ref BGL/JE/12-20/22140					
Map data ©2018 Google					
		<div>Baddesley Colliery Offices, Main Road, Baxterley, Atherstone Warwickshire, CV9 2LE. Telephone : 01827 717891 Fax : 01827 718507</div>			
Technical advisers on environmental issues					



Key / Notes

- Land under the control of Granite Products Limited
- Current limit of extraction
- Approximate parish boundary
- Surface watercourse
- Surface waterbody
- Green Lane routes
- Cycle route 3
- Cycle route 6a
- Potential southern extension
- A Heritage asset

Note:
Parish boundary taken from the interactive school
catchment map at
<http://webmaps.digimap.je/jerseyschoolcatchments/>

	Final	SRW	LC	GT	15/01/21
Rev	Status	Drn	App	Chk	Date

Site
LA GIGOULANDE QUARRY

Client
GraniteProducts
QUALITY LOCAL STONE SINCE 1946

Title
Potential southern extension at La Gigoulande
Quarry

Figure 3
Scale
1:5,000@A3

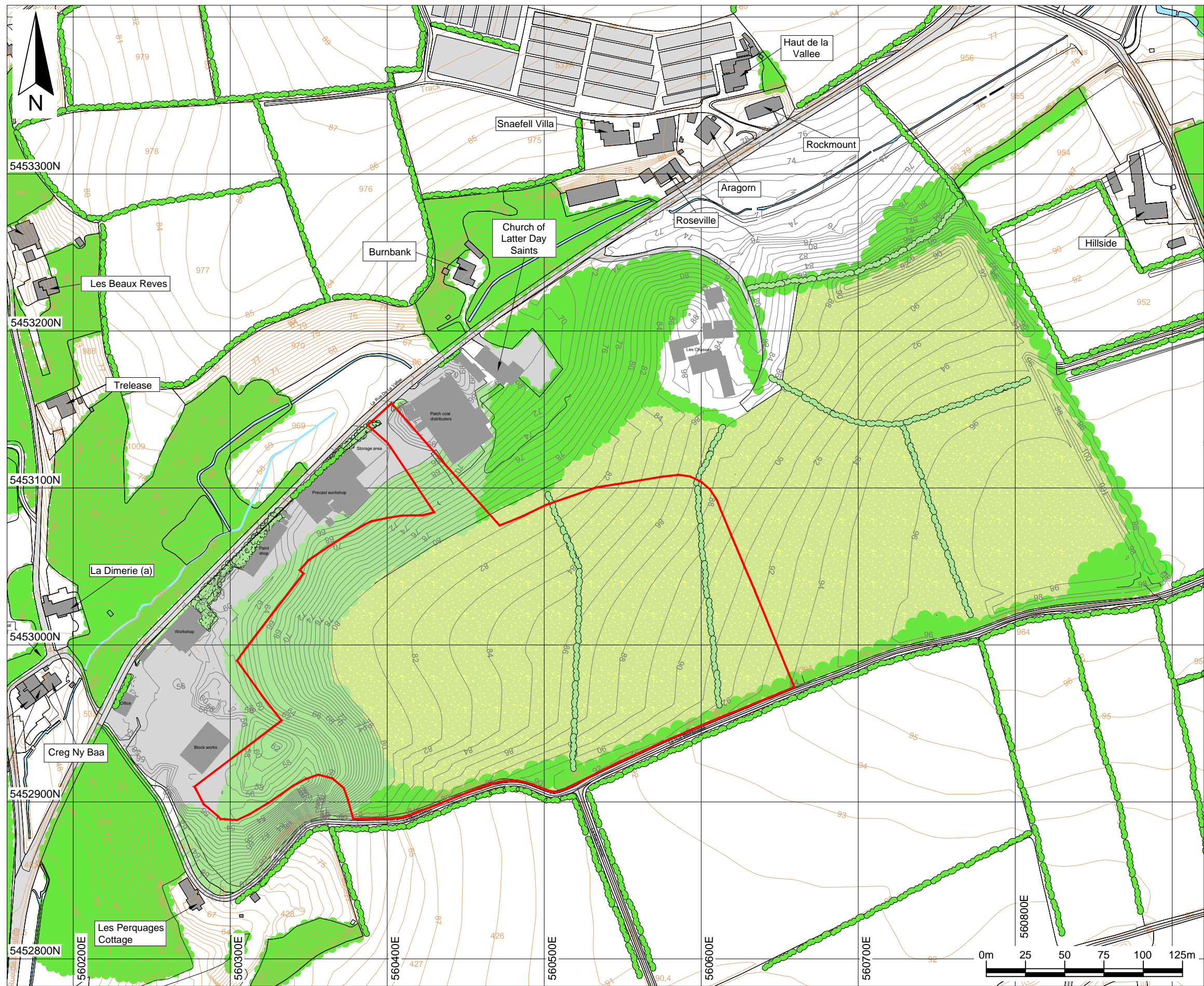
Drawing Ref
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APPENDIX A

**CONCEPTUAL RESTORATION PLAN FOR LA GIGOULANDE QUARRY (DRAWING
REFERENCE BGL/JE/06-11/16177)**



Key / Notes



Boundary of planning permission reference P/2006/1273 and the boundary of the application for planning permission



Restoration contours (m AMSL)



Existing contours (m AMSL)



Proposed agricultural land



Proposed tree planting



Existing woodland



Existing hedgerows



Proposed hedgerows



Buildings

	Final	KR	SPS	GT	19/01/12
	Draft	KR	MM	GT	15/12/11
Rev	Status	Drn	App	Chk	Date

Site
LA GIGOULANDE QUARRY

Client
GraniteProducts
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Title
Conceptual restoration plan

Figure 7
Scale
1:2,500@A3

Drawing Ref
BGL/JE/06-11/16177

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APPENDIX B

**LA GIGOULANDE QUARRY DEVELOPMENT INTO FIELD 966 – REPORT BY
GWP CONSULTANTS**



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LA GIGOULANDE QUARRY DEVELOPMENT INTO FIELD 966 For GRANITE PRODUCTS

January 2021

Report Title: La Gigoulande Quarry development into field 966
Client: Granite Products

Job: GP20LAG
Report Number: 201115
Version: v.02
Issue Status: Final
Prepared by: Alan Cobb
Issue Date: 13th January 2021

Issue History:

Issue No	Date	Description	Admin Review	Technical Review	Approver
v.01	18.11.20	Draft report issued to Client	CL	JCB	JCB
v.02	13.01.21	Final report issued	CL	JCB	JCB

Approver Signature:



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Table 1	Designed overall face gradients at La Gigoulande Quarry
Table 2	Summary of material volumes

DRAWINGS

Drawing Number	Drawing Title	Version
GP20LAG2011-1	Eastern excavation at start of excavation	a
GP20LAG2011-2	Fill ramp construction and initial overburden strip	a
GP20LAG2011-3	First year of rock excavation in Field 966	a
GP20LAG2011-4	Second year of rock excavation in Field 966	a
GP20LAG2011-5	Third year of rock excavation in Field 966	a
GP20LAG2011-6	Fourth year of rock excavation in Field 966	a
GP20LAG2011-7	Fifth year of rock excavation in Field 966	a
GP20LAG2011-8	Final rock excavation in Field 966	a

LA GIGOULANDE QUARRY DEVELOPMENT INTO FIELD 966

1. **INTRODUCTION**

Following discussions between Simon Clowes of Granite Products, Guy Titman of MJCA and Alan Cobb of GWP, GWP Consultants LLP (GWP) have drawn up a scheme for developing Field 966 from the La Gigoulande Quarry. There are a number of constraints:

- The quarry needs to continue working whilst the development takes place.
- Production rates will remain at 125,000t per year (equivalent to some 50,000m³ of *in situ* rock).
- A ramp needs to be developed in the floor of the eastern excavation to c. 59mAOD.
- Access needs to be maintained to the western quarry to remove the c. 1.5 years of reserves remaining in this part of the quarry
- The Hoggin stockpile in the centre of the quarry needs to be preserved, with room for expansion, if possible.

The stability of the quarry faces is heavily dependent on the joint pattern and varies according to the orientation of the face. The quarry faces need to be developed in accordance with the criteria set out in GWP Report No. 190410 which gave safe overall slope angles for faces in various orientations. These overall slope angles are given in Table 1.

2. **PROPOSED DEVELOPMENT**

2.1 **General**

The proposed development is shown on Drawing Nos. GP20LAG2011–1 to 8, with the rationale behind the stages given below.

2.2 **Initial works**

The approximate initial condition before development of Field 966 commences is shown on Drawing No. GP20LAG2011–1. At this stage it is assumed that the northern faces of the eastern excavation have been trimmed back to the limit indicated in GWP Report No. 190410 and that a lower bench at 59mAOD has been developed in the floor of the eastern excavation. The ramp down to this bench is kept as far north as possible in order to give room for the ramp that will be required up to the Field 966 workings. The western side of the eastern excavation is shown at the assumed eastern limit of rock workings in the (now backfilled) central part of the quarry. An access route (not shown) will need to be maintained around the northern side of the eastern excavation to the overburden tip. This access route can be constructed of fill if required.

2.3 **Initial stripping of overburden and construction of fill ramp**

The initial works are the diversion of La Rue Bechervaise to run on the inside of the bounding hedge banks of the eastern and southern sides of Field 966, as shown on Drawing No. GP20LAG2011–2. The new route will now meet Rue l'Aleval some 150m south of the current junction between these two roads. As La Rue Bechervaise is a narrow, low speed road with a 2.5m wide paved carriageway, it is assumed that the replacement road need only be of the same standard.

Screening banks 3m high to west and east and 5m high to the south (where Field 966 is closest to adjoining property) would be built from 12,800m³ of soil stripped from Field 966, over the area shown on Drawing No. GP20LAG2011–2. Initially, the eastern 3m high screening bank will need to terminate south of the existing site fence. This is to enable a haul road to be constructed from the northeastern corner of Field 966 to the area of the current eastern overburden mound. This road is required to permit entry of equipment and removal of a further 38,400m³ overburden to construct the fill ramps and to provide the initial rock excavation working area. Owing to lack of space, it is not possible to provide a screening bank between this road and La Rue Bechervaise. Once the required initial overburden strip has been completed, this haul road may be closed and the screening bank completed.

The overburden material, plus material removed from the eastern spoil heap, will be used to construct a fill ramp up the southern face of the quarry for access to the upper working levels. The necessary

ramp is shown on Drawing No. GP20LAG2011–2. The shape of the ramp is constrained by the necessity of leaving the Hoggins stockpile (and an area for this stockpile to be extended, if required) and not impinging on the still working eastern quarry area. The ramp has a 7m wide running surface with 1.5m high edge banks on either side and a rising gradient of 1 in 10 (v:h) up to the first bench level of 81mAOD. Above this level, the ramp is narrower and steeper, as only blasthole rigs and powder wagons will need to use it to reach the rockhead level. An internal rock ramp will be provided up to rockhead level before further overburden stripping is required.

2.4 First year of rock excavation

Whilst work to develop Field 966 is underway, it is assumed that quarry working will take place in the existing western quarry, although the extent of these workings are not shown on the drawings.

The first year of excavation in Field 966 is shown on Drawing No. GP20LAG2011–3. This comprises the removal of 50,000m³ of rock from the uppermost bench, which has a floor level of 81mAOD. At the end of this stage, there will be sufficient width on the 81mAOD level to develop a rock ramp up to the rockhead level on the southern side for access and for further removal of overburden.

2.5 Second year of rock excavation

The second year of excavation in Field 966 is shown on Drawing No. GP20LAG2011–4. With the development of the rock ramp up to rockhead level, the upper section of fill ramp above 81mAOD should be removed. Concurrently with the removal of the upper fill ramp, the upper 81mAOD bench is extended eastwards to recover another 50,000m³ of rock and a further 11,300m³ of overburden is removed up to the eastern boundary. It is assumed that all this overburden will be deposited in the western excavation, which should have been completed by this time.

2.6 Third year of rock excavation

The third year of excavation in Field 966 is shown on Drawing No. GP20LAG2011–5. No overburden stripping takes place during this stage. The upper part of the fill ramp is modified with a step cut down to 71mAOD at the western end, to enable the construction of a short ramp up from the existing quarry road south of the Hoggins stockpile to the 71mAOD level. The location of this ramp is heavily constrained by the Hoggins stockpile. If the western parts of this stockpile are removed by the third year of operations, then the ramp can be relocated further north. With this ramp developed, most of the third years rock supply (c. 28,000m³) is recovered from the 71mAOD bench, with the remaining 22,000m³ from further eastern extension of the 81mAOD bench.

2.7 Fourth year of rock excavation

The fourth year of excavation in Field 966 is shown on Drawing No. GP20LAG2011–6. The rock ramp up to rockhead is switched to the eastern side of the temporary southern face and all remaining overburden is removed over the next few years. It is assumed this will be deposited in the western excavation.

33,000m³ of rock is obtained from the southern and western sides of the 81mAOD bench and 17,000m³ from the southern and western sides of the 71mAOD bench. The western side of the 81mAOD bench is taken to the excavation limits.

2.8 Fifth year of rock excavation

The fifth year of excavation in Field 966 is shown on Drawing No. GP20LAG2011–7. 27,000m³ of rock is obtained from the eastern and southern sides of the 81mAOD bench and 23,000m³ from the western and eastern ends of the 71mAOD bench. The eastern side of the 81mAOD bench and the western side of the 71mAOD bench are taken to the excavation limits.

Following the fifth year of excavation, it is anticipated that the 81mAOD and 71mAOD benches will be extended southwards in their western halves and a bench at 61mAOD will be developed from the existing quarry road about 100m west of the ramp to the 71mAOD level.

2.9 Final rock excavation

The final extent of the excavation in Field 966 is shown on Drawing No. GP20LAG2011–8. This shows the excavation being taken down to 21mAOD. There will be some 3Mt of rock accessible to be worked in total with extraction being undertaken in Field 966, equivalent to some 24 years supply at current extraction rates (see Table 2).

The benches below 61mAOD are accessed by a haul road spiralling down anti-clockwise around the pit from an access point on the existing quarry road.

3. CONCLUSIONS

A scheme for the development of the resources beneath Field 966 is presented. Some 3Mt of rock will be available, which will give some 24 years supply at current production rates.

Initially, a fill ramp will need to be constructed to access the upper levels of the site. This is progressively modified and partially removed to access lower levels. The location of the ramp has been chosen to enable the Hoggin stockpile and access to the eastern quarry to be retained.

GWP CONSULTANTS
JANUARY 2021

Table 1**Designed overall face gradients at La Gigoulande Quarry**

Face	Orientation		Bench height	Face width	Bench width	Overall width	Overall gradient
	From	To	m	m	m	m	1 in x
Southeastern	330°N	350°N	10	5.0	3.5	8.5	0.85
Northwestern	135°N	155°N	10	5.0	4.7	9.7	0.97
Eastern	220°N	250°N	10	5.0	7.7	12.7	1.27
Western	070°N	090°N	10	5.0	3.5	8.5	0.85
Northern	155°N	190°N	10	5.0	9.7	14.7	1.47

Face angle is 1 in 0.5 (v:h)

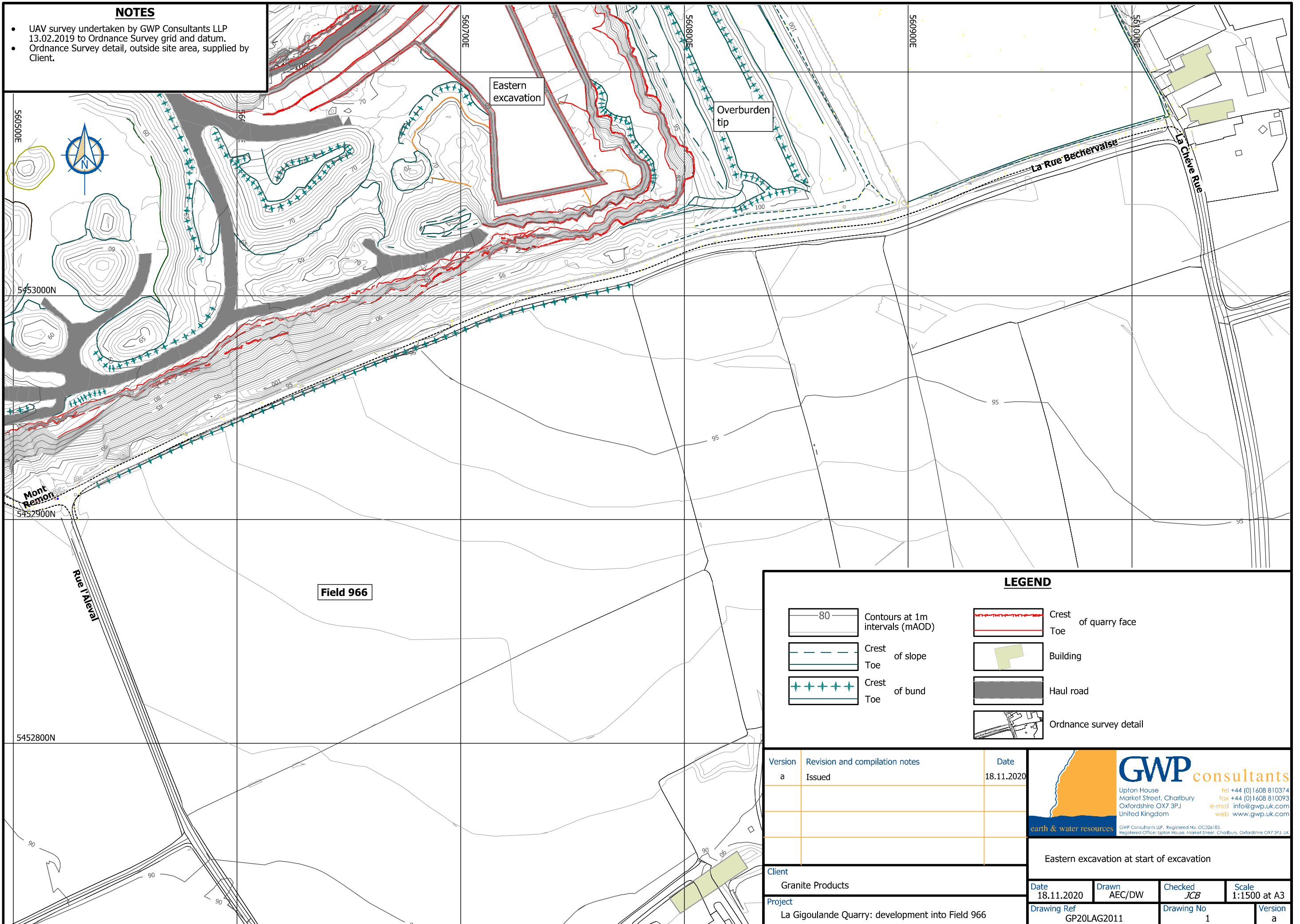
Bench width is measured from rear of blasthole line to toe of next bench

Table 2
Summary of material volumes

Stage	Volume (m³)			Tonnage Rock
	Total	Rock	Overburden	
Initial	51,200	0	51,200	0
Year 1	101,200	50,000	51,200	125,000
Year 2	162,500	100,000	62,500	250,000
Year 3	212,500	150,000	62,500	375,000
Year 4	303,300	200,000	103,300	500,000
Year 5	353,300	250,000	103,300	625,000
Final	1,333,300	1,230,000	103,300	3,075,000

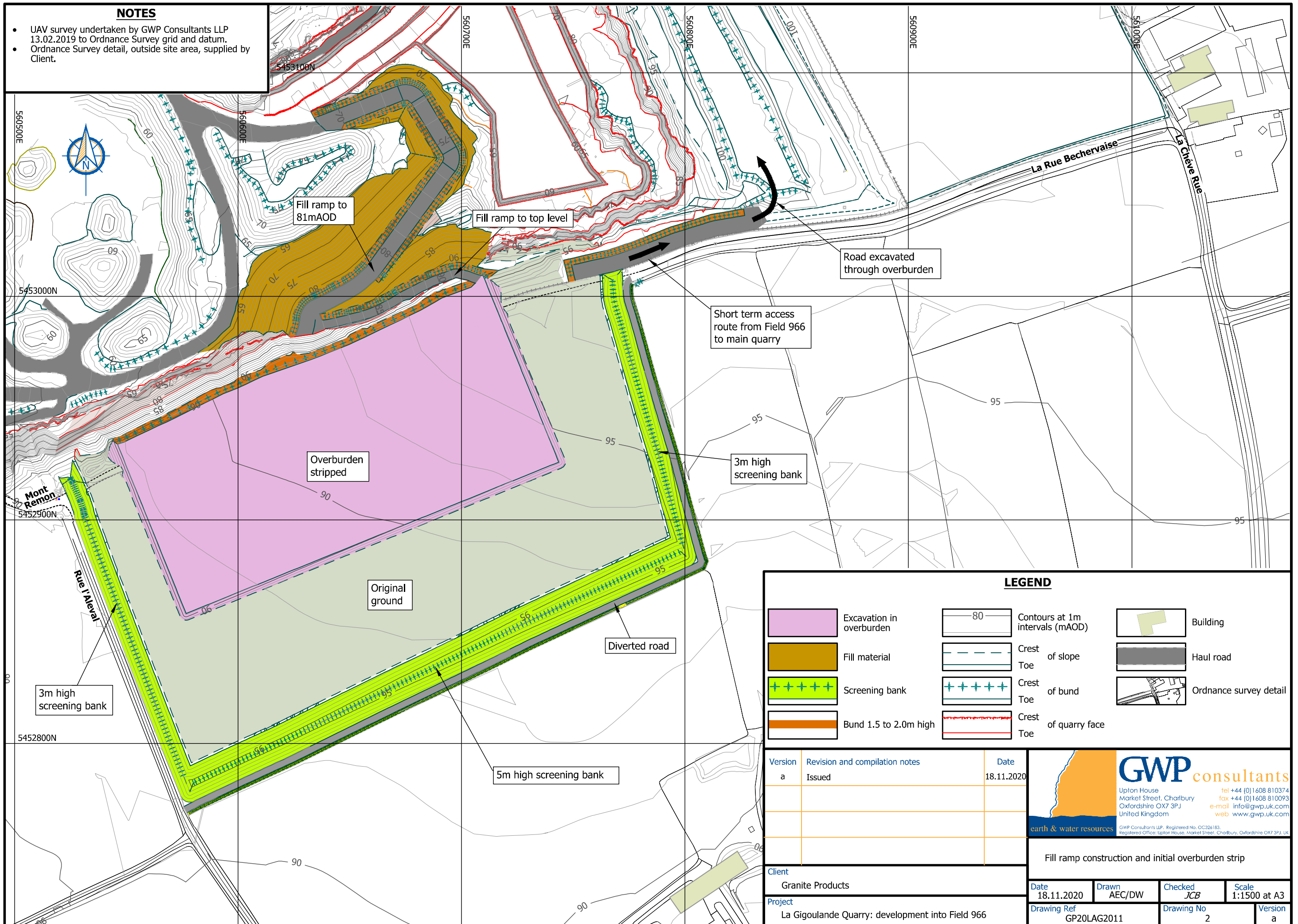
NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.


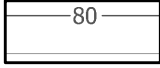





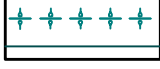
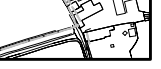




NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Contours at 1m intervals (mAOD)		Building
	Fill material		Crest of slope		Haul road
	Screening bank		Crest of bund		Ordnance survey detail
	Bund 1.5 to 2.0m high		Crest of quarry face		

Version	Revision and compilation notes	Date
a	Issued	18.11.2020

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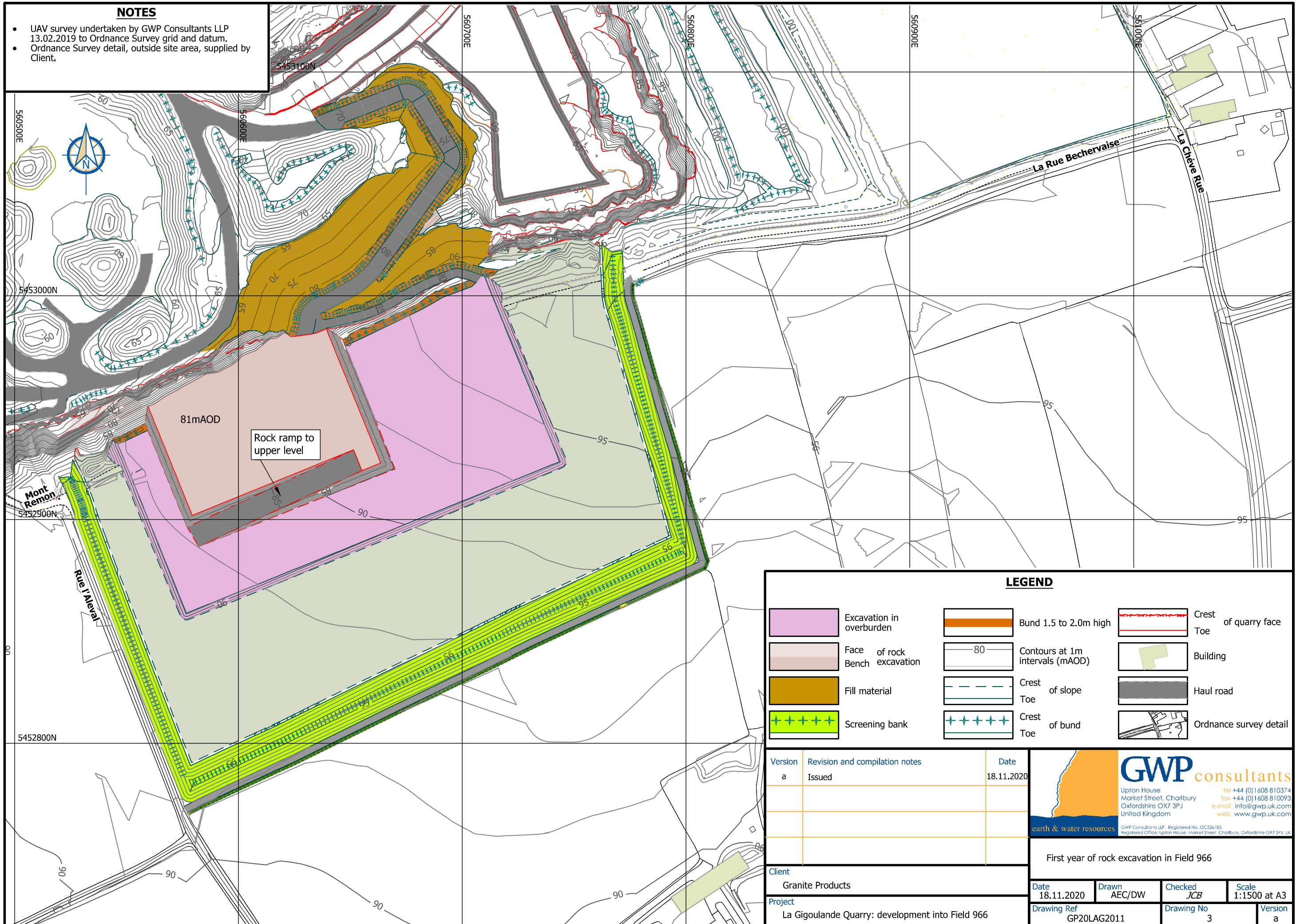
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Fill ramp construction and initial overburden strip



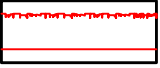

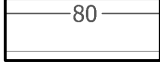


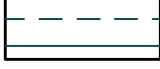





Client	Granite Products	Date	18.11.2020	Drawn	AEC/DW	Checked	JCB	Scale	1:1500 at A3
Project	La Gigoulande Quarry: development into Field 966	Drawing Ref	GP20LAG2011	Drawing No	2	Version	a		

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Bund 1.5 to 2.0m high		Crest of quarry face
	Face of rock Bench excavation		Contours at 1m intervals (m.AOD)		Toe of quarry face
	Fill material		Crest of slope		Building
	Screening bank		Crest of bund		Haul road
					Ordnance survey detail

Version	Revision and compilation notes	Date
a	Issued	18.11.2020

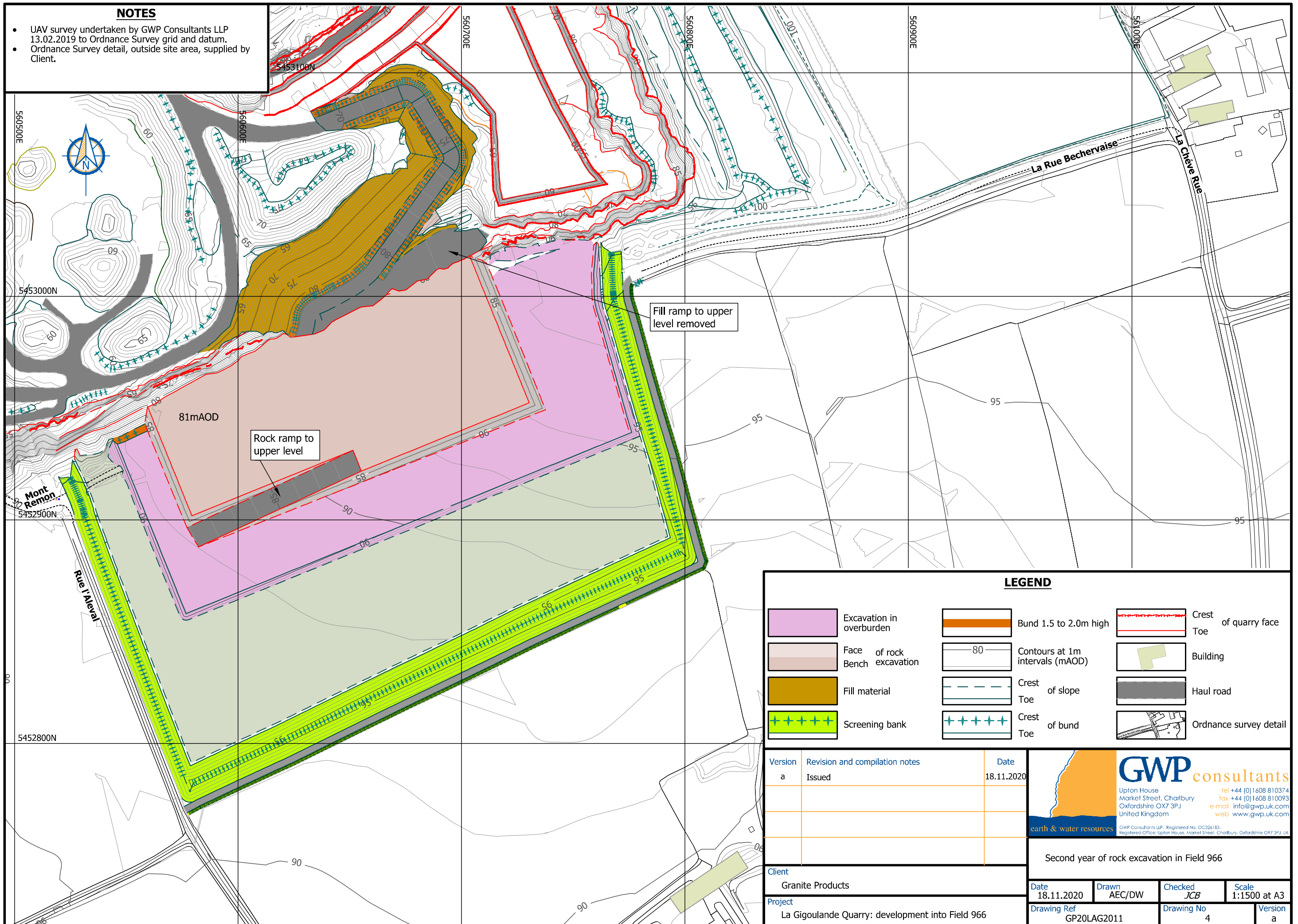
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First year of rock excavation in Field 966



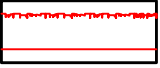

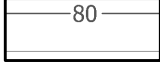


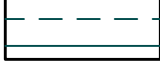




Client	Granite Products	Date	18.11.2020	Drawn	AEC/DW	Checked	JCB	Scale	1:1500 at A3
Project	La Gigoulade Quarry: development into Field 966	Drawing Ref	GP20LAG2011	Drawing No	3	Version	a		

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Bund 1.5 to 2.0m high		Crest of quarry face
	Face of rock Bench excavation		Contours at 1m intervals (mAOD)		Building
	Fill material		Crest of slope		Haul road
	Screening bank		Crest of bund		Ordnance survey detail

Version	Revision and compilation notes	Date
a	Issued	18.11.2020

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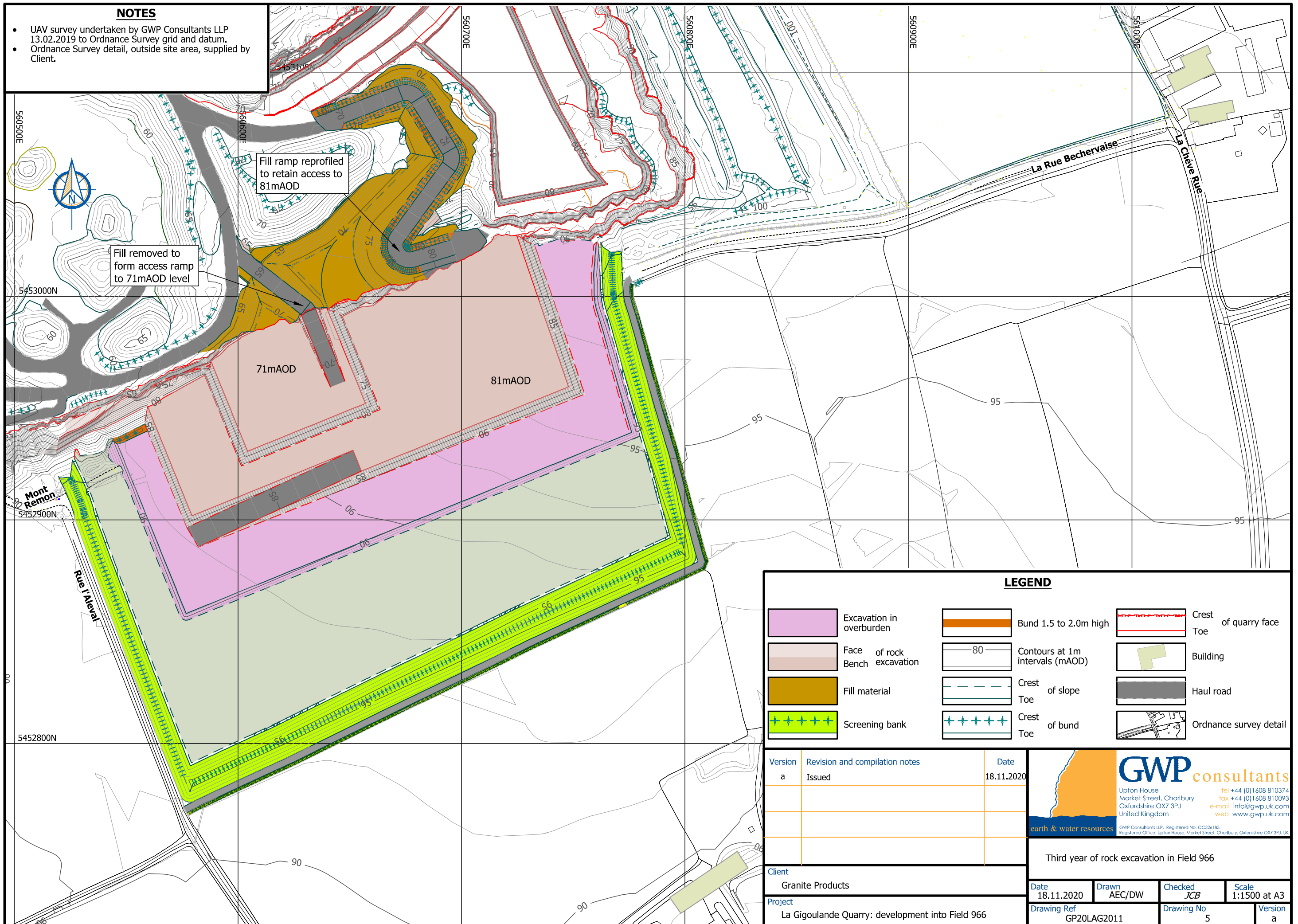
GWP Consultants LLP, Registered No. OC326183.
Registered Office: Upton House, Market Street, Charlbury, Oxfordshire OX7 3PJ, UK

Second year of rock excavation in Field 966



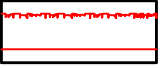

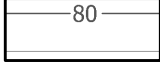


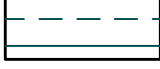




Client	Granite Products	Date	18.11.2020	Drawn	AEC/DW	Checked	JCB	Scale	1:1500 at A3
Project	La Gigoulande Quarry: development into Field 966	Drawing Ref	GP20LAG2011	Drawing No	4	Version	a		

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Bund 1.5 to 2.0m high		Crest of quarry face
	Face of rock Bench excavation		Contours at 1m intervals (mAOD)		Building
	Fill material		Crest of slope		Haul road
	Screening bank		Crest of bund		Ordnance survey detail

Version	Revision and compilation notes	Date
a	Issued	18.11.2020

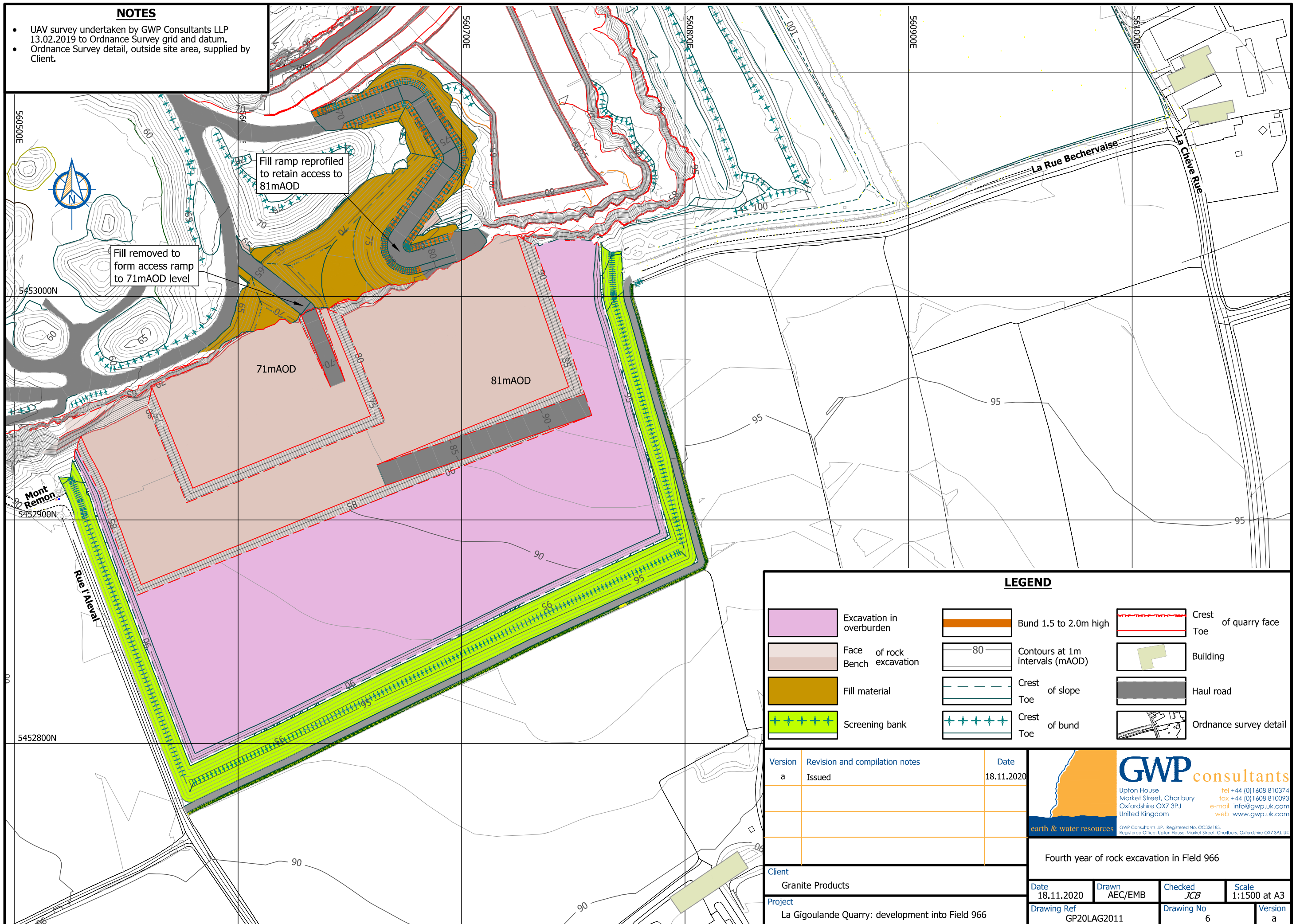
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Third year of rock excavation in Field 966

Client	Granite Products	Date	18.11.2020	Drawn	AEC/DW	Checked	JCB	Scale	1:1500 at A3
Project	La Gigoulade Quarry: development into Field 966	Drawing Ref	GP20LAG2011	Drawing No	5	Version	a		

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



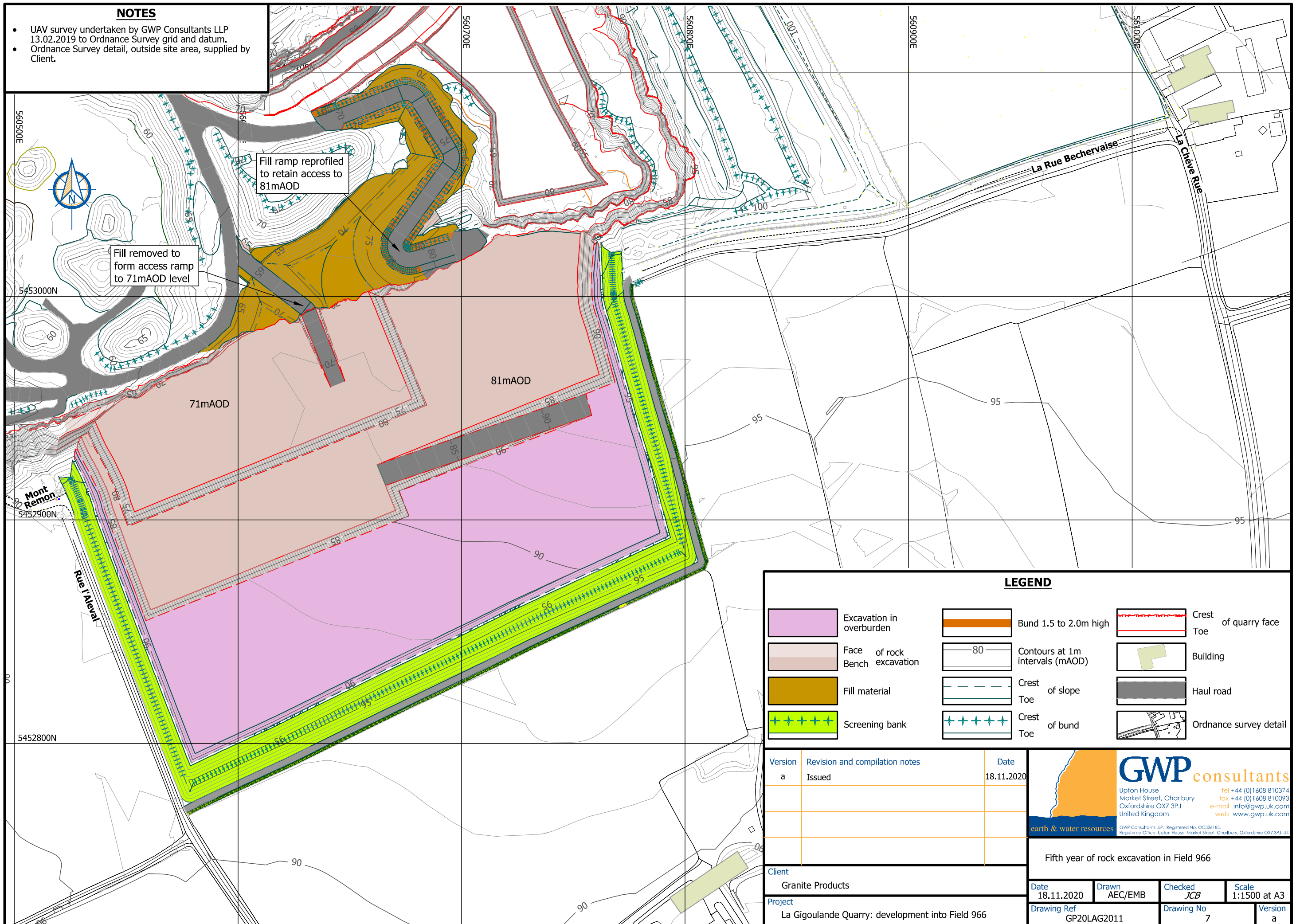
LEGEND

	Excavation in overburden		Bund 1.5 to 2.0m high		Crest of quarry face
	Face of rock Bench excavation		Contours at 1m intervals (mAOD)		Toe of quarry face
	Fill material		Crest of slope		Building
	Screening bank		Toe of slope		Haul road
			Crest of bund		Ordnance survey detail
			Toe of bund		

Version	Revision and compilation notes	Date	 Upton House Market Street, Charlbury Oxfordshire OX7 3PJ United Kingdom tel +44 (0)1608 810374 fax +44 (0)1608 810093 e-mail info@gwp.uk.com web www.gwp.uk.com GWP Consultants LLP, Registered No. OC326183. Registered Office: Upton House, Market Street, Charlbury, Oxfordshire OX7 3PJ, UK		
a	Issued	18.11.2020			
			Fourth year of rock excavation in Field 966		
Client			Date	Drawn	Checked
Granite Products			18.11.2020	AEC/EMB	JCB
Project			Drawing Ref	Drawing No	Version
La Gigoulande Quarry: development into Field 966			GP20LAG2011	6	a

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Bund 1.5 to 2.0m high		Crest of quarry face
	Face of rock Bench excavation		Contours at 1m intervals (mAOD)		Toe of quarry face
	Fill material		Crest of slope		Building
	Screening bank		Toe of slope		Haul road
			Crest of bund		Ordnance survey detail
			Toe of bund		

Version	Revision and compilation notes	Date
a	Issued	18.11.2020

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earth & water resources

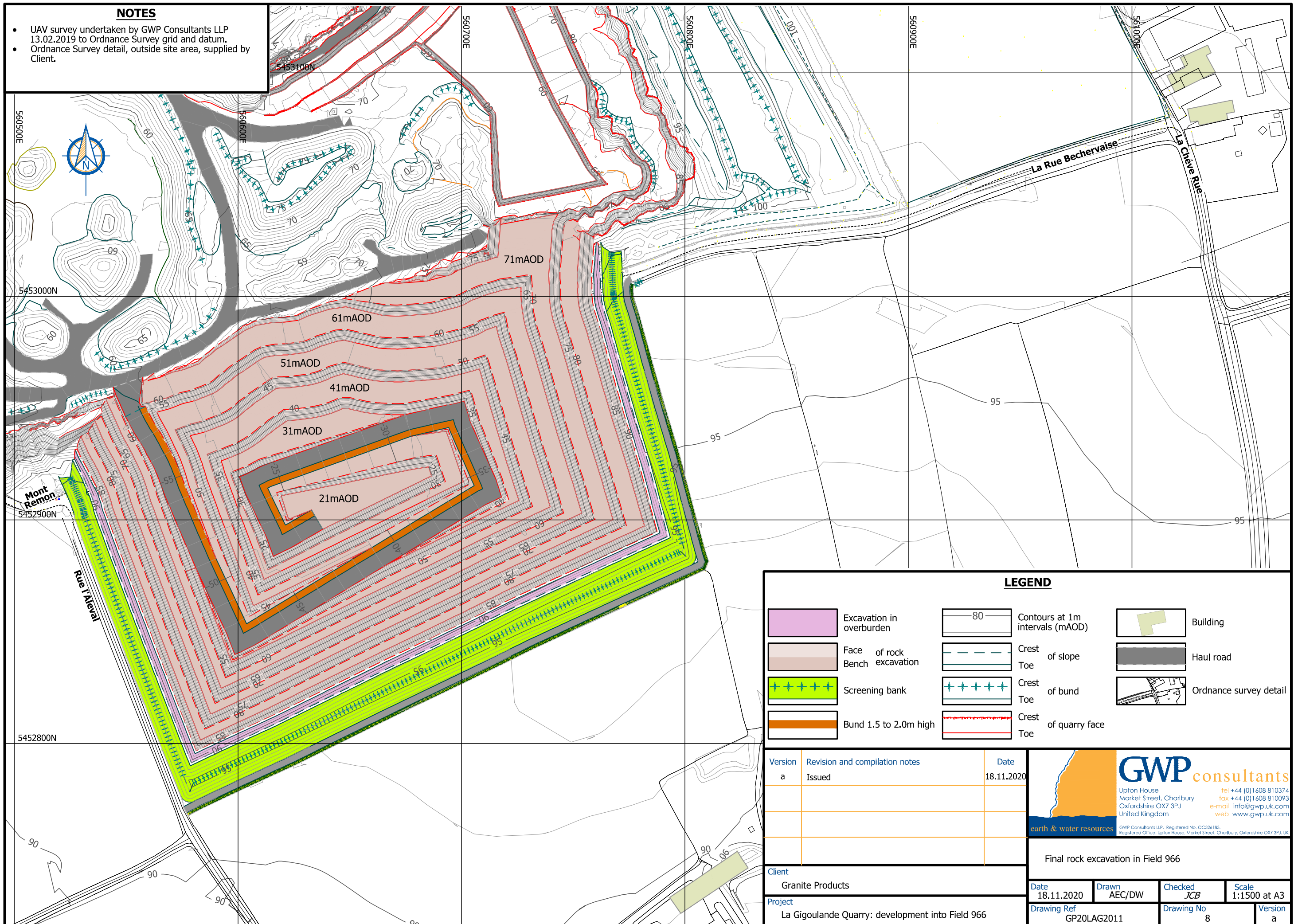
GWP Consultants LLP, Registered No. OC326183.
 Registered Office: Upton House, Market Street, Charlbury, Oxfordshire OX7 3PJ, UK

Fifth year of rock excavation in Field 966

Client	Granite Products	Date	18.11.2020	Drawn	AEC/EMB	Checked	JCB	Scale	1:1500 at A3
Project	La Gigoulande Quarry: development into Field 966	Drawing Ref	GP20LAG2011	Drawing No	7	Version	a		

NOTES

- UAV survey undertaken by GWP Consultants LLP 13.02.2019 to Ordnance Survey grid and datum.
- Ordnance Survey detail, outside site area, supplied by Client.



LEGEND

	Excavation in overburden		Contours at 1m intervals (mAOD)		Building
	Face of rock excavation		Crest of slope		Haul road
	Bench excavation		Toe of slope		Ordnance survey detail
	Screening bank		Crest of bund		
	Bund 1.5 to 2.0m high		Toe of bund		
			Crest of quarry face		
			Toe of quarry face		

Version	Revision and compilation notes	Date	 Upton House Market Street, Charlbury Oxfordshire OX7 3PJ United Kingdom <small>GWP Consultants LLP, Registered No. OC326183. Registered Office: Upton House, Market Street, Charlbury, Oxfordshire OX7 3PJ, UK</small>		
a	Issued	18.11.2020			
			Final rock excavation in Field 966		
Client Granite Products			Date 18.11.2020	Drawn AEC/DW	Checked JCB
Project La Gigoulade Quarry: development into Field 966			Drawing Ref GP20LAG2011	Drawing No 8	Scale 1:1500 at A3
			Version a		

APPENDIX C

**POTENTIAL CONSTRAINTS ON THE EXTENSION OPTIONS AS A RESULT OF WATER
RESOURCES**

Appendix C

Constraints associated with the southern extension as a result of potential impacts on water resources

- I. The southern extension would bring mineral extraction operations and dewatering to within approximately 100m of the irrigation pond excavated into the granite. Based on previous planning applications it is understood that the pond is groundwater fed. There are also known private water abstractions at Greenhills Country Hotel and Haut de Mont Farm approximately 200m south and south west of the southern extension respectively. Based on the application for planning permission for deepening the western part of the existing quarry it was determined from the results of the groundwater level monitoring at the existing quarry that the radius of influence of dewatering was between 115m and 245m hence these receptors could be outside of the radius of influence of quarry dewatering. As stated above, it would be necessary to obtain up to date groundwater level monitoring information together with groundwater level monitoring information for the southern area, and up to date rainfall data to carry out this assessment.
- II. As proposed with previous applications for the site and set out above, subject to the agreement of the owners of the private water abstractions and irrigation pond groundwater levels would be monitored in the private abstraction boreholes and pond prior to the extraction of mineral in the southern extension to assess the seasonal fluctuation of groundwater levels. Groundwater levels would be monitored in the private abstraction boreholes and the pond during the extraction of granite in the southern extension. In the event that groundwater abstractions were derogated mitigation would comprise either deepening the boreholes or providing a mains supply. If the groundwater levels in the pond are derogated the mitigation measures would include lining the irrigation pond or topping the pond up from settled quarry water.
- III. The southern extension may bring mineral extraction and dewatering closer to some of the sensitive habitats in the La Hague Reservoir Valley however the western part of the currently permitted extraction area is already within 100m of these habitats whereas the southern extension boundary would be approximately 250m from these habitats at the closest point. There is the potential for cumulative impacts in this respect. The main aspect would be the presence of groundwater seepages/ issues

from the side of the valley which may feed into sensitive habitats. It would be necessary to investigate potential spring lines along the La Hague Valley to determine whether there could be potential impacts on these habitats. This work may be unnecessary if it could be demonstrated that the valley is likely to be outside of the radius of influence of quarry dewatering as set out above. If it is not possible to demonstrate that the La Hague Valley is outside of the influence of quarry dewatering, monitoring/ mitigation measures would be proposed as necessary.

Conclusion

- IV. It is considered unlikely that following the implementation of mitigation measures there will be any overriding constraint with respect to water resources that would preclude development of the southern extension.

APPENDIX D
ECOLOGICAL CONSTRAINTS ASSESSMENT

Ms Laura Cherry
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5th January 2021
Our Ref: SW21/E1941/LCL1

Dear Ms Cherry,

La Gigoulande Quarry, Southern Extension - Ecological Constraints Assessment

Further to your recent email we understand that it is proposed to promote a southern extension to La Gigoulande Quarry in the minerals plan. In order to assist with this, an initial assessment of the potential ecological constraints relevant to this has been requested. This is the purpose of this report.

The proposed southern extension area is shown on MJCA drawing ref: BGL/JE/12-20/22141.

Background

In order to identify potential ecological constraints on the working of the southern extension area, as part of the previous commission, a desk-based review was carried out. This primarily included a data request to the Jersey Biodiversity Centre (JBC) in June 2018 for any records they held of protected species within the site and up to 2km away. Information relating to nature conservation designations, such as Sites of Special Interest (SSI) was gathered from the States of Jersey website¹ at that time, and was updated for this report in January 2021.

To supplement the 2018 search, the results of previous ecological appraisals of the quarry and surrounding area undertaken by Bioscan in 2006 and 2011 were also reviewed to identify the likely habitats within the extension area. This was then verified, as far as possible, using freely available on-line resources such as aerial and street level photography.

Desk study results

The review of the States of Jersey website confirms that there continues to be no part of proposed southern extension area that is part of an SSI or potential SSI and there are no such sites within the 2km search area. Also, none of the protected species records provided by the JBC in 2018 are from within the extension area. Red squirrel *Sciurus vulgaris* has, however, been recorded in 2010 approximately 200m north of the southern extension area, in the woodland on the opposite side of the existing quarry.

Habitat assessment

The vast majority of the proposed extension area was identified as being used for arable cultivation at the time of both the 2006 and 2011 site surveys, and cultivation appeared to be continuing based on aerial (dated 7th March 2014) and street level photography when revised in 2019. A check of these two sources in 2021 indicates that this is unlikely to

¹ <https://www.gov.je/citizen/Planning/Pages/NaturalSites.aspx>

have changed during the interim, with aerial photography dated 3rd June 2020 showing the whole of the main field being arable.

In addition, the boundaries of the extension area continue to appear to be largely undefined other than by a change in cultivation or where a road is present. The only substantive block of non-arable habitat evident continues to be between Le Rue Bechervaise and the existing quarry. Here a belt of scrub/developing secondary woodland continues to be evident. Other habitats noted are in the form of short sections of hedgerow along the northern field boundary.

Assessment of potential impacts which could be material to options appraisal

Overall, based on the information available at this stage, the broad picture of this extension area continues to be one of land that is characterised mainly by arable cultivation, with some associated habitats in the form of hedgerows. This mosaic of habitat appears common within the surrounding landscape based on aerial photography and would not be considered likely to represent an overriding constraint on the working of the proposed extension area. A block of scrub/woodland appears to be within the likely extension area as defined by the proposal drawings. It is understood that the proposal for working the extension would involve expansion of the quarry directly southward resulting in the removal of this scrub/secondary woodland, and sections of remnant hedgerow. Further assessment of these as part of a planning application would therefore be needed, but there is nothing at this stage to suggest that these habitats are likely to have significant ecological value or conservation interest.

With regards to protected species, as red squirrel has been recorded locally, a detailed survey of any habitat suitable for supporting this species, and that would be affected, such as the hedgerows and scrub/woodland, will be required to support a planning application. Nevertheless, should this species be confirmed, based on the outline working drawing (GWP Consultants drawing ref: GP20LAG2011) with the inclusion of a stand-off and screening bank along the diverted road (western, southern and eastern site boundaries) there should be space to create compensatory habitat for this vegetation loss as part of the proposal. Subject to the final restoration scheme, opportunities such as retention of established compensatory habitat post-extraction could also result in the proposal delivering a net gain in red squirrel habitat in the long term.

No other protected species have been identified at this stage that are considered to have the potential to be a material constraint on the proposed working of the extension area.

I trust the above is of assistance and please do not hesitate to contact us to discuss anything further if necessary.

Regards

FOR AND ON BEHALF OF BIOSCAN (UK) LTD



Samuel Watson MCIEEM
Principal Ecologist
Samwatson@bioscanuk.com

APPENDIX E
HERITAGE ASSESSMENT



La Gigoulande Quarry



Heritage Appraisal

January 2021

E:mail andyjosephs@hotmail.com • Telephone 07990 571908

Waltham House, Stowmarket, IP14 1AS

Andrew Josephs Ltd. Registered Office, Antrobus House, 18 College St, Petersfield, GU31 4AD. Registration no. 4547366

1. Introduction

1.1 DESCRIPTION of the OPTIONS

This Heritage Appraisal has been commissioned by MJCA on behalf of Granite Products Ltd. to provide an overview of archaeology and cultural heritage in relation to a proposed southern extension at La Gigoulande Quarry, Jersey.

The proposed extension area (PEA) is shown hatched brown on **Figure 1**.

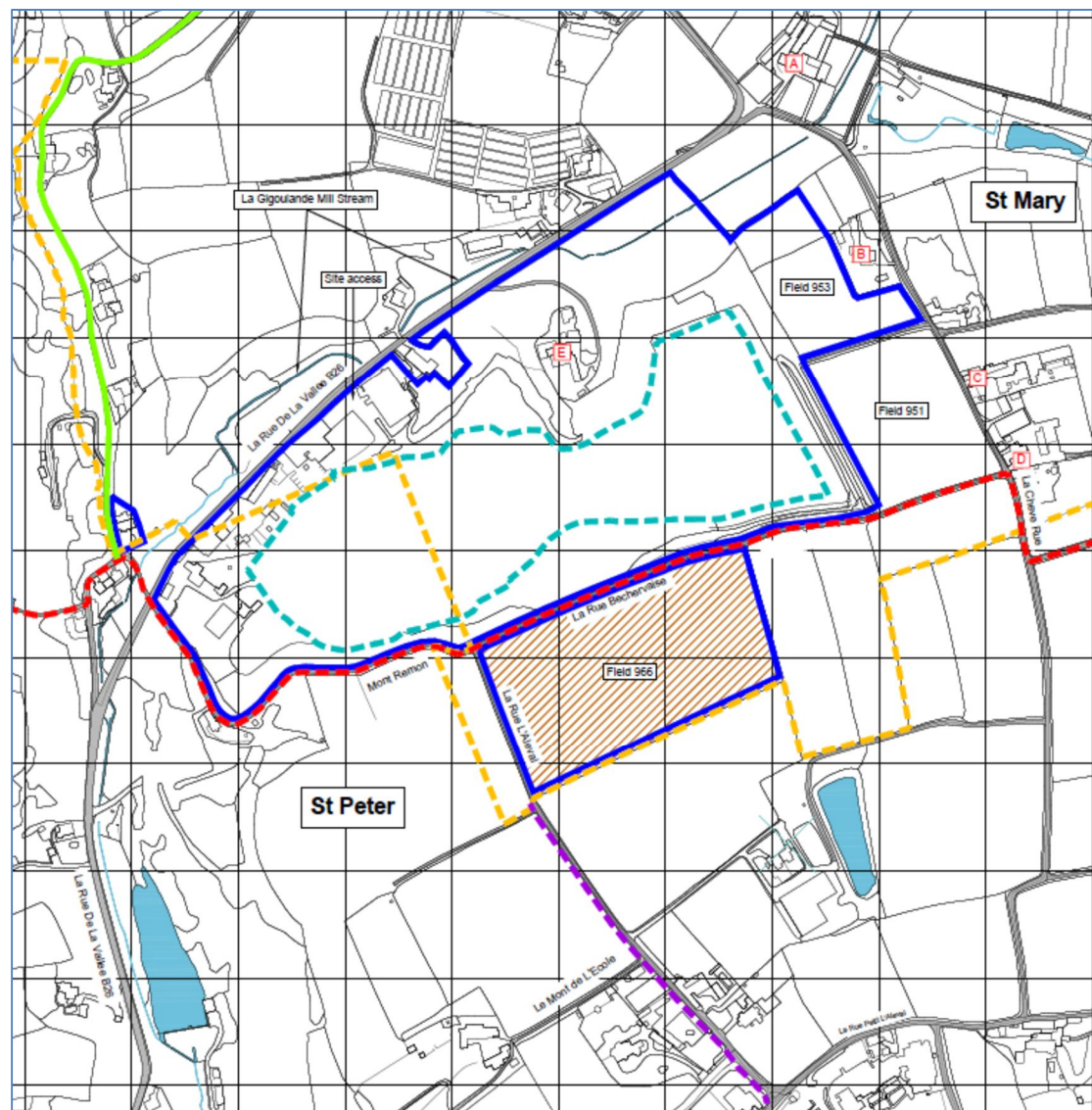


Figure 1 Location of the PEA hatched brown
source: MJCA

1.2 SCOPE OF CULTURAL HERITAGE

Cultural heritage is represented by a wide range of assets and features that result from past human use of the landscape. These include historic structures, many still in use, above ground and buried archaeological monuments and remains of all periods, artefacts of anthropological origin and evidence that can help reconstruct past human environments. In its broadest form cultural heritage is represented by the landscape and townscape itself.

1.3 SCOPE OF THIS APPRAISAL

Desk-based research was supplemented by a site visit (from PROW) and consultation of historical records at the Jersey Archive. Aerial photography was also examined. All work was carried out confidentially and the nature of the proposals was not discussed with consultees.

2. Baseline

2.1 DESIGNATED HERITAGE ASSETS

A search of the online States of Jersey listed buildings and monuments database was carried out and verified at the Jersey Archive. **Figure 2** shows designated assets in the vicinity of the PEA. These are described in **Table 1**.

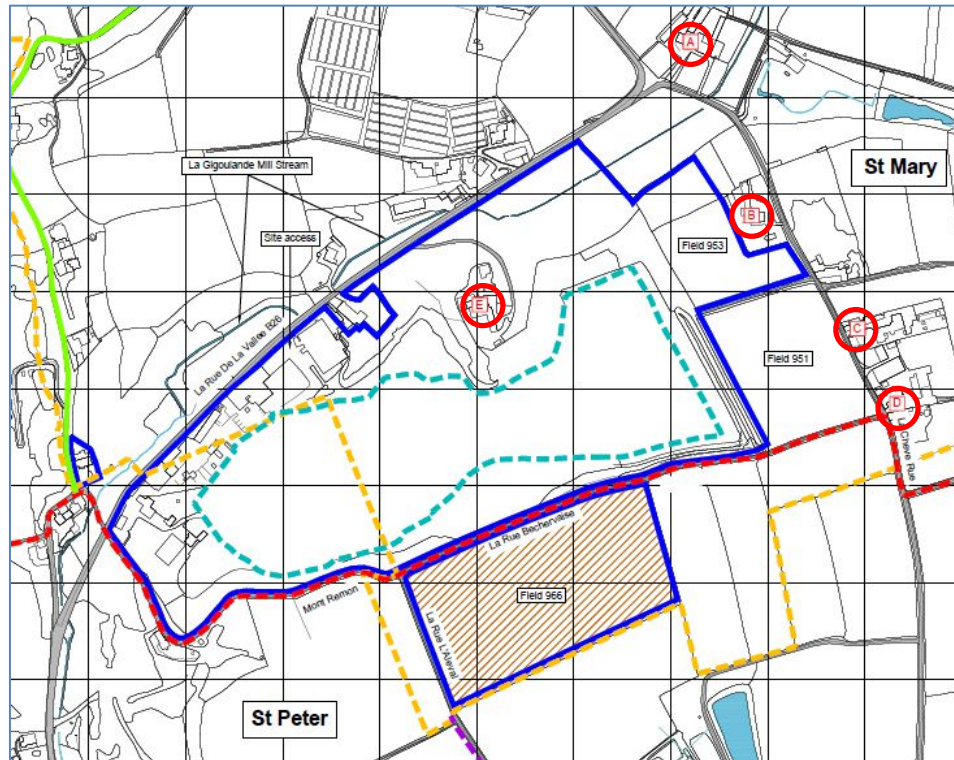


Figure 2 Listed Buildings in the vicinity of the PEA

Table 1 Designated Heritage Assets in vicinity of PEA

Ref	Name	Grade	Description
A	The Elms	2	National Trust for Jersey HQ. An important, high quality example of 18th century house and associated 18th / 19th century farm group, with elements dating back to the 15th century. Historically the manor house of the Fief du Câtelet in St John from before 1500 until the 19th century. Currently headquarters of The National Trust for Jersey. The site includes an important and apparently unusually extensive (for Jersey) early 18th century garden layout for a lesser manor house, which survives in part in relict form.
B	Hillside	3	Mid-late C19 house which retains its historic character and features.
C	La Cheve Rue Cottages	4	A row of mid 19th century cottages which retain external historic character and have "a rhythm and scale that allows it to sit well in the landscape."
D	Stuart Farm	4	A good survival of a mid C19 farm house and associated farm buildings
E	La Chasse	3	Historic farm group. The C18 house retains its proportions and character with some historic features remaining. The southeast outbuilding, pigsties and wellhead contribute to the group value.

2.2 ARCHAEOLOGICAL BACKGROUND

There is no Historic Environment Record for Jersey, although one is in the course of being created. However, Jersey has a long history of amateur archaeology and La Société Jersiaise has been carrying out research on the island since 1873. This is the primary source of information and their records were consulted at the Jersey Archive.

There are no known records within the PEA and the potential for archaeology is considered low.

On the 1st edition Ordnance Survey of 1935 shows the PEA to be a featureless field contained within the same boundaries as today (**Figure 4**). A map of 1849 also shows a featureless, although without boundaries (**Figure 5**). There are no cropmarks evident on aerial photography (**Figure 6**).

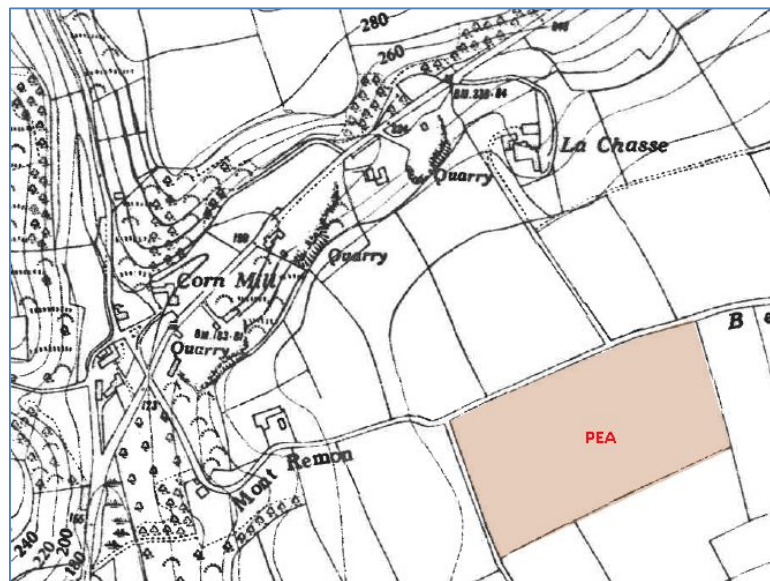


Figure 3 1st edition Ordnance Survey of 1935



Figure 4 Map of 1849 map



Figure 5 **2019 Aerial Photograph**

2.3 IMPACT OF PLOUGHING

The PEA is under the plough and the potential for well-preserved archaeology is therefore slight.



Figure 6 **The PEA from the north**

2.4 SITE VISIT

Due to confidentiality photographs were not taken of the listed buildings.

There is however no intervisibility between the listed buildings and the PEA. Their setting will not be affected.

Of potential interest is La Rue Bechervaise that would be removed to access the PEA. Bounding the southern side of the lane is a slight banked boundary (**Figure 7**). These can be significant and Jersey Heritage describe them as “*among the all too few surviving monuments to Jersey's medieval period. 'Fosses' and 'banques' are earth banks, sometimes dating back to the 14th century. They often have hedges or trees growing on top of them. 'Fosse' is the generic name for all banks, whereas a 'banque' was built to retain earth, so the land will be higher on one side than on the other.*”

The bank is slight in comparison to others on Jersey and importantly contains no boundary stones, although elsewhere along La Rue Bechervaise some are evident. Its removal is not considered a significant constraint.



Figure 7 View west along La Rue Bechervaise with ‘*banque*’ to left and PEA beyond

3. Conclusion

The PEA comprises a single, regularly ploughed field that is likely to be of low archaeological potential. Some recording, and possibly a watching brief during the removal of La Rue Bechervaise, may be required to see if dating evidence can be retrieved that would provide important information on the date of the creation of the lane.



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www.andyjosephs.co.uk

APPENDIX F
NOISE CONSTRAINTS ASSESSMENT

GRANITE PRODUCTS LTD
LA GIGOULANDE QUARRY, ST PETERS VALLEY, JERSEY

***NOISE CONSTRAINTS
ASSESSMENT***

*Granite Products Ltd
St Peter's Valley
Jersey*

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2.0	QUARRY LOCATION, OPERATION & ENVIRONS
3.0	NOISE SURVEYS
4.0	NOISE STANDARDS & NOISE LIMIT LEVELS <i>Noise Standards</i> <i>Noise Limit - General Workings</i> <i>Noise Limit - Soil Removal/Bund Formation</i>
5.0	PRELIMINARY CONSIDERATION OF OPERATIONAL NOISE LEVELS <i>Southern Extension</i> <i>Figure 1 - Site Location Plan</i> <i>Figure 2 - Aerial View.</i> <i>Figure 3 - Southern Extension</i> <i>Figure 4 -Noise Measurement & Receptor Locations</i>

1.0 INTRODUCTION

1.1 *La Gigoulande Quarry*, located in *St Peter's Valley, Jersey* is owned and operated by *Granite Products Ltd* and has been a working *Quarry* for many years. The *Quarry* is one of the two significant stone quarries in *Jersey*.

1.2 The option under consideration with respect to the potential extension to the *Quarry* is:-

- *A potential southern extension with the route of La Rue Bechervaise diverted around the perimeter of the southern extension.*

1.3 This report is a summary of the potential constraints with respect to noise associated with the option under consideration and provides, where possible at this stage, mitigation that would need to be provided. The southern proposed extension is shown in ***Figure 3 - Potential Extension Option***.

2.0 QUARRY LOCATION, OPERATION & ENVIRONS

- 2.1** *La Gigoulande Quarry* is located to the north of *Le Mont Remon* and *La Rue Bechervaise* and to the south of *La Rue de la Vallee* from which the *Quarry* is accessed. Its location is shown on **Figure 1 - Site Location Plan** and **Figure 2 - Aerial View**.
- 2.2** To the north of the *Quarry* is the *Church of Latter Day Saints* and *Les Chasses*, which is a large house in the ownership of the *Company*. There are also several residential properties bordering *La Rue de la Vallee*. Further away to the east there is a cluster of residential properties in the *La Cheve Rue*. The proposed workings in the proposed east extension will come closer to these properties.
- 2.3** On the west side of the *Quarry* entrance and directly across *La Rue de la Vallee* there are several houses with further houses and a *Hotel* on the hill above. To the south west there is a house in *Mont Remon* which would be to the west of the proposed southern extension and to the south of the southern extension a property off *La Rue L'Aleval*. The nearest residential properties (*receptor locations*) around the *Quarry* and to the proposed potential extension area together with both previous and new background noise measurements positions, are marked on **Figure 3 - Noise Measurement & Receptor Locations**

3.0 NOISE SURVEYS

3.1 Noise surveys of the *Quarry* and the surrounding areas were carried out in 1998, 2005, 2011 and 2018.

3.2 The background noise levels at and in the vicinity of the *Quarry* are presented in *Table 1*.

Table 1
Survey Results (Averages)

Background Measurement Positions	Start Time	1998 Survey		2005 Survey		2011 Survey		2018 Survey	
		LAeq	LA90	LAeq	LA90	LAeq	LA90	LAeq	LA90
1 East side	AM	54	50			41	35	47	42
	PM					44	36	46	44
2 North side	AM	45	41			42	39	52	44
	PM					42	39	46	43
3 North side	AM			51	39	54	50	47	42
	PM					54	49	45	42
4 West side Opposite Entrance	AM			56	50	49	46	51	49
	PM					48	42	49	47
5 West side Hotel Charriers	AM			46	43	46	45		
	PM					47	42		
6 South West side Les Perquages	AM			50	42	48	42	49	45
	PM					43	41	45	40
7 Southside	AM							49	42
	PM							46	42

4.0 NOISE STANDARDS & NOISE LIMIT LEVELS

- 4.1 In past discussions with the *Island Environmental Health Team* regarding previous noise assessments at the *Quarry* it was accepted that *UK Noise Standards* could be used taking account of the comments set out in the *Revised 2011 Island Plan*.
- 4.2 The *February 2019 National Planning Policy Framework (NPPF)* is now the current document in the *UK* which provides guidance to *Local Authorities* on the use of their planning powers to control environmental noise. Its aim is to provide advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. General policies in respect of *Facilitating the sustainable use of Minerals* are set out in *Section 17*
- 4.3 Considering the advice given in the *NPPF* a suitable noise limit level at the nearest residential properties to the *Quarry* and the proposed extension workings can be established. Setting such a limit level would ensure that noise from any workings would be suitably controlled to provide acceptable conditions. Details on noise limits for *Quarries* are set out in *Planning Practice Guidance - Minerals (2014)*.

Noise Limit - General Workings

- 4.4 As the typical background condition around the *Quarry* has been found to be **45 dB LA90**, it is considered that the appropriate Noise Limit Level at any one of the nearest residential properties to the either *Quarry* or the proposed *Extension Area* should be **55 dB LAeq (1 hr)**. This is the current noise limit included in the planning permissions for the *Quarry*.

Noise Limit - Soil Removal/Bund Formation

- 4.5 With regard to a noise limit at nearby residential properties for short term activities, on mineral sites it has previously been recommended and accepted for the *Quarry* activities that **70 dB LAeq (1 hr)** for periods of up to 8 weeks in a year should be set to facilitate essential site preparation and restoration work and construction of screening bunds.

5.0 PRELIMINARY CONSIDERATION OF OPERATIONAL NOISE LEVELS

5.1 The general procedures for the working of the potential extension area to the south of the *Quarry* are to be the same as presently carried out in the *Quarry* and all other plant and activities within the *Quarry* will continue. Working of the area would potentially affect the noise climate of residential properties to the south, to the west and to the east.

5.2 Considering the noise levels of the plant that would be operated and the respective distances of operations from the nearest residential properties a series of calculations have been made. The results of these calculations are shown in **Table 2**. All workings have been taken at existing ground levels.

Initial Workings

5.3 Initial workings in the *southern extension* would commence with the removal of top soils and overburden and the construction of perimeter screen bunds. Taking that these operations would last no more than 8 weeks in a year the temporary noise limit of **70 dB LAeq (1 hr)** would not be exceeded.

General Workings

5.4 Following on from the initial short term activities and the construction of the proposed 3m & 5m high perimeter screen bunds, the calculations show that the general mineral extraction operations would not exceed the consented noise limit at the nearest residential properties specified in the existing planning permissions of **55 dB LAeq (1 hr)**.

Table 2
Calculated "worst case" noise levels

Calc Ref	Receptor	Operation				Combined Noise Level	Noise Limit LAeq
		Soil Removal Bund Formation		Rock Removal Transportation			
		Excavator	Shovel	Face Shovel	Dump Truck		
C3	D	51.0	45.0			52.0	70 dB
C4				25.1	32.1	32.9	55 dB
C5	F	56.1	50.1			57.1	70 dB
C6				25.7	33.8	34.4	55 dB
C7	G	48.4	42.4			49.4	70 dB
C8				25.1	32.1	32.9	55 dB

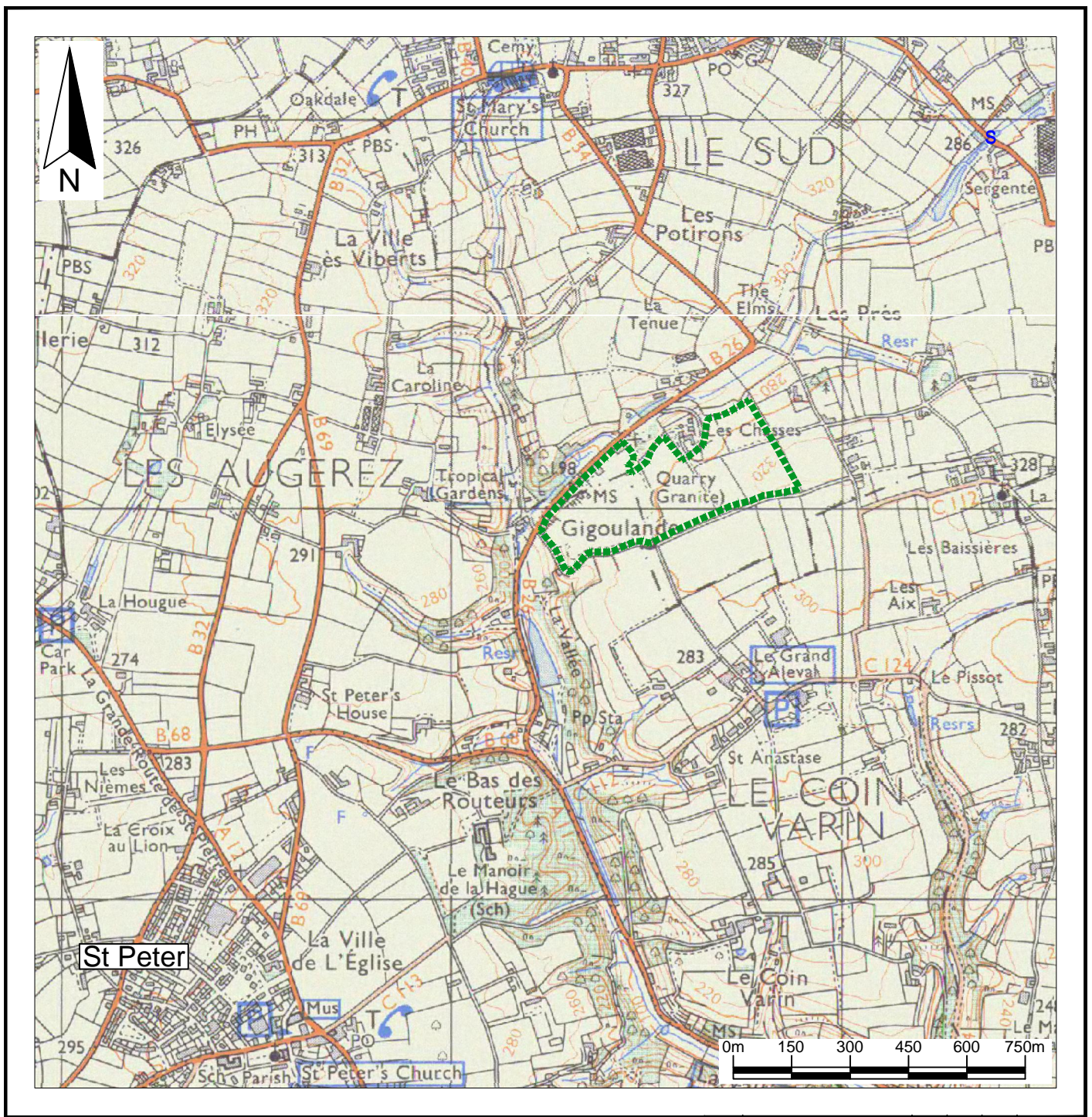
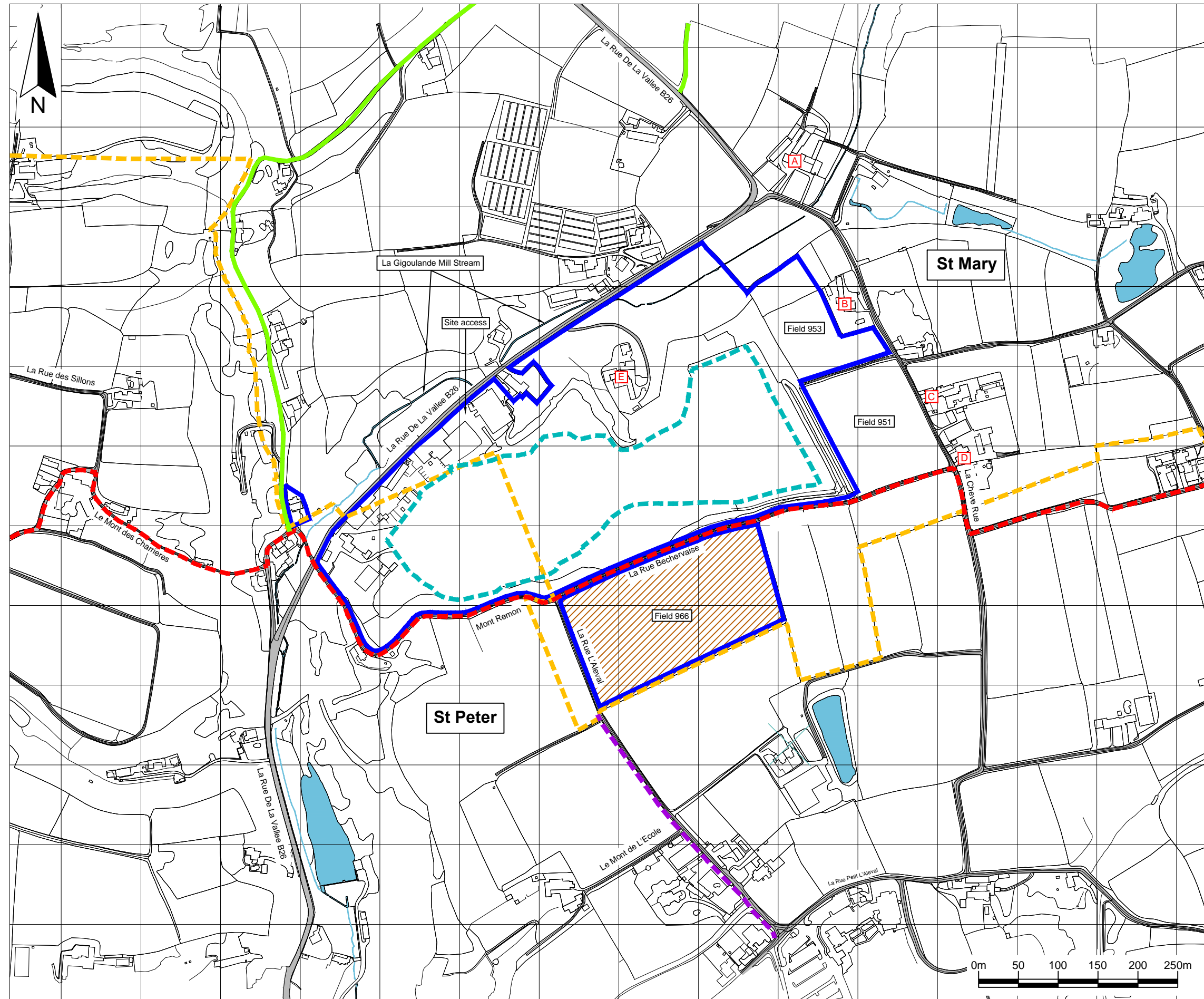


Figure 1 - Site Location Plan



Figure 2 - Aerial View



Key / Notes

- Land under the control of Granite Products Limited
- Current limit of extraction
- Approximate parish boundary
- Surface watercourse
- Surface waterbody
- Green Lane routes
- Cycle route 3
- Cycle route 6a
- Potential southern extension
- A Heritage asset

Note:
Parish boundary taken from the interactive school
catchment map at
<http://webmaps.digimap.je/jerseyschoolcatchments/>

	Final	SRW	LC	GT	15/01/21
Rev	Status	Drn	App	Chk	Date

Site
LA GIGOULANDE QUARRY

Client
GraniteProducts
QUALITY LOCAL STONE SINCE 1946

Title
Potential southern extension at La Gigoulande
Quarry

Figure 3
Scale
1:5,000@A3

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APPENDIX G
LANDSCAPE AND VISUAL APPRAISAL

LA GIGOULANDE QUARRY, ST. MARY & ST PETER, JERSEY

Proposed Southern Extension Area

Landscape and Visual Appraisal

January 2021



Notice

This report was produced by DB Landscape Consultancy Ltd. (DBLC) for Granite Products Ltd for a proposed southern extension to the existing quarry at La Gigoulande Quarry, St. Mary & St Peter, Jersey.

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1 INTRODUCTION

- 1.1. DB Landscape Consultancy Ltd. (DBLC) was appointed by Granite Products Ltd to undertake a high level Landscape and Visual Appraisal (LVA) relating to a proposed southern extension at La Gigoulande Quarry, on the Island of Jersey.
- 1.2 The proposed southern extension area (hereafter referred to as the 'Site') extends over approximately 3.7 hectares (ha) and is located to the immediate south of the existing quarry, separated from it by a well-established, approximately 260m long woodland belt which extends along a partially raised bank feature and also by La Rue Bechervaise, a minor local road which runs along the northern boundary of the Site.
- 1.3 The draft phased working scheme, as shown on Drawing No's 1 to 8, Version A (Drawing Ref. GP20LAG2011, produced by GWP Consultants, dated November 2020) requires La Rue Bechervaise to be diverted to the south, so that the existing quarry can be extended in a southerly direction.
- 1.4 Details of how the worked out Site would be restored would be considered in depth at the detailed design stage and included in the full planning application document, including a Final Restoration Plan and appropriate cross sections to illustrate the proposals in further detail.

2 LANDSCAPE AND VISUAL BASELINE

Introduction

- 2.1 The landscape and visual baseline represents a study of the existing landscape receptors (i.e. landscape features and landscape character) relevant to the Site and surrounding land and also visibility of the area from key locations within the surrounding landscape. The existing quarry has been in operation since 1945, is a well-established feature in the landscape and has been subject to many previous extensions.

LANDSCAPE BASELINE

- 2.2 Figure 1 illustrates the location of a number of the features within the landscape setting that are described below. The combination of some or all of these landscape features contributes to the character and appearance of the Site and surrounds.

Description of the Eastern Part of the Quarry

- 2.3 This part of the site is being worked at present, with mineral extraction occurring within an area at the eastern extent of the quarry, as indicated on Figure 1. The area has been stripped with the overburden material banded along the eastern edge of the quarry. Blasting is occurring and the resultant rock is hauled back to the plant site for processing.
- 2.4 The area is currently at a higher level than the rest of the quarry void although blasting and subsequent extraction works will progressively reduce the elevation of the land, as it is worked. It is noted that extraction operations are already permitted within adjacent land further to the east, on which the overburden bund is located.

Description of the Plant Site Area

- 2.5 The plant site area is located in the central section of the quarry, as indicated on Figure 1. The plant site is situated on an unworked plateau at a level of approximately 56m AOD, with further site infrastructure, including storage and workshop buildings, offices, stocking areas, roads/circulation areas and other built development, located to the northwest and the west.

Description of the Site and Immediate Surrounds

- 2.6 The Site is located to the immediate south of the existing quarry, divided from it by La Rue Bechervaise, a minor road which is also the line of Cycle Route 3. Between the road and the quarry edge there is a wide, well established vegetation screen predominantly containing scrub

and developing secondary woodland which effectively separates the road and the Site from the quarry, both physically and visually.

- 2.7 Land across the Site is in arable use, as is adjacent farmland to the south and east, beyond low hedgerows which divide the fields into parcels. The western boundary of the Site is marked by La Rue L'Aleval beyond which are more arable fields. The land is on the gently sloping side of the valley, sloping downwards from east to west.
- 2.8 A large residential property and its associated garden curtilage is located further to the south, approximately 125 metres (m) from the southern boundary of the area. A pond surrounded by vegetation is located to the east of property and there is a 'L' shaped narrow strip of trees to the west, along with more small blocks of trees to the south and southeast of the property, in the vicinity of a number of other properties arranged along Rue de L'Aleval. The field between the Site and the property has recently been planted with a large number of trees at relatively wide spacings.

Description of the Wider Surrounding Area

Topography, Land Use and Vegetation Cover

- 2.9 The existing quarry lies on a gently sloping hillside with a westerly aspect, extending upwards from the north western corner, close to the quarry exit, at a level of approximately 53m AOD to the eastern boundary, at a level of approximately 97m AOD. The surrounding topography to the north and south of the quarry follows this general pattern, with land sloping gently from west to east, including some local undulation and variation in places.
- 2.10 The western end of the quarry lies close to the bottom of the valley which runs in a broad north to south direction along the La Rue de la Vallee and La Dimerie, marked by extensive woodland blocks and belts of trees, in contrast to higher, more open farmland on the gently rising sides of the valley, to the east and west.
- 2.11 Surrounding land use is predominantly arable farming with fields of varying sizes divided by hedgerows, often with individual trees, interspersed with slightly wider strips of mature trees. The boundaries of the existing quarry are generally well wooded, especially the north eastern corner, the north western corner alongside La Rue de la Vallee and the southern edge, at the crest of previously worked faces.

Settlement and Infrastructure (including Listed Buildings)

- 2.12 As mentioned above, the closest residential properties to the Site lie approximately 125m to the south of the southern boundary of the area, consisting of a large residential dwelling with a number of additional buildings arranged at right angles to the main residence, forming three sides of a square. There is a similar sized residence and associated buildings to the immediate southeast of the property closest to the Site, separated from it by a boundary hedgerow and grassland strip.
- 2.13 A number of other properties are located further to the south, in the vicinity of the small settlement of L'Aleval, arranged in a generally linear pattern along Rue l'Aleval (with the closest property approximately 220m from the Site), Mont St Anastase and Rue du Petit l'Aleval. A collection of properties along with Stuart Farm are located along La Cheve Rue, approximately 255m to the northeast of the Site.
- 2.14 Other properties are located in small groups, linear patterns or individual plots within the surrounding landscape. The closest main town is St Peter, approximately 1.45 kilometres (km) to the southwest.
- 2.15 Apart from La Rue de la Vallee, there are no other main roads in the surrounding area, emphasizing the rural, agricultural nature of the landscape and the lack of concentrated areas of built development.

Public Rights of Way (PRoW)

- 2.16 There are no Footpaths or Bridleways on Jersey, with land generally restricted to private use unless specially marked as a Walking Route, Cycle Route or a Green Lane. Cycle Route 3 and a Green Lane route runs along La Rue Bechervaise, which divides the quarry from the Site, and Cycle route 6a extends along Rue l'Aleval, which marks the western boundary of the Site.
- 2.17 In addition to the cycle routes, there is also a marked 'Walking Route' along La Dimerie and Rue des Potirons to the northeast of the quarry. All these routes are shown on Figure 1.

Existing Landscape Character Assessments

Introduction

- 2.18 The combined elements of a landscape set one area apart from those adjacent to it and make its character distinctive to the people who both live in or visit the area. Recognition of this

character variation requires an understanding of these influences that give different areas a unique 'sense of place'. This section reviews existing landscape character assessments that relate to the Site and the surrounding land.

National Level Landscape Character Assessment

- 2.19 In England, at the national level landscape character assessment has been defined by Natural England's own assessment work which has divided areas of England into areas with similar landscape character called National Character Areas (NCA's), published by Natural England. A similar study has not been undertaken for Jersey hence there are no national level landscape character studies of relevance.

Island Level Landscape Character Assessments

Countryside Character Appraisal (December 1999, LUC)

- 2.20 This report *"is regarded as an essential prerequisite for future development planning and policy formulation on the Island, to help ensure that the distinctive and varied character of the Island's countryside is recognised, respected, protected and enhanced"* (Project brief ref: 8/8, 1997)
- 2.21 The existing quarry are located at the southern extent of Character Area E6: Central Plateau – Valley Heads while the potential southern extension area is located at the northern extent of Character Area E5: Central Plateau – Ridges. Both of these character areas have been considered in more detail below.

Character Area E6: Central Plateau – Valley Heads

- 2.22 This character area *"forms the northern part of the interior plateau. The northern boundary is formed by the main north coast road. To the south, are the ridges between the valleys. The boundary between the valley heads and ridges is difficult to define on the ground as it occurs at the point where the valleys become shallower and the ridges open out to form a wider plateau. It is roughly defined by the change in geology from the softer shales to the harder igneous rocks"*.
- 2.23 The Essential Character is defined as the following:
- *"The highest part of the Island's main south draining watershed, forming the northern part of the interior plateau;*
 - *Underlain by hard granites and rhyolites, blanketed by thick deposits of loess creating rich soils for agriculture;*

- *The gently undulating, open landform intersected by the springs and shallow upper tributaries of the main valleys, is one of the principle defining features of the area;*
- *An intact, productive agricultural landscape with a characteristic 'patchwork' of arable and pasture fields enclosed by mixed hedgerows. Lines of tightly flailed and pollarded trees are very visible feature in views across the area;*
- *Historically one of the most attractive places on the Island for settlement providing a degree of shelter, an abundant water supply and access to the bulk of arable land which lay across the northern plateau in the Medieval period. Contains the four village centres at St. Ouen, St. John, Trinity and St. Mary; and*
- *A particularly distinctive feature of the area are the long views across the interior, often encompassing the church spires and steeples of the main settlements."*

2.24 The Evaluation section states the following regarding the integrity of character: *"This forms part of the rural heartland of Jersey. It is, on the whole, an intact, productive agricultural landscape with a characteristic 'patchwork' mix of arable land and pasture. A distinctive feature of the area are the very long views that can be obtained, across the interior and a consequent sense of 'openness' which differentiates this area from the more enclosed ridges to the south. The area is also distinctive for the clusters of settlement that it contains at the four village centres. The church spires and steeples create very prominent landmarks in the long views. Overall, the area retains a positive character, although with some evidence of degradation. The general strategy is for conservation with restoration and management of specific features.*

2.25 Relevant Threats to Local Character are as follows:

- *"Further loss of hedgerows and hedgerow trees or the amalgamation of fields which, in this area has the potential to open up very long views, often encompassing development and roads."*

2.26 Relevant Management Priorities are as follows:

- *"Restoration of the hedgerow network is a priority. Replanting should supplement existing thin/gappy hedges or reinstate old field boundaries discernible from historic maps or air photos; and*

- *Sympathetic hedgerow management is required and some hedgerow trees should be allowed \all lines of flailed and pollarded hedgerow trees are a characteristic feature of the Jersey landscape particularly in this open area, and some should be retained."*

2.27 The Levels of Protection and Capacity to Accept Change section states the following of relevance:

"Capacity: There is limited capacity to accept any new development and it is recommended that this area should have high levels of protection. Any development can have a very high impact in the long views that can be obtained within this area. New development should be limited to the existing village areas at Trinity, St. John, St. Mary and St. Ouen.

Guidance: Where developments are permitted, opportunities should be taken to achieve the environmental enhancements and management measures outlined above."

Character Area E5: Central Plateau – Ridges

2.28 This character area *"comprises the ridges of land which separate the main valleys in the central part of the Island. They run from St. Peter's Valley in the west to Le Grand Val in the east. The ridges extend back from the escarpment and are adjoined by the Valley Heads Character Area in the north. The boundary with the valley heads is difficult to define on the ground as it occurs at the point where the valleys become shallower and the ridges open out to a wider interior plateau. It is roughly formed by the change in geology from the softer shales to the harder igneous rocks."*

2.29 The Essential Character is defined as the following:

- *"Comprises the high plateau ridges which divide the intervening valleys in the central part of the Island;*
- *Underlain mainly by the sedimentary rocks of the Jersey Shale Formation, with a thick covering of wind-blown loess creating rich soils for agriculture;*
- *The essential character of the area is derived from the growth of the cider industry in the seventeenth century and the mass planting of orchards enclosed and sheltered by earth banks and hedges;*
- *Characterised by a patchwork of small fields enclosed by mixed hedges of holly, privet, blackthorn, field maple, oak and elm scrub. Thick hedgerows with mature oaks are a*

characteristic feature of the upper valley sides and help tie the more open ridge tops into the wooded valleys;

- *Forms part of the rural heartland of Jersey with a mix of arable land on the slopes above the wooded valleys and open pasture on the flatter ridge tops;*
- *Densely settled, containing some of Jersey's most attractive granite farmhouses; and*
- *Intricate network of narrow winding lanes connect the dispersed dwellings while the flatter ridgetops provide routes of the main roads leading to the north and west of the Island."*

2.30 The Evaluation section states the following regarding the integrity of character: *"The integrity of character has been eroded particularly on the flatter ridge tops, by the impact of roads and development, field enlargement and loss of boundaries and tree cover. Overall the area retains a strong rural character, although with some evidence of degradation. The general strategy is for conservation with restoration and management of specific features. There is some capacity for change."*

2.31 Relevant Threats to Local Character are as follows:

- *"Where trees have been lost through Dutch elm disease, hedgerow removal or the amalgamation of fields to create horse paddocks, the landscape can appear very bleak particularly on the flat ridge tops."*

2.32 Relevant Management Priorities are as follows:

- *"Restoration and management of the hedgerow network is a priority. A particular aim for this area should be to extend and link the broadleaved woodland within the valleys by the restoration of thick hedgerows across the intervening ridges. Appropriate species for planting include oak, hazel, hawthorn, blackthorn, ash and field maple, although local differences in hedgerow character should be observed. Replanting should supplement existing thin/gappy hedges or reinstate old field boundaries discernible from historic maps or air photos;*
- *Management of field margins to enhance habitat diversity should be undertaken in tandem with restoration of the hedgerow network; and*
- *Maintenance of the agricultural landscape comprising a mix of pasture and arable land is a priority. Under appropriate management the agricultural land could provide a*

valuable habitat. Loss of agricultural land for example to development, gardens or horse paddocks should be resisted."

- 2.33 The Levels of Protection and Capacity to Accept Change section states the following of relevance:

"Capacity: There is limited capacity to accept new development and it is recommended that the rural character of this area should be enhanced. Any development along the ridge tops can have a high impact on views to the areas. Small scale sympathetic development around settlements in the northern part of the area may be acceptable, for example around Carrefour Selous as this could help soften the existing hard urban edge."

Guidance: Where developments are permitted, opportunities should be taken to achieve the environmental enhancements and management measures outlined above."

VISUAL BASELINE

Extent of Visibility – Exiting Quarry

- 2.34 The visibility of the existing quarry is primarily influenced by the sloping landform and peripheral vegetation/tree belts, which is extensive around most sides of the operational area. There is no visibility of the eastern part of the quarry from locations to the north, east or south due to landform and intervening vegetation. However, due to the position of the quarry on the western facing side of a gently sloping valley landform, some limited views from locations further to the west and northwest are available, including from La Rue de la Vallee which passes the quarry entrance.
- 2.35 Due to its position at a lower level at the western end of the quarry, the plant site is only visible to a very limited extent from the site entrance along La Rue de la Vallee, as views of it are restricted by other built infrastructure and vegetation along the boundary of the quarry.
- 2.36 The southern and eastern quarry faces are partially visible from locations further to the west, along La Rue des Sillons and La Rue de la Caroline, approximately 650 - 750m from the quarry, although again the intervening mature woodland vegetation helps to break up views towards the elevated quarry faces in the distance.

Extent of Visibility – Potential Southern Extension Area (i.e. the Site)

- 2.37 Visibility of the Site is also influenced by local landform and vegetation cover, with views from the north, northwest and southwest very restricted by extensive woodland blocks and belts along La Rue de la Vallee and along the valley feature marked by La Dimerie. The scrub and developing secondary woodland along the northern side of La Rue Bechervaise, which separates the Site from the existing quarry, is also effective at screening views towards the Site, particularly in combination with the marked drop in elevation from the woodland belt down to La Rue de la Vallee and associated land to the north, which is notably lower than land to the south, including the Site.
- 2.38 Longer range views of the Site from locations in the vicinity of La Rue des Sillons and La Rue de la Caroline to the west are well screened by a roadside tree belt along the north western side of the quarry, separating it from La Rue de la Vallee, and other intervening vegetation. In addition, views are limited by the difference in height between the lower lying western areas and the Site, resulting in an upward oriented viewing angle not conducive to allowing visibility when combined with the aforementioned tree belt.
- 2.39 Partial views of the Site are available however from a number of locations in closer proximity, including from points along Rue l'Aleval and La Rue Bechervaise, which bound the Site to the west and north respectively. The relative lack of hedgerow or tall tree vegetation along these boundaries does mean that visibility is increased, although in places the elevation of the road and the height of the roadside bank combined with grassy vegetation does restrict views across the Site.
- 2.40 There are likely to be reasonable views across most of the Site from north-facing first floor windows within the nearest property to the south, although ground floor views from windows, the driveway and the garden are likely to be curtailed by the boundary hedgerow at the property. Views are very limited from properties further south within L'Aleval due to distance and intervening vegetation, though partial glimpses of parts of the Site from a limited number of first floor windows facing north may be possible.

3 POSSIBLE MITIGATION MEASURES

- 3.1 Access into the Site would be possible from the existing quarry and extraction would extend from north to south, into the Site. This would necessitate permanent diversion of a section of La Rue Bechervaise (also Cycle Route 3) and removal of the existing, scrub and developing secondary woodland along the northern side of the road. This feature consists of a partially raised, vegetated bank (or 'banque') which are evident within the surrounding area and are reasonably characteristic of the wider landscape. The diverted road would extend around the outside of the bunds constructed around the western, southern and eastern sides of the Site.
- 3.2 There would be the opportunity to plant woodland and scrubby species on the screen bunds along the western, southern and eastern boundaries of the Site in order to help offset the loss of the existing vegetation. In addition, the planted bunds would, to some extent, recreate the partially raised, vegetated bank that would need to be removed as part of the works.
- 3.3 The planted southern bund would help mitigate glimpsed, partial views of the existing quarry from first floor windows of the property to the south that would become available once the existing scrub and developing secondary woodland along the northern side of La Rue Bechervaise had been removed.
- 3.4 Working the proposed southern extension would open up views into a different part of the quarry from the few locations to the north along La Rue de la Vallee, from where the existing quarry is partially visible (notably at the entrance to the quarry). However, these additional views of quarry works would be seen in the context of the adjacent faces and also seen in conjunction with the plant site and office/car park infrastructure.
- 3.5 Early works in the proposed southern extension would be partially visible further to the west, especially from locations along the southern part of La Rue des Sillons. Again though, these works would be seen in the context of the existing quarry faces which are partially visible from these locations, and distance itself would limit the effects of the visual changes.
- 3.6 As stated above at point 1.4, restoration details for the Site would be fully considered at the detailed design stage, including long term mitigation measures relating to the effects on landscape topography and vegetation loss. The proposed bunds would be in place for the full duration of mineral extraction, which would be in excess of twenty years, after which they would

likely remain, either fully or partially, and would be incorporated into the long term restoration scheme.