

# REPORT

## 1. INTRODUCTION

This report focuses primarily on how the Island makes and will continue to make the necessary provision of minerals in the form of construction aggregates, in order to satisfy the community's development requirements. In doing so, it takes on board the need to maintain a high quality environment and to generally embrace the principles of sustainable development.

At present, the only minerals which are actively worked in the Island are sand and gravel and stone, principally in the form of crushed rock. The majority of these minerals are used as aggregates by the construction industry for essential building work on homes, schools and other community facilities. The local aggregates industry also provides direct and indirect employment for a small, but significant number of Island residents. Minerals therefore, are vital natural resources which make an essential contribution to the economic well-being of the Island and the quality of life.

Notwithstanding the above, the Planning and Environment Committee recognises the rising environmental aspirations of the public and, in particular, the growing weight of concern about the environmental costs of mineral working and the potential long term pressures which minerals extraction places on the local environment. In Jersey, as elsewhere, it is becoming increasingly difficult to extract minerals without damaging the environment to an extent that people find unacceptable. Potential adverse environmental impacts include damage to the landscape, wildlife, water resources and countryside character. In addition, mineral extraction has the potential to generate nuisance for local residents in relation to noise, dust, water pollution, heavy traffic movement and other disturbances (including vibration and shock waves from blasting). These problems are exacerbated in Jersey, due to the relatively small land area, the dispersed pattern of settlement and the vulnerability of the high quality landscape and countryside, which is extremely sensitivity to the effects of intrusive development.

The challenge therefore, is to devise a mineral strategy which balances the community's needs for aggregates, with the need to conserve mineral resources for future generations and the need to prevent unacceptable damage to the environment. Implicit in this balancing exercise, is the necessity to consider the potential contribution from alternative sources other than the Island's present extraction sites.

Meeting this challenge rests in the first instance with the Planning and Environment Committee. This Committee is responsible for licensing extraction on land and for determining all planning applications for matters relating to such mineral operations, including applications for new sites, for extensions to existing quarries and for ancillary buildings connected with the processing of minerals. Ultimately, however, the final decision is for the States of Jersey. Clearly, some difficult decisions have to be made and it has to be recognised that it is not possible to reconcile fully the Island's requirements for aggregates with demand for environmental quality.

Presently, there are clear indications that there will be significant additional pressures to release land for sand working and stone quarrying in the Island during the next 10-15 years. The three main mineral operators have all expressed a desire to expand the area of their present operations,

either immediately, or in the near future. These proposals have and will raise numerous localised issues and concerns similar to those outlined earlier.

Unfortunately, the current Island Plan policies do not reflect changes in public and political attitudes throughout the 1990's, particularly in relation to the environment and are now regarded as inadequate to meet challenges associated with changing development pressures and associated mineral requirements. For this reason, the Planning and Environment Committee consider it is essential, as a matter of priority, that the States of Jersey agrees a broad strategy for minerals planning, backed up by a detailed policy framework, in order to control mineral operations on the Island. Any such strategy can be carried forward into the new Island Plan in due course, and must also integrate with and complement other strategic policies on related matters, including solid waste management and countryside protection.

In 1995 the States requested the Planning and Environment Committee to bring forward proposals in respect of the exploitation of mineral resources. As a consequence, in November 1996, the Committee appointed suitably qualified independent consultants Arup to undertake a study of mineral options for the Island and to recommend a framework for determining future mineral development. The Arup study was completed, only after extensive consultations with local mineral operators, building industry representatives, environmental groups and officers of the States of Jersey (see Appendix 1). Copies of the study report entitled, 'Jersey Mineral Study, Consultation Report', ARUP, March 1999, were circulated to all States Members in July 1999.

The strategy put forward in the Arup was the subject of a public information and consultation exercise undertaken in July 1999. However, the review of the recommended mineral strategy was held in abeyance pending the findings of the Port Masterplan study, which was to examine *inter alia* the feasibility of using the La Collette Oil Jetty Basin for the importation of aggregates. The opportunity was also taken to extend the review process to take on board additional issues arising from :

- the emerging Solid Waste Management Strategy(PS);
- the proposed Development Framework for La Collette II;
- discussions with pilots and ex-pilots regarding the options for new port facilities to accommodate the importation of aggregates;
- visits by Planning and Environment Committee members and others to a variety of mineral and waste related operations on the UK mainland, including mineral importing facilities, quarry landfill and restoration sites and waste recycling facilities;

In the light of the above, the Planning and Environment Committee has produced this revised mineral strategy, which has been modified in response to further consultation with the Island's mineral operators, relevant States departments and other interested parties.

## **2. BACKGROUND**

The Planning and Environment Committee recognised at the outset, that in order to successfully meet the requirements of the States of Jersey for a minerals strategy, it was necessary to obtain specialist advise.

A study brief was approved in September 1996 as the basis for a tendering process, which outlined the scope of the study, as follows :

- to establish existing and potential sources / reserves of minerals within and around the Island (terrestrial and marine) by type, volume and quantity;
- to assess the future market requirement for minerals use within the Island (it is presumed that no licence will be given to export materials from the Island);
- to assess the potential that exists for recycled minerals, concrete and bitumen based products to meet the Island's future market requirements;
- to consider the implications of the Island's commitment to sustainable development on the future supply of minerals;
- to assess and make recommendations for supplying / managing minerals to meet future markets, including a full economic and environmental appraisal of the alternatives (including importation);
- to make planning policy recommendations for the future exploitation / safeguarding of mineral resources for minimising the impact of mineral operations on the local environment.

In November 1996, Arup and Partners was appointed to undertake the study, which involved a review of the minerals industry demand and employment (mainly concentrating on construction aggregates); a review of the capacity of current supply sources; consideration of alternative supply sources; a review of mineral uses other than for construction aggregates; a study of the environmental, social and economic consequences of the alternative options; and the formulation of planning policy recommendations.

In carrying out this work, the company consulted widely with operators, States departments and other interested parties. An initial draft report of findings was produced in January 1998, and was formally presented to the Island's operators and suppliers, building industry representatives and other study consultees, as part of an ongoing programme of consultation initiated by the Planning and Environment Committee.

Arup was then re-commissioned to respond to the extensive and wide ranging opinions and representations received during the consultation process and in July 1998 submitted its observations and a modified report with extensive changes to the text. Given the extent of the modifications and the complexity and sensitivity of the issues involved, this second report was also subjected to further consultation with the Island's operators, which resulted in further revisions. The Arup study report, entitled 'Jersey Mineral Study-Consultation Report' was subsequently approved by the Planning and Environment Committee as the basis for a public information and consultation exercise in July 1999. This is without doubt a landmark document, which represents the most informative and comprehensive statement on minerals to-date.

### **3. POLICY CONTEXT**

#### **Strategic Policy**

The key strategic objectives of the States, which are of most relevance to mineral development in the local context, are set out on '2000 and Beyond - Strategic Policy Review', 1995, as follows :

- to ensure that the development and management of natural resources does not limit choices in future;
- to avoid over-exploitation / consumption of the Island's mineral resources;

- to preserve open land while recognising and responding to the need to provide for the Island’s economic and social policy objectives;
- to discourage development in the rural environment.

On 28<sup>th</sup> September 1995, the States of Jersey in debating ‘2000 and Beyond’, also instructed the Planning and Environment Committee to :

*“recommend targets, or bring forward proposals for the approval of the States where appropriate, in respect of (inter alia) the exploitation of mineral resources”.*

The States’ ‘Environmental Charter’, 1996 also commits the Island to develop a mineral (and water) resources policy to provide for the sustainable utilisation of local resources.

## **Sustainable Development Strategy**

‘2000 and Beyond’ includes a ‘Mission Statement’ comprising high level strategic policy objectives. This statement provides that all States policies should be designed, inter alia, to achieve “sustainability” so that the *“environment of Jersey is passed on to future generations in as good a condition as, or better than it is today”*.

The Environmental Adviser to the States is presently engaged in developing a long-term ‘Sustainable Development Strategy’ for the Island. The strategy is due to be completed for endorsement by the States later in 2000. However, in September 1998, the Environmental Adviser produced an interim framework document entitled ‘Jersey in the New Millennium - A Sustainable Future’. This report is the product of an extensive consultation exercise with the public and various stakeholder working groups, and it puts forward a series of visions for a sustainable future. The relevant vision relating to mineral resources is as follows :

*“To supply the construction industry with adequate mineral resources of the required quality in the most sustainable manner, especially having in mind the extremely high ecological value of Jersey’s sand dune system”.*

## **Island Plan**

At the time of preparing the current Island Plan, the Island Development Committee of the day was mindful of the fact that mineral resources are finite and should be used carefully. It effectively pursued the option of **‘maximising local supplies’**, through the continued working and expansion of local operations. The Committee sought to make use of the Island’s own mineral resources, for their quality and as a means to avoid bulky importation from the UK or the Continent. For this reason, it recommended that no export licences be granted for mineral, or mineral-based products.

The Island Plan itself makes no specific provision for the extension of existing workings, or the establishment of new mineral extraction areas. However, it does allow for such proposals to be considered on their merits, having regard to the need for further mineral extraction and other policies of the plan. The policy provides for the Committee to bring forward propositions to the States to rezone land for extraction purposes, where the Committee is convinced that there is a proven justification.

*“ Policy CM24*

*The Plan makes no provision for the extension of existing, or the establishment of new mineral extraction sites. The Committee will consider applications for such proposals on merit, having regard to the need for further mineral extraction as well as other policies of the Plan. If a justification to undertake major works is proved the land will be zoned for the purpose”.*

Whilst there are no detailed policies, or development control criteria in the current plan against which to judge applications for mineral workings, the plan emphasises the need for operators to restore disused mineral workings in order to protect the landscape. Policy CM25 below, makes it clear that future permissions for mineral extraction will contain conditions and be subject to legal agreements requiring the full restoration of the site, if possible as the extraction itself proceeds.

*“ Policy CM25*

*In order to protect the landscape the Committee will require the restoration of mineral workings by means of conditional permits and binding agreements. Wherever possible those undertaking the works will be required to reduce the impact of the works on the appearance of the countryside by restoring the land as extraction proceeds”.*

Throughout the last twelve years or so, since the adoption of the Island Plan, there have been only a small number of consents granted for the extension of existing quarrying operations, although permissions have been given for a variety of ancillary buildings and works associated with the operations. The majority of development permissions granted for the extension of quarries relate to sites which had already been zoned for the purpose, prior to the plan (see Figure 1).

Notwithstanding the limitations of the generalised and somewhat open-ended mineral policies in the Island Plan, successive Island Development and Planning and Environment Committees have generally complied with them. In doing so, they have arguably been successful in achieving the underlying policy objectives of ensuring adequate provision from local supplies, whilst protecting, as far as possible, the appearance of the countryside. All proposed developments have been considered on their individual merits and permissions have only been granted where there has been a demonstrated need. Furthermore, all approvals to extend quarrying activities have been subject to a large number of conditions variously designed to :

- limit the physical extent of extraction;
- control the nature of the works and activities on site;
- reduce noise and dust emissions and other nuisances;
- limit the visual impact on the appearance of the countryside and the wider landscape;
- restrict the nature of any fill materials;
- restore the land in a satisfactory manner to a condition suitable for an appropriate after use, either on completion of works or as extraction proceeds.

Land which has been worked for sand during the plan period and then successfully restored, includes Fields 1580, 1581, 1582, 1583 and 1583A, situated to the east of Le Chemin du Moulin, St. Ouen.

A combination of changing States’ strategic policy objectives, increasing environmental awareness and recent pressures to expand the area of land for stone quarrying have served to emphasise the shortcomings of the current Island Plan policies. They are no longer regarded as

an adequate basis for determining future mineral proposals and, as explained earlier, the factors referred to above have prompted the on-going work to develop a new mineral strategy for the Island.

*Figure 1 : Permissions granted for mineral development since 1987*

<b>Date</b>	<b>Address</b>	<b>Owner</b>	<b>Description of work</b>
June 1989	La Gigoulande Quarry, St. Peter's Valley	Granite Products Ltd	to extend quarry into Field 967, St. Mary on land which was re-zoned for the purpose in January 1989
August 1992 (superseded in August 1993)	Field 246, St. Peter	Mr Simon	to extract building sand and gravel from the land which was re-zoned in 1976
April 1994 (superseded in February 1996)	Field 1580, St. Ouen	Mr Moon	to extract sand from the land which was re-zoned in 1976 (a decision reaffirmed by the States in 1990).
May 1997	Field 1606, St. Ouen	Mr Moon	to extract sand from the land which was largely re-zoned in 1976 and reaffirmed by the States in 1990
November 1997	Ronez Quarry, St. John	Ronez Ltd.	to use Fields 121 and 122, St. John to the west of Ronez Quarry for the storage of concrete/manufactured products, on land already re-zoned for the purpose in January 1986
September 1999	La Gigoulande Quarry, St. Peter's Valley	Granite Products Ltd	to extend the existing quarry-face 20m back into Field 961, St. Mary on land which was rezoned in September 1999. This was intended as an interim proposal to enable the quarry to continue operating, pending the adoption of a Mineral Strategy for the Island
December 1999	Field 1605, St. Ouen	Mr. Moon	to extract sand from the site and re-fill, on the last block of land in this area which is zoned for the purpose

## **St. Ouen's Bay Planning Framework**

This document was produced by the Planning and Environment Committee in July 1999, in advance of the Island Plan Review. The intention is that it be formally adopted by the States as an inset to the new Island Plan. Its main purposes are to provide a robust planning policy and land management tool to guide the future development of this very special part of the Island and to sustain and enhance its unique character.

The document takes on board certain of Arup's recommendations in respect of mineral planning for the Island, which are outlined later in this report. Most notably, the recommendations to pursue a policy of winding down extraction at Simon Sand and Gravel Ltd. over a fifteen year period and thereafter to import all the Island's sand supplies, in order to protect the sensitive

environmental resources of St. Ouen's Bay. Accordingly, Policy SO50 on Mineral Extraction states :

*“Permission will not be granted for new or extended mineral extraction sites within St. Ouen's Bay Special Area. Permission may be granted for continued extraction of sand at Simons Sand, subject to appropriate agreements regarding the future import arrangements and restoration of the existing site, to conclude no later than 2014”.*

#### **4. SUSTAINABLE FRAMEWORK**

The implications of the emerging Sustainable Development Strategy for mineral planning are referred to earlier in this report. Principles of sustainability suggest the need for efficiency in materials use, minimisation of use of scarce resources and recycling of construction and demolition wastes wherever possible. They also call for the protection of the local environment from damaging incursion.

The UK Strategy for Sustainable Development, 1994, suggests that a sustainable framework for mineral extraction, should seek to meet the following aims :

- to conserve minerals as far as possible, while ensuring an adequate supply to meet the needs of the community / society for minerals;
- to minimise production of waste and to encourage efficient use of materials, including appropriate use of high quality materials and recycling of wastes;
- to encourage sensitive working practices during mineral extraction and to preserve or enhance the overall quality of the environment once extraction has ceased;
- to protect designated areas of critical landscape or nature quality from development, other than in exceptional circumstances, where it has been demonstrated that development is in the public interest.

#### **5. DEMAND FOR MINERALS**

The demand for rock and sand resources in the Island is almost entirely dependent on construction industry activity. From a peak of around 525,000 tonnes in the early 1990's, demand declined to 450,000 tonnes in 1996, before rising again to over 500,000 tonnes in 1998 and 1999.

Clearly, estimates of aggregate minerals demand in the foreseeable future are essential in underpinning the development of a mineral strategy. In order to help determine future levels of construction on the Island, Arup undertook extensive consultation with representatives of the construction industry, local mineral operators and the Public Services Department. This led them to conclude that, in the medium term, a continuation of current (1998) levels of demand or a modest annual growth is likely. They advised that for strategic planning purposes, future demand for aggregates should be assumed to be around 500,000 tonnes per annum.

Figure 2, includes Arup’s breakdown of this assumed requirement, which it suggested would have to be met by the local extraction industry, local recycling and/or imports.

Figure 2 : *Estimated Medium Term Demand for Aggregates by Type*

PRODUCT TYPE	PRODUCERS	DEMAND (tonnes per annum)	
		Arup’s Estimate	Revised Estimate
Aggregate for products manufacture (e.g. asphalt, blocks)	Ronez	200,000	180,000
Concreting aggregates	Granite Products	150,000	135,000
Sand	Simons and Imports	75,000	67,500
Graded fill materials	Moon and Recycled	70,000	63,000
Dimension / decorative stone	La Saline	5,000	4,500
<b>TOTAL DEMAND</b>		<b>500,000</b>	<b>450,000</b>

Sources : *Jersey Mineral Study - Consultation Report, ARUP, March 1999 and Department of Planning and Building Services, July 2000*

However, the current States resolve to contain the size of the Island’s private and public sector construction programmes, would suggest that Arup’s demand assumptions could now realistically be revised downwards to say 450,000 tonnes per annum. In order to dampen the economy, encourage competitive tendering and generally reduce inflation, the Finance and Economics Committee recently devised an eight-point strategy, which has subsequently been approved by the States. One of the aims is to limit the level of activity in the construction industry to just below its overall capacity (i.e. estimated to be approximately £165m., including major capital projects, civil engineering projects, minor works and other items). It is proposed that this be achieved by limiting the annual level of public sector capital spending on works to £60million and using the Regulation of Undertakings and Development (Jersey) Law to limit private sector work to roughly the same amount. Whilst such measures could undoubtedly have a major impact on construction activity, it should be noted that they exclude civil engineering projects and construction projects under £500,000.

Nevertheless, in the circumstances, Arup’s assumed demand of 500,000 tonnes of aggregates per annum would now appear too high, because it compares with the 1998 production figures when the construction industry was operating at over capacity. In contrast, the revised estimate of 450,000 tonnes per annum compares with the production figures for 1996, when it is generally held that the construction industry was working on average at capacity. Accordingly, Arup’s original breakdown of aggregate demand in Figure 2 has been proportionately revised.



Of course, the Planning and Environment Committee recognises that there are certain dangers inherent in attempting to predict the demand for aggregates for the next 10 years and beyond. Predictions can always be called into question, not least because of the cyclical nature of demand from the construction industry, in addition to uncertainties about future economic growth and its relationships with aggregates consumption. Demand could also alter significantly in response to unforeseen changes in relation to :

- government policy on construction activity and related matters;
- the nature of construction output;
- the type of buildings produced in future and the degree to which they will rely on basic aggregate and concrete;
- the extent to which the conversion and refurbishment of existing building resources grows in response to efforts to concentrate development in built-up areas;
- the degree to which efficiencies in construction can be advanced through waste minimisation and recycling of waste (e.g. sub-soils, clays, demolition wastes) are dumped without having been used;

It could also be argued that fiscal policies, planning policies, research and development and public sector specifications for capital projects, will present opportunities in future to induce behavioural changes in the construction industry, which could curtail the level of demand for aggregates.

Notwithstanding the uncertainties associated with predicting future demand, the Planning and Environment Committee considers that the revised annual estimate of 450,000 tonnes per annum offers a reasonable basis for developing a minerals strategy. However, the Committee does not wish to rely totally on a 'predict and provide' approach to mineral planning. There is clearly a need to regularly monitor and review aggregate demand and the various factors which impact upon it. As a consequence, the Committee will adopt a 'plan, monitor and manage' approach, to ensure that the strategy evolves to respond effectively to changing circumstances.

## **6. GENERAL OUTPUT OF MINERALS**

Historically, because of its geographical isolation, Jersey has had to rely heavily on indigenous mineral resources, (particularly hard rocks), for building and construction materials.

Sand and stone are the only two minerals which are actively worked in the Island at present, and the distribution of these operations is shown in Figure 3 below. There are currently two working sand pits, which both extract sand from St. Ouen's Bay. The largest pit is operated by 'Simon Sand and Gravel Ltd.' and the much smaller pit is operated by Mr L. E. Moon,. The three

operational stone quarries in the Island, include Ronez and La Saline quarries on the north coast and La Gigoulande quarry in St. Peter's Valley.

In 1999, these local operators had a total output of around 450,000 tonnes, which was supplemented by local recycling. This is also supplemented from time to time by the importation of rock armour and beach replenishment materials (estimated at 1-200,000 tonnes in 1996). Figure 4 provides a breakdown of the local output in 1996, 1998 and 1999 and compares this with the peak output of the late 1980's and early 1990's.

Figure 3 : Quarries and Active Sand Workings

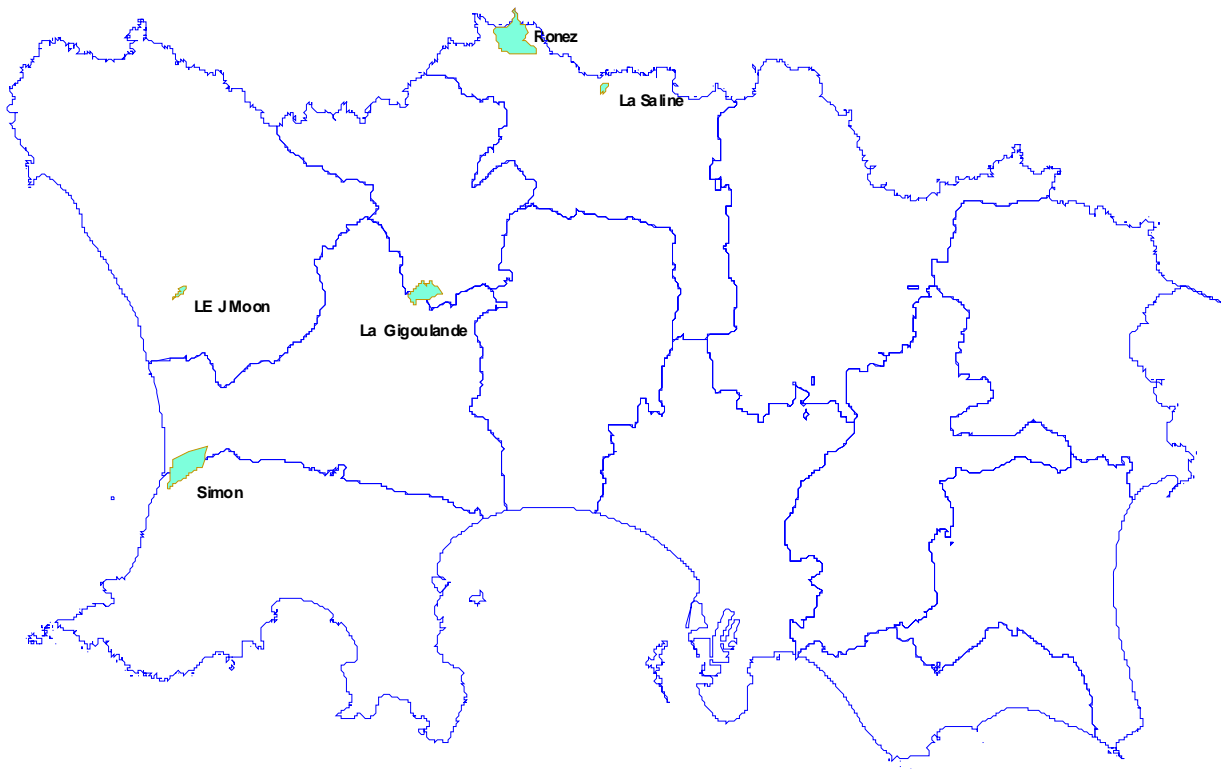


Figure 4 : Comparison of Mineral Output in recent years with the peak years of the late 1980's / early 1990's

SOURCE	OUTPUT (tonnes p. a.)			
	late1980's / early 1990's * <sub>1</sub>	1996 * <sub>2</sub>	1998 * <sub>3</sub>	1999 * <sub>4</sub>
Ronez	250,000	175,000	200,000	220,000
Granite Products	150,000	170,000	165,000	151,000
La Saline	5,000	2,500	2,500	2,000
L.E.J. Moon	30,000	10,000	10,000	10,000
Simon Sand and Gravel	80,000	60,000	80,000	74,000

<b>Sub-total</b>	<b>515,000</b>	<b>417,500</b>	<b>457,500</b>	<b>457,000</b>
Recycled (secondary) aggregates	10,000 (?)	+ - 40,000	+ - 50,000	+ - 50,000
<b>TOTAL OUTPUT</b>	<b>525,000</b>	<b>457,500</b>	<b>507,500</b>	<b>507,000</b>

Notes - Construction industry operating :

- \*1 at over capacity
- \*2 on average at capacity
- \*3 at over capacity
- \*4 at over capacity (first half of year) and under capacity (second half)

Sources : *Jersey Mineral Study, ARUP, draft report, June 1998*  
*Jersey Mineral Study - Consultation Report, ARUP, March 1999*  
*Individual Mineral Operators, June/July 2000*

The main reason for the 15% decline in output between 1996 and the earlier peak was the completion of Ronez Ltd.'s contracts for inert fill materials and rock bund construction in the early phases of St. Helier foreshore reclamation. However, all but one of the operators produced less volume in 1996, reflecting the general decline in the construction industry during that period and to a much lesser extent, the increase in recycled output. Granite Product's La Gigoulande quarry was the exception to that general decline. Its production increased to supply a number of major contracts for concreting aggregate, which stemmed from a preference over Ronez Ltd.'s aggregates, in view of the historic 'alkali-silica reactivity problem' associated with the latter quarry.

The figures for 1998 reflect an upturn in construction industry activity since 1996 and this trend continued into 1999. However, from the middle of 1999 there has been spare capacity in the construction industry, which is reflected in reduced quarry outputs. The agreed capital programme up to the end of 2003 would suggest that outputs will recover during the second half of 2000 and the construction industry will once again be working at full capacity throughout 2001 and 2002.

## 7. RONEZ QUARRY

Ronez quarry (formerly La Houle quarry) is operated by Ronez Ltd, which is now part of Aggregate Industries PLC, following a merger of Bardon and Camas in 1997. The quarry is located in the Green Zone in the Parish of St. John, on the north coast of the Island, approximately 1 mile north west of the village centre of St. John. It has been operational since 1890 and was originally used to supply stone for export. Indeed, shipment of stone by sea out of Ronez continued up until about 1978.

### Output

The current output (1999) from Ronez measures approximately 220,000 tonnes per annum. This covers a wide range of products, including concrete blocks, wrapped products, graded dry aggregates, asphalt and pre-mix concrete. The quarry operators presently import some specialist materials, including cement and sand, which is used as fine aggregate for concrete,

primarily because locally produced sand is too fine and crushed rock fines do not meet the grading specification for concrete, if they are used on their own.

### **Capacity**

The Jersey Mineral Study estimates that currently permitted realistically available reserves at the quarry are probably in the range 4-5 million tonnes and that the quarry has a theoretical life expectancy of between 20 and 30 years.

### **Suitability for Expansion**

Selective working of the quarry and quality checking has, in Arup's opinion, eliminated the historic problems of rock reactivity, which have adversely affected the quarry since the early 1970's. This view is essentially endorsed by an independent report by the Building Research Establishment Ltd. (BRE) on the alkali-silica reaction issue.<sup>1</sup> The BRE report concludes:

*“On balance, however, BRE would agree with the statement indicating that the use of a combination of a selective quarrying and the use of a suitable quality control scheme (which incorporates a third party audit) to form the basis of an integrated Quality Assurance procedure, would probably, be sufficient to ensure safe use of Ronez material. Indeed, there is preliminary work that shows that restricting the amount of vein/dyke material contained in the aggregate does reduce the risk of asr to acceptable levels.”*



Ronez Quarry - March 2000

<sup>1</sup> Alkali-Silica Reaction - Review of the Jersey Mineral Study, BRE, June 1998

Notwithstanding the above, the Public Services Department and the Jersey New Waterworks Company remain cautious at the present time and will not use Ronez rock for particular types of construction projects.

Arup concludes that the quarry is a suitable location for expansion, in terms of :

- its geology - that is, the ability to work the quarry to provide suitable construction material;
- the impact on the natural environment as well as the amenities of local residents.

However, it recognises that the location of the quarry in the 'Green Zone', where there is a presumption against development, means that the development would need to be justified in terms of a strategic requirement.

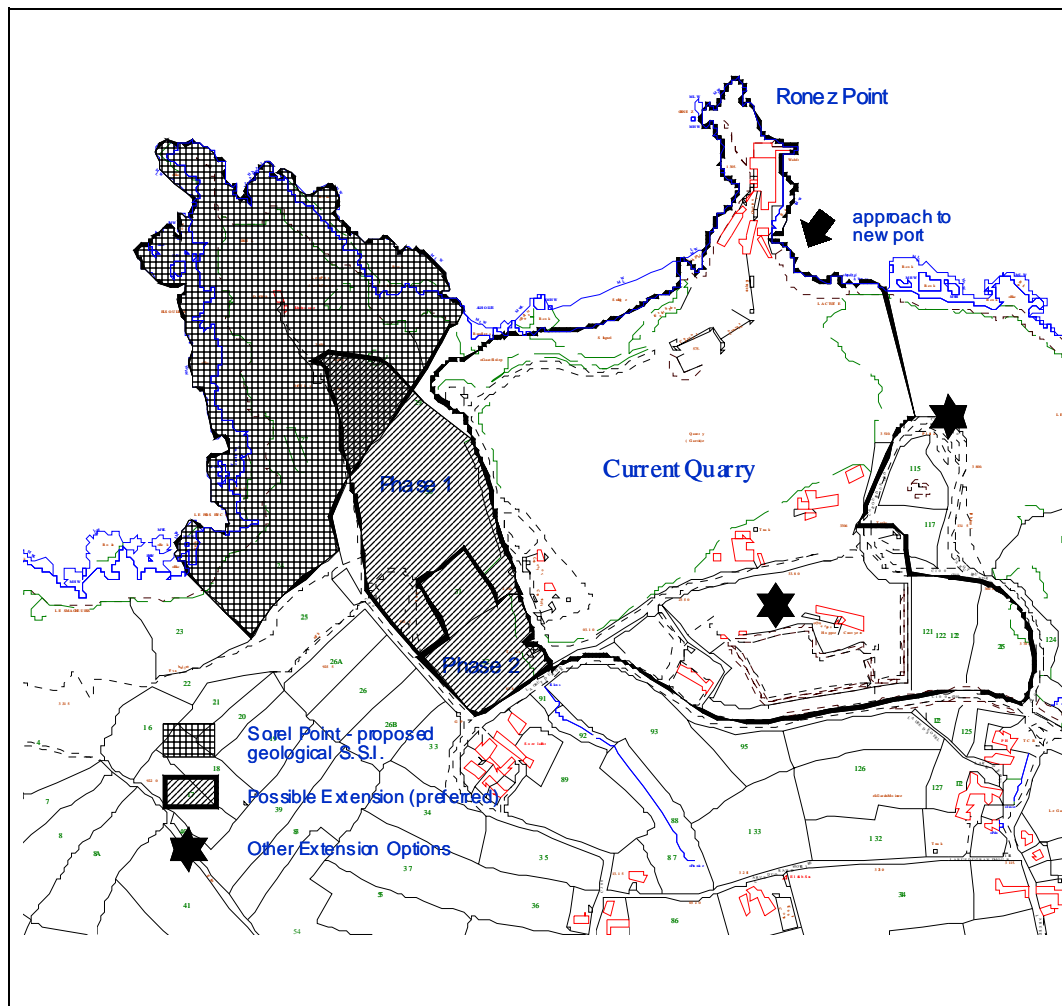
### **Plans for the Future**

Although the theoretical life expectancy of the available reserves in the existing quarry is estimated at between 20 and 30 years, Ronez Ltd has been engaged in reviewing its proposals for future working with a view to maximising its resource, increasing the recoverable reserves and securing its long term future. Consequently, in the summer of 1996 the company submitted informal proposals for a 2 stage expansion of the quarry immediately to the west, as shown in Figure 5.

The company maintains that to obtain maximum depth extraction, it will be necessary to extend sideways in the near future. It has expressed the view that such a proposal will require serious consideration and consent within five years.

*Figure 5 : Ronez Quarry - Current area of Working and Proposed Extension.*





The company considers that a westerly extension would have least affect on neighbouring properties and the current proposals involve land which is largely owned by the States of Jersey and is presently used by the Jersey Motorcycle and Light Car Club for its motorcross programme. However, the second phase proposals would involve land which is currently in private ownership. These proposals would increase reserves to 9.3 million tonnes. Allowing for subsequent extraction and assuming a production range, based on current plant, of between 175,000 and 200,000 tonnes per annum, Arup calculated that the theoretical life expectancy of the quarry would extend to between 36 and 51 years. Clearly, if output is increased through the installation of higher capacity crushing plant and the quarry were to become the only supplier of crushed rock aggregate, life expectancy would be commensurately lower.

Ronez Ltd would not look favourably on a southern expansion of the quarry, because they believe the granite reserve under the block-making plant to be of an inferior nature and because quarrying in that location would “*cause problems with neighbours*”.

The company has been advised that an Environmental Impact Assessment would be required to accompany any formal application and that this would be judged within the framework provided by the forthcoming mineral strategy. The company is awaiting the completion of the mineral strategy before moving ahead with it plans.

All the land featuring in Ronez Ltd's current expansion plans is presently located in the Green Zone and Sorel point is designated as a geological Site of Special Interest.