Appendix 5 - RAMSAR Boundary.

Showing the proximity of the RAMSAR boundary to LA Collette II rock armour. (extracted from the States of Jersey - Island Plan 2002)



Hopkins Architects The Esplanade Quarter, Jersey

4.2 Waste management (Prepared by States of Jersey Transport and Technical Services Department)

Waste Management Plan

The Esplanade Quarter forms part of the original West of Albert I and II landfill sites, created between 1986 and 1995. Most of the Island's inert waste material was disposed of here at that time, together with the ash from the Bellozanne incinerator plant.

This section draws on material provided by the developer's technical consultants to present a high level summary of the principles that will be adopted for waste management on the site.

Initial calculations indicate that about 410.000 cubic metres of material will be excavated. Much of the excavated material will be recycled during the construction work, either on site or elsewhere in the island. The States of Jersey will insist on the highest achievable levels of recycling of excavated material, with the remainder being taken to the current Jersey reclamation site, east of La Collette.

Based on current recycling rates from the incoming material to the La Collette II site, it is estimated that between 20% and 40% of the material could be recycled. Much will depend on the nature of the original fill material and the opportunity for resale into the marketplace at the time of excavation.

The overall volume equates to about 3.85 years of space in the current La Collette II reclamation site with no recycling. If 20% recycling were achieved, this volume equates to about 3 years. If 40% recycling were achieved, this volume equates to about 2.3 years.

The waste management plan will need to demonstrate that the highest achievable level of recycling of extracted materials will be achieved on this site. The developer of the waterfront 'Annex' site has recently indicated that significantly higher levels of recycling than the indicative range of 20% to 40% have been achieved. Clearly, if there is potential to exceed a recycling rate of 40% in the Esplanade Quarter, the opportunity will be taken to achieve this. Until the developer has conducted further site investigations it is difficult to determine the quantity which could be recycled and it is therefore not possible, at this stage, to accurately judge the impact on the expected lifespan of La Collette II.

Traffic movements between the development site and La Collette will be significant during peak excavation with

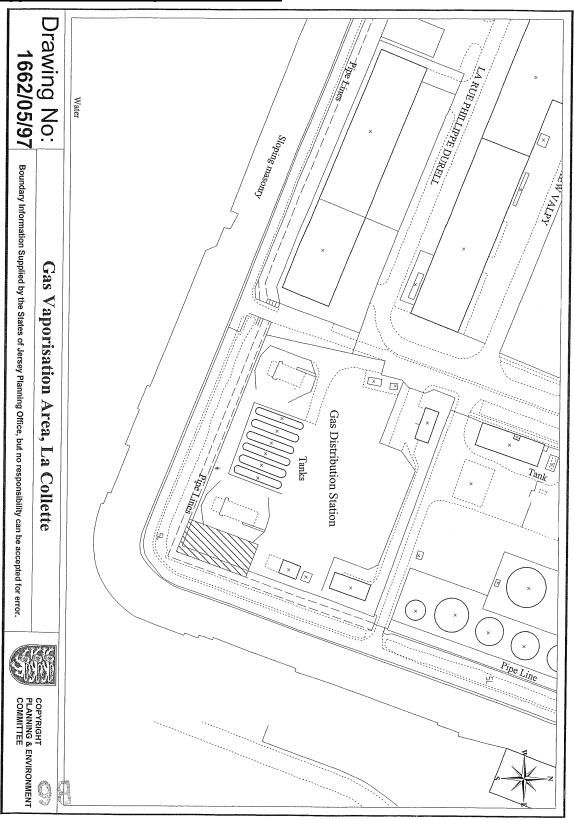
significant additional lorry traffic over a 12 month period. This heavy vehicular movement will impact on the area of Commercial Buildings and there will be a full traffic impact assessment to optimise the transfer of this large quantity of material. The developer will be required to cover the relevant costs associated with repair or resurfacing of the Commercial Buildings road at the end of the works.

Whilst excavation of the site is being undertaken, the developer will be required to provide a sustainable waste management plan that demonstrates best practice for the removal and ultimate disposal of the materials. In the early years of landfill on the West of Albert site, ash was mixed with inert waste. Later, the ash was disposed of in pits throughout the site. The ash must be excavated in accordance with agreed protocols for excavation and will be delivered to the La Collette II site for disposal into lined and sealed pits. This cost will be an expense for the developer.

If loose asbestos cement sheeting is found during excavation, as anticipated, the developer will be required to safely remove it using accepted protocols, for disposal at the TTS asbestos site at La Collette.

All specialist costs associated with site monitoring at the development site and at the disposal site at La Collette will be at the developer's expense, together with any containment measures required for the ultimate safe disposal of asbestos.

Appendix 7 - Gas Vapourisation Plant



States of Jersey Inert Waste Arising and Landfill Capacity Report

Appendix 8 - Extract re La Gigoulande Extensions

La Gigoulande Quarry' (also known as St. Peter's Quarry) has been operated since 1946 by Granite Products Ltd. The company is part of Brett, a UK group of companies that also has dredging interests in the North Sea. The quarry is located in the Sensitive Landscape Area of the Agricultural Priority Zone, in St. Peter's Valley, on the parish boundary between St. Mary and St. Peter.

Output

The current output from La Gigoulande (1999) measures approximately 150,000 tonnes per annum. Approximately 50% of the normal quarry output is used for pre-cast products, blocks and ready-mix concrete and the remainder is sold as loose aggregate. As a direct result of the alkali-silica reactivity problem related to Ronez rock, demand for La Gigoulande aggregate has increased and Granite Products has been able to expand into bulk aggregates and ready-mix concrete, capturing market share from Ronez. At present, Granite Products use sand from Simon for concrete, mainly to fill an aggregate grading gap, which cannot otherwise be filled with crushed granite sand.

Capacity

Current permitted reserves at the quarry are very limited and rely entirely on the recent rezoning of part of Field 961, St. Mary. This was approved by the States of Jersey as an interim measure, in order that the quarry could continue operating and supplying the Island's building industry (for a period of approximately 12 months at the normal rate of extraction) pending the approval of a Mineral Strategy. Granite Products Ltd. put remaining permitted reserves at approximately 100,000 tonnes (@March 2000). Taking into account the lower than planned level of output during the first half of 2000, the quarry has a theoretical life expectancy of approximately 6-8 months (@July 2000), and is therefore in urgent need of additional reserves if it is to continue operating.

Suitability for Expansion

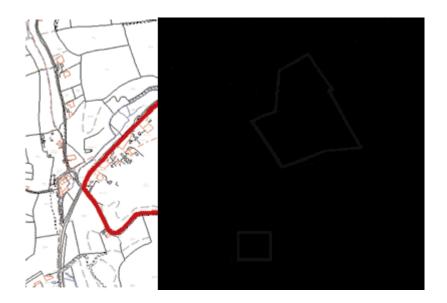
The Arup report concludes that La Gigoulande quarry is geologically suitable as a short to medium term source of extracting rock for construction purposes. Indeed, they recognise that such expansion may be warranted to provide a continued source of supply to supplement the Ronez Quarry, whose product may not be suitable for some construction applications. Nevertheless, the quarry' is located in an area of high landscape quality including dense woodland with steep valley sides and farmed upland areas. Significant expansion of the quarry would mean using good quality agricultural land and there is a potential risk to the quality of a nearby watercourse that feeds one of the Island's restores. Given the nature of these constraints, the site was viewed less favourably by Arup for expansion.

Plans for the Future

In June 1996, Granite Products Ltd. submitted an outline planning application (Ref. 603/R) to extend the quarry into adjacent fields together with an accompanying Environmental Assessment report, (see area shown hatched on Figure 6). The site in question measures approximately25.5 vergées (11.3 acres) of which20 vergées (8.9 acres) are proposed for quarrying. The application has been held in abeyance pending the approval of a Mineral Strategy for the Island. Granite Products Ltd. have been advised that determination of its proposal will be dependent on an Environmental Impact Assessment and that the proposal will also require the agreement of the States for the land to be re-zoned.

The proposal to work an additional 20vergéesto the northeast of the quarry would make available an additional 2 million tonnes of rock. It is estimated that this would extend the life of the quarry by anything from 13 to 20 years, based on outputs of between 150,000 and 100,000 tonnes per annum respectively.

All the land in question is presently located in the "Sensitive Landscape Area of the Agricultural Priority Zone".



Appendix 9 – Tables from Projected Life of La Collette II model

04-Aug-08	Total Material Delivered to La	Waste	Predicted I Excavation Period		5 1 00							0 00	0.100	N 00	D 00		5 1 00						4 00	0 00
Project Esplanade Quarter Castle Quays Les Jardin de la Mer	Collette (m3) 410,000 61,200 Minimal Quantities	Recycled 30% 30%	(months) 12 12	Jan-08	Feb-08	Mar-08 5,100	Apr-08 5,100	May-08 5,100	Jun-08 5,100	Jul-08 5,100	5,100	Sep-08 5,100	5,100	Nov-08 5,100	Dec-08 5,100	Jan-09 34,167 5,100	Feb-09 5,100	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
Elizabeth Terminal Liberation Place	Minimal Quantities Minimal Quantities															34,167	34,167	34,167	34,167	34,167	34,167	34,167	34,167	
Weighbridge Square Park View	Minimal Quantities Minimal Quantities																							
Jersey Water Jersey Gas Jersey Electricity Jersey Telecom Jersey Airport	25,000 Minimal Quantities Minimal Quantities Minimal Quantities	30%				208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208
States Housing TTS Mains Drainage Extns TTS EfW plant TTS General Receipts (long term average	- - - 158,071	25%		13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173	13,173
Other Other Total	-			13,173	13,173	18,481	18,481	18,481	18,481	18,481	18,481	18,481	18,481	18,481	18,481	52,648	52,648	47,548	47,548	47,548	47,548	47,548	47,548	47,548
Waste to Landfill Area of Land Created at La Collette (m²) Accumulated Area of Land Created (m²) Estimated landfill depth (m)	12.36			9,879 799 799	9,879 799 1,599	13,595 1,100 2,699	13,595 1,100 3,798 13,595	1,100 4,898 13.595	1,100 5,998 13,595	1,100 7,098 13.595	1,100 8,198 13.595		1,100 10,398 13.595	1,100	1,100	37,512 3,035 15,633 37,512	3,035 33.942	2,746 33.942	2,746 33.942	2,746 33.942	2,746 33.942	2,746 33.942	2,746 33.942	2,746
Percentage of Land required Total Land Area Required (m ²)	33,100			2%	5%	8%	11%	15%	18%	21%	25%	28%	31% 11,498	13, 5 ,55,6 12,598	38%	18,668	21,414	65% 24,160	73% 26,906	29,652	32,398	98% 35,145	106% 37,891	
Date when 100% of land is created	July-09													12,590										
La Collette remaining surface area (m2) Date La Collette is full Remaining Life	116,600 February-17 8.5		707 Years																					
Total Annual Deposits															155,712									
Possible Annual Variation +/-		15%													15%									
Potential Annual Deposits															179,068									