

STATES OF JERSEY



SOLID WASTE STRATEGY: LOCATIONS FOR PROPOSED FACILITIES

**Lodged au Greffe on 11th April 2006
by the Minister for Transport and Technical Services**

STATES GREFFE

PROPOSITION

THE STATES are asked to decide whether they are of opinion –

- (a) to agree that the proposed Energy from Waste Plant to replace the existing Bellozanne Plant should be located at La Collette II reclamation site, immediately to the south of the Jersey Electricity Company Power Station, shown as Area 1 on the attached plan (Drawing No. 10180/S002), subject to Environmental Impact Assessment and Planning approval, and;
- (b) to agree that the proposed enclosed “in-vessel” Composting Facility should be located at La Collette II Proposed Industrial Zone, shown as Area 2 on the attached plan (Drawing No. 10180/S002), subject to Environmental Impact Assessment and Planning approval.

MINISTER FOR TRANSPORT AND TECHNICAL SERVICES

REPORT

Introduction

The former Environment and Public Services Committee (EPSC) had its Solid Waste Strategy approved by the States on 13th July 2005. One of the main priorities of the Strategy was to provide a replacement for the existing Bellozanne Energy from Waste (EfW) Plant. During the debate on the Strategy, the EPSC made a commitment to the States that it would carry out a full evaluation of the Bellozanne and La Collette sites.

The EPSC carried out further evaluations of the La Collette site and came to the conclusion that it has a number of advantages over the Bellozanne site that was originally proposed for the EfW Plant. This recommendation is also supported by the Minister for Transport and Technical Services.

The EPSC was also charged by the States to provide a modern facility for recycling of garden and green waste, by 2007. Evaluation of a number of sites for this purpose has been carried out by the Transport and Technical Services Department (TTSD), and the recommendation of the Minister for Transport and Technical Services (T&TS) was that it should be located at La Collette II, in the Proposed Industrial Zone. In the States, on 4th April 2006, the Proposition of the Connétable of St. Helier (P.31/2006) to debate the location of the Composting Facility was accepted, and the Minister was asked to reconsider the available sites for this project.

Background

The recommendation contained in the Strategy for the new EfW Plant is at Bellozanne, as this area has, in the past, been designated as the Island's main site for waste facilities. This site was identified in the 2002 Island Plan for the new EfW Plant and is on the site of the current Refuse Handling Plant (RHP), where bulky (non-putrescible) waste is shredded before going to the existing EfW Plant. One of the advantages of this site was that it is in a side valley, the sides of which provide natural screening. (See the attached plan, Drawing No. 10180/S001, for the location.)

The disadvantages of this site were that it has very limited space for such a large construction project, and the current RHP operation would have to be relocated temporarily to another site, i.e. La Collette II, during the 4-year period for the construction and commissioning of the new EfW Plant, and the demolition of the old EfW Plant. The shredded bulky waste would have to be transported back to Bellozanne during this period, and there were considerable costs of these "enabling works", both capital and operational (£3.6 million).

Following the commissioning of the new EfW Plant, and the demolition of the old EfW Plant, the RHP would then have been re-established on the Bellozanne site (at a cost of £1 million).

However, during the debate on the Strategy, there was considerable concern expressed about locating the new EfW Plant at Bellozanne. The Bellozanne and First Tower areas have become much more heavily developed for residential use, since the original Plant was built; for example the new large housing development on the former OTC site, and the housing development on the east side of Route Es Nouaux. The nearby First Tower School, at the bottom of Tower Road, has also grown in size. There are also concerns about the volume of heavy industrial traffic passing through this area to the EfW Plant, in addition to the other commercial traffic that goes to Bellozanne Valley. The two main constituents of the traffic bringing solid waste to the site are the Refuse Collection Vehicles from the Parishes, delivering to the EfW Plant, and the deliveries of commercial and domestic bulky waste to the RHP.

It was considered that the volume and type of traffic were both a health and a safety concern. The amendment to the Strategy lodged by Deputy Fox asked that the States should consider locating the new EfW Plant at La Collette, for these reasons. This resulted in the EPSC giving a commitment to the States that it would carry out a detailed assessment of the La Collette and Bellozanne sites for the new EfW Plant, and report back to the States, before tenders were invited or a planning application was submitted.

The construction of a new enclosed Composting Facility was an urgent priority that was agreed in the Strategy. The existing open windrow composting operation at La Collette II is known to be the source of odour problems

and to address these problems the EPSC gave an undertaking to move forward with proposals for the new Composting Facility as quickly as possible, and to have it in operation by 2007.

EfW Plant at La Collette or Bellozanne

Further investigation of all of the matters relating to the La Collette and Bellozanne options has been carried out. All possible locations at La Collette have been examined. The locations of the sites are shown on the attached plan (Drawing No. 10180/S002).

There were two possible locations considered at La Collette, where the new EfW Plant could be sited. One was on the La Collette I site (shown as Area XX), adjacent to the JEC Power Station (to the west of it), and included the site occupied by the existing Abattoir. This would involve very significant additional costs for moving the Abattoir and various items of strategic operational equipment belonging to the JEC. (This was the site investigated for the Guernsey/Jersey joint Plant.)

The second location was on the La Collette II Reclamation Site, which is the current partlyfilled inert waste site, and there were references in the States Debate in July 2005 to locating the EfW Plant there. The EPSC's response, at that time, was that, similar to the situation of the previously proposed Guernsey EfW Plant, there would be considerable additional costs involved with construction on most parts of the site, due to the depth of new infill to reach the rock-head and the more complicated foundation construction required. The new Plant would also be much more visible in this location, requiring high costs of extensive architectural treatment.

Since the States debate, further investigations have brought forth a number of factors that significantly affect the decision on the possible locations for the new EfW Plant. The EPSC considered these factors and concluded (on 13th October 2005) that the best location for the new EfW Plant was on the La Collette II Reclamation Site, i.e. the site marked Area 1 (on Drawing No. 10180/S002), and that all further investigation should be concentrated on this site.

The reasons for this decision were as follows –

- A detailed investigation of Area 1 has shown that it would be feasible to construct an EfW Plant there, as the Civil Engineering costs would be much less than for locations further to the south. Preliminary ground investigations have shown that the depth to rock-head is considerably less.
- Additional construction costs on this site would not be as high as the La Collette I site (Area XX), as there would be no need to relocate the JEC facilities and the Abattoir.
- It would be close to the JEC Power Station, and should be able to make use of some of its existing infrastructure, for example the chimney and the cooling water system. It would also be a better location for linking directly into the main electrical system readily for exporting power. Discussions have taken place with the JEC on the possibility of sharing some of their existing facilities, which would produce some savings in costs, and these discussions are continuing.
- The use of the La Collette chimney would mean that there would be only one large chimney on the Island, as the Bellozanne chimney would be demolished.
- It would allow construction to take place much more easily, with less disturbance to residents. Construction of an EfW Plant would be much easier on the La Collette II site, as there is more space for construction working areas. Also, very large pieces of equipment (such as boilers) could be transported to the site very easily from the Victoria Pier. (These components would have to be broken down into smaller loads for transport to Bellozanne, but would still be unusually large loads travelling through the area.) These factors would make construction easier and quicker for the contractor, and could result in more competitive bids from contractors.
- Although it is unlikely that Guernsey will make a decision on its own Plant before 2008, there is still a

possibility that Guernsey might wish to make use of the spare capacity that will be available in the new EfW Plant during its first 5 years of operation. (This “spare capacity” is due to having to allow in the capacity of the Plant for growth in the waste quantity over the life of the Plant.) Transport of this waste from the Harbour to La Collette would be much more acceptable than to Bellozanne.

There are, however, other issues that need to be considered –

- The traffic routes to La Collette are predominantly through commercial and industrial areas. Nevertheless, the impact of the volume of traffic would have to be fully assessed, and this work is currently being undertaken as part of the Environmental Impact Assessment.
- The visual impact of the Plant would be much greater than at Bellozanne. It will be a large building that will be highly visible, but various measures can be taken to reduce the visual impact. The existing mound to the east of the site could be extended in height and landscaped with trees, thereby providing screening. The appearance of the building would be improved by having a swept building form and some additional architectural features. (Preliminary plans and elevations of the proposed building are being prepared, and will be available for viewing by States members prior to the debate.)

Regardless of which site is chosen, emissions from the Plant will be in accordance with the EU Directive, and will be regulated by the Environmental Regulator. It is proposed that on-line monitoring of the emissions will be provided, and will be available to public access. Existing modern EfW Plants are achieving levels considerably lower than the present EU standards. An Environmental Impact Assessment (EIA) will cover these aspects fully, including a Health Impact Assessment (HIA), which will both be part of the planning process, and this work is under way.

A further advantage is that the RHP would not have to be moved from Bellozanne until after the completion of construction of the new EfW Plant, when it will be incorporated within the new Plant. This will avoid the costs of its temporary relocation and the additional transport of the bulky waste from La Collette to Bellozanne.

One very important environmental factor was that, by locating the new EfW Plant at La Collette, the volume of traffic passing through the First Tower area going to the Bellozanne site would be dramatically reduced. Much of this traffic is large commercial vehicles, travelling through this area from early morning to late afternoon.

Although the EPSC had given an undertaking to carry out a full EIA of both the Bellozanne and La Collette sites, following a review of these factors it instructed the Officers to concentrate on the La Collette II site.

Composting Facility

One of the most urgent projects required by the Strategy is the construction of a new Composting Facility. The Minister for T&TS is determined to resolve the problems of smells and odours from the existing temporary arrangement of open windrow composting at La Collette II. The former EPSC gave a commitment, which has been continued by the Minister, to provide a modern, well-designed enclosed “in-vessel” Composting Facility, with full odour control, by 2007. The programme for this was very tight, and there were some key decisions that needed to be made urgently. The first of these was the location of this new facility. This programme is no longer achievable, due to the delays that have occurred in determining the site, and the likely date for its completion is now early 2008.

It was stated in the Strategy and in the States Debate in July 2005 that the preferred location for the EfW Plant was at Bellozanne, and it was considered that the most likely location for the Composting Facility would be at La Collette II (Area 1).

If the new EfW Plant is to be located at La Collette II (Area 1), on this same site, one option for the Composting Facility could be to locate it at Bellozanne, on the RHP site. This, however, would have several disadvantages.

- Until planning approval for the EfW Plant has been obtained for La Collette II (Area 1), a commitment

use the Bellozanne site for Composting could not be taken, as this site has been zoned in the Island Plan for the new EfW Plant. The time required for this decision was considered to be delaying the progress of the Composting Facility.

- It would require moving the RHP operation even sooner than for the construction of an EfW Plant at Bellozanne.
- A detailed review of the Bellozanne site showed that there would not be enough space to allow for expansion of the Composting Facility in the future.

By having the location of the Composting Facility on a site other than the Bellozanne RHP site, this would remove the delay in progressing the Composting Facility while waiting for a decision on the location of the EfW Plant. Once the EPSC decided that its preferred location for the EfW Plant was La Collette II (Area 1), a further review of possible sites was carried out.

Therefore, the TTSD has investigated various other sites as possible options for the location of the Composting Facility. Bearing in mind the tight timescale for the project, the list has been limited to sites that were in States ownership, as the time to acquire a privately owned site could be considerable, even with a willing seller. In a previous study carried out in 1994, there were 20 sites identified to see if they had any potential for open windrow composting. These sites were reviewed and those in States ownership were considered.

The requirements for a site for the new Composting facility are –

- It should be reasonably central in the Island.
- Road access must be good, with access from other parts of the Island preferably not having to go through the centre of St. Helier.
- It should be reasonably close to the main agricultural areas, as most of the end product goes to agricultural use.
- It should have enough space to allow for the possibility of future expansion, for either agricultural waste or kitchen waste.
- It should preferably be in States ownership, to avoid the possibility of lengthy delays in acquiring the site.

The list of sites that were considered in detail is as follows –

1. Warwick Farm (TTSD Parks & Gardens operations area).
2. Bellozanne Valley North Compounds (to the north of the Sewage Treatment Works).
3. Field 1489, to the north-east of Bellozanne Valley.
4. Howard Davis Farm, current Trials Field (Field 827).
5. La Collette II Proposed Mound Area (Area 1).
6. La Collette II Proposed Industrial Zone (Area 2).
7. La Crete Quarry, St. Martin.
8. Warren Farm, Noirmont (southern part of Field 690).

9. Previous Shredding Site (near the Airport), Rue de la Commune, St. Brelade.
10. Former Mont Mado Quarry.
11. Les Landes, Emergency Sludge Storage Fields.

These sites were assessed on a large number of factors, the main headings of which were Land Use Resource (the value of the site for other potential use), Planning Criteria, Design and Operational Criteria, Timescale for Site Availability, Pollution Risks, Transportation Issues, and Other Environmental Issues. With all of these sites, there were pros and cons, and the detailed aspects of the individual sites were scored to give a relative evaluation of their overall suitability.

Five of these sites emerged as the most viable, and these were, in order of scoring from highest to lowest, Warwick Farm, La Collette II Proposed Industrial Zone (Area 2), Howard Davis Farm Trials Field, La Collette Proposed Mound Area (Area 1), and Mont Mado Former Quarry.

A sensitivity analysis of the two top sites, Warwick Farm and La Collette II Proposed Industrial Zone (Area 2) was carried out on their scores. This showed that they were very sensitive to changes in the factors for Land Use Resource (the value of the site for other use), Timescale for Site Availability, and Transportation Issues (in particular traffic problems on nearby junctions). Making moderate positive changes to the factors for these aspects to La Collette II Proposed Industrial Zone gave it a higher score than Warwick Farm.

This report was considered by the Minister, and then by the Council of Ministers on 26th February 2006. The Council considered that greater account should be taken of some of the factors. The proposed Composting Facility at Warwick Farm would be much closer to residential properties than at La Collette II, and the type of traffic would be of less concern at La Collette II, being an industrial area. On this basis, the Council of Ministers decided that its recommendation to the Minister for T&TS on the location for the Composting Facility was La Collette II Proposed Industrial Zone.

The Minister for T&TS accepted this recommendation from the Council of Ministers, and instructed work to proceed on the planning of the new Composting Facility at La Collette II. Work on the EIA for this facility is also under way.

During the debate in the States, on 4th April 2006, when the Proposition of the Connétable of St. Helier to debate the location of the Composting Facility was accepted, the Minister was asked to reconsider the available sites for this project. The Minister believes that all feasible sites have been considered, and that it is inevitable that any site that is recommended for this purpose will have some disadvantage. Nevertheless, having considered all of the factors, the Minister is still of the opinion that the best site for the enclosed "in-vessel" Composting Facility, in the circumstances, is La Collette II (Area 2)

Composting Technology

Following approval of the Strategy and acceptance by the States that food waste would not be included at this stage, enclosed "in-vessel" technologies for composting green waste have been considered. These technologies do not preclude food waste being added at a later date, although expansion to provide additional capacity would be required.

With the high growth rate in composting in the U.K. and the rest of Europe, there are many companies offering composting technologies. To address the odour problems, it is essential that any Plant constructed in Jersey will be fully enclosed to ensure that full odour control can be achieved throughout the process.

A Notice was inserted in the Official Journal of the European Communities (OJEC), in November 2005, to obtain Expressions of Interest from companies with the expertise to provide technology for composting the Island's green waste, with provision of odour control equipment, and to design and build the Composting Facility. Applications have been received from 17 companies for this project, and work has been proceeding on assessing these companies and their technologies, in order to form a short list of companies who will tender for the project.

Of the 17 applications received, following detailed evaluation, the list is down to 5 companies, all of which can provide enclosed “in-vessel” technologies. The specific “in-vessel” design varies from company to company, however, all of those selected will be able to produce high quality compost to the required standards, in an odour-controlled environment.

However, there is a limit to the amount of progress that can be made on this project, until the States has made a final decision on the location of the Composting Facility. Non-site-specific work has been completed, but final specifications for the work cannot be completed and tenders cannot be invited, until the location has been agreed.

Traffic considerations

With the EfW Plant at La Collette II, the traffic situation at Bellozanne would be considerably improved, by removing virtually all solid waste traffic movements from Bellozanne. These are mainly large commercial vehicles, and now have to pass through what has become predominantly a residential area along Route Es Nouaux.

Locating the Composting Facility at La Collette II should not add to the traffic loading that exists, as the green waste composting operation is already located at La Collette II.

However, by locating the EfW Plant and the Composting Facility at La Collette II, the implications to traffic loadings would have to be fully assessed. Detailed traffic studies are being carried out, to provide information for the EIA studies for both the EfW Plant and the Composting Facility, and will be considered as part of the planning process.

Various measures could be instigated, to improve the management of the overall traffic to La Collette, such as placing restrictions on vehicles using the facilities at peak times. By the time the new EfW Plant would be completed and commissioned at La Collette II, i.e. in about 2011, the improvement plans for the Weighbridge/Tunnel junction will have been completed, as part of the overall St. Helier Regeneration Strategy and East of Albert Planning Brief.

Financial and manpower implications

In the Solid Waste Strategy, the following costs were identified – the Re-Use and Recycling Centre £1.4 million, the Composting Facility £3.9 million, and the new EfW Plant to be in the order of £75.5 million (including Enabling Works and other costs).

The most significant element is clearly the EfW Plant. A detailed appraisal for the construction of an EfW Plant at La Collette II (Area 1) has identified a number of significant savings that can be achieved by integrating with the JEC existing building. For instance, it should be possible to utilise redundant space within the existing chimney, thereby saving on the capital cost of a new chimney. By locating the power generating equipment within the JEC building and linking to the existing infrastructure, further savings can be made by not having to provide this equipment in a dedicated building as part of the EfW project. In addition, a number of available services can be provided from within the JEC building. These potential savings have to be offset against the additional cost of providing improved architectural treatment to the EfW Plant and the inevitable costs of working on an infilled area. Having evaluated the savings against the additional costs, it is still considered to be the best solution for the Island, and it is believed will still provide savings.

However, since the Strategy was approved by the States, in July 2005, the U.K. Government has stated that it sees the role of EfW Plants as being necessary for the management of solid waste, and it has become apparent that there is now significant interest in the EfW market. As a result of this interest, the limited number of specialist contractors, and the emerging influence of the construction work associated with the U.K. staging of the Olympic Games, it is very difficult to provide cost certainty until this project has been put out to tender.

The cost of the new EfW Plant was initially estimated at £61.2 million in 2000, from the previous Carl Bro Group Solid Waste Management Review. As a result of delays to the project, the cost was estimated at £75.5 million in

2005. Although this estimate was considered to be realistic, delays to this project, and the uncertainty mentioned above, suggest that this cost could have further increased significantly, by up to £10 million.

It is considered that any further delays to the EfW project will inevitably lead to higher costs.

Manpower

Existing manpower resources for the combined Solid Waste operations will not be exceeded with the new EfW and Composting facilities, although inevitably some retraining of staff will be required. During the period of commissioning, there might be a requirement for additional staff resources, but this might be provided by the contractor that is constructing the new EfW Plant.

Summary

The advantages of locating the new EfW Plant at La Collette II (Area 1), rather than at Bellozanne, are : follows –

- Considerable traffic volumes, particularly heavy vehicles, would be removed from the roads through residential areas leading to Bellozanne.
- The EfW Plant would be close to the JEC Power Station, and would benefit from the sharing of the existing infrastructure. This could mean only one large chimney on the Island.
- The construction of such a major project would be much easier than at Bellozanne, which could lead to more competitive bids.
- The EfW Plant would be located in an industrial area, rather than close to residential areas.
- The RHP would remain at Bellozanne, until after the completion of the new EfW Plant, when it would be co-located in the new Plant. This would avoid additional transport of the bulky waste, during the construction period.
- Although it cannot be confirmed at this stage, there is still the possibility of taking some of Guernsey's waste to this Plant, in the future. The transport of this waste to Bellozanne would not be acceptable, whereas La Collette is close to the Harbour.

The new Composting Facility should be located at La Collette II Proposed Industrial Zone (Area 2), for the following reasons –

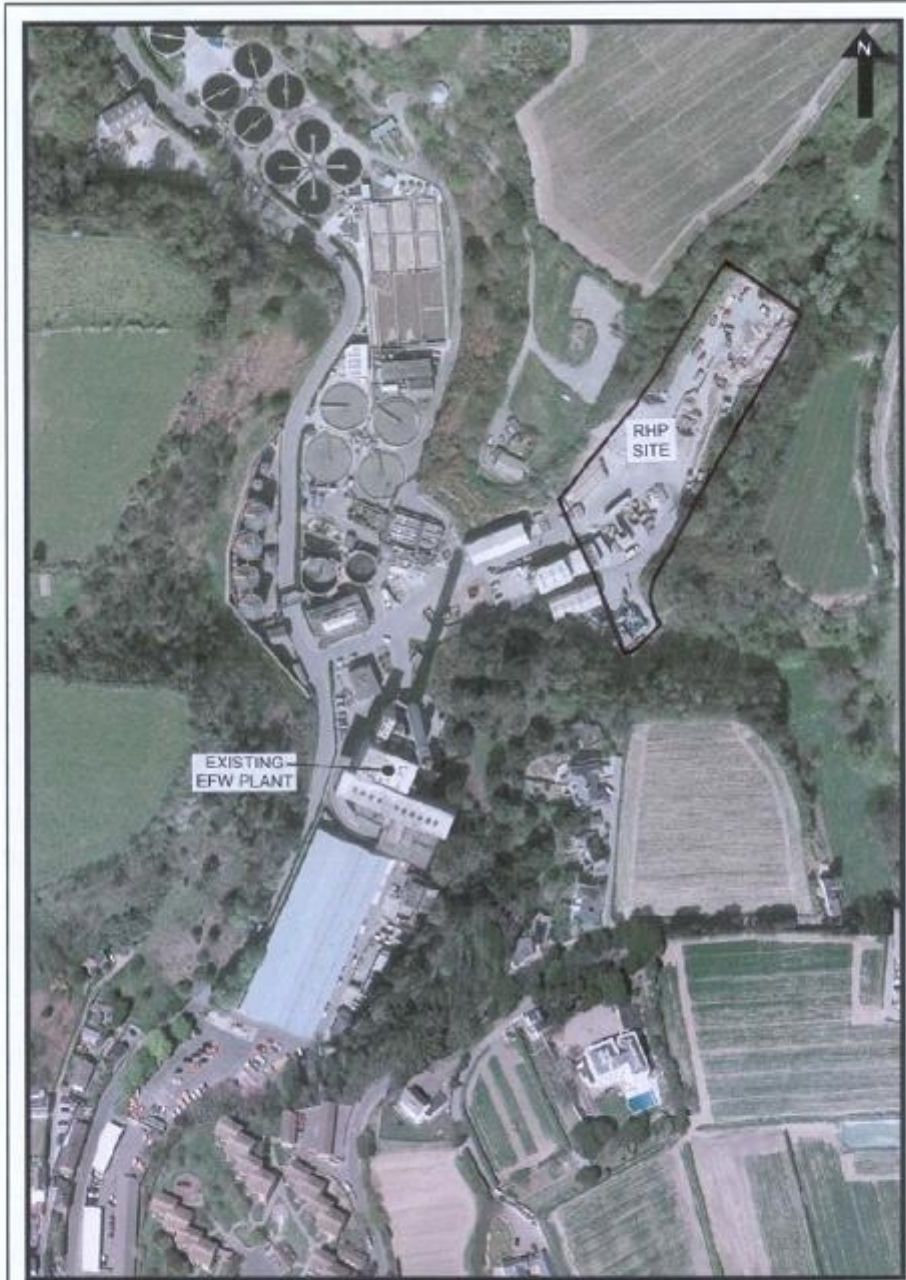
- The site is already an industrial area, and this type of operation would be more suitable there, due to the nature of the traffic that would use the site.
- It would be a considerable distance from residential properties (over 700 metres).
- The site would be readily available and completion of the project could be achieved in a shorter timescale.

Conclusion

The Minister for Transport and Technical Services is firmly of the opinion that the new EfW Plant should be located at La Collette II reclamation site (Area 1), rather than at Bellozanne.

The Minister for Transport and Technical Services is of the opinion that the new enclosed “in-vessel” Composting Facility should be located at La Collette II Proposed Industrial Zone (Area 2).

10th April 2006



07 April 2006
 Scale: 1:2500
 mapping@pwr.je

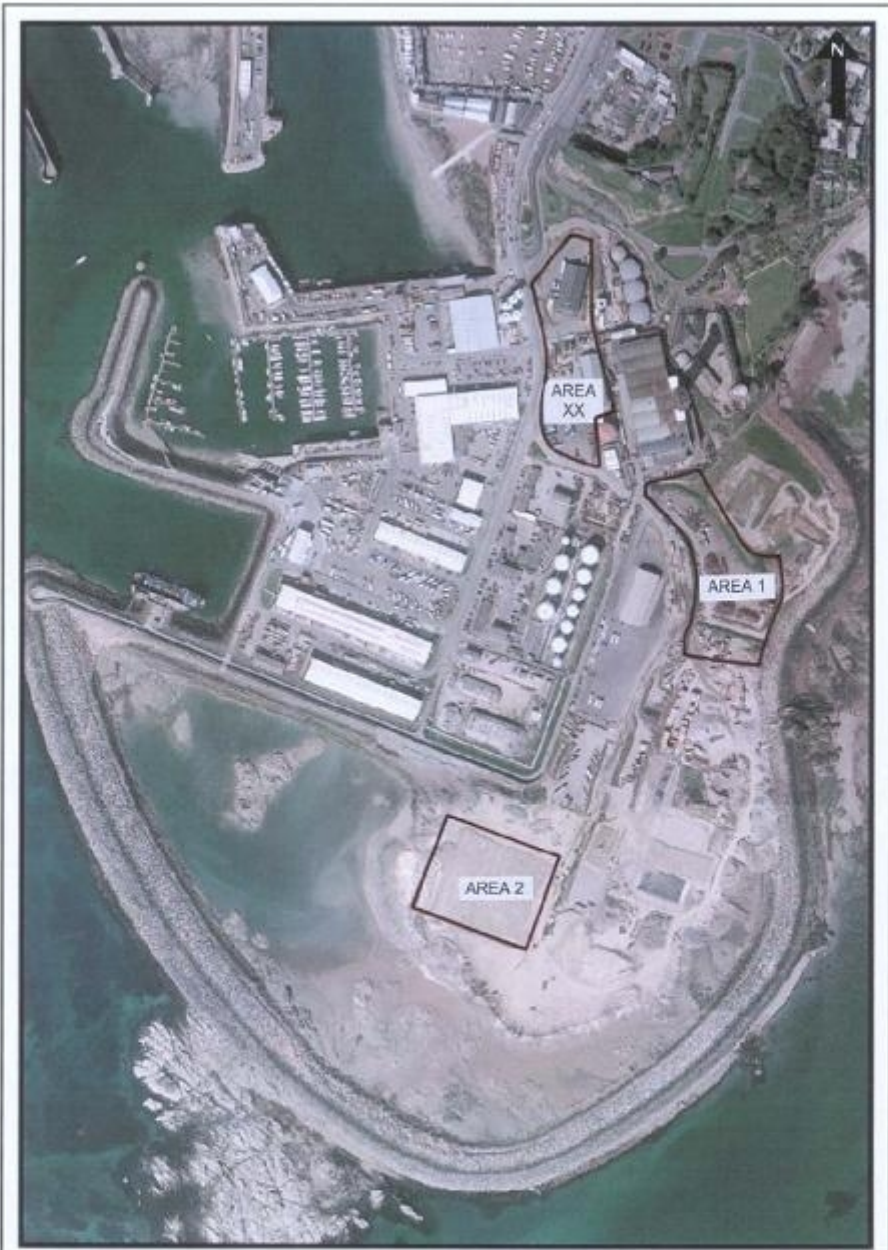


STATES OF JERSEY
 SOUTH HILL, SANDHURST
 JERSEY JE4 8UY
 Tel - 01534 801500
 Fax - 01534 708050

TRANSPORT & TECHNICAL SERVICES DEPARTMENT

Designed by:	Checked:	Scales: DO NOT SCALE
Drawn by:	Date: April 2006	Org. No.: 10180 / S001

SOLID WASTE STRATEGY
 Bellozanne Refuse Handling Plant Site



07 April 2006
 Scale: 1:5000
 mapping@pev.je



States of Jersey



STATES OF JERSEY
 SOUTH HILL, SHELLEN
 JERSEY JE4 8UY
 Tel +01534 601600
 Fax +01534 760060

TRANSPORT & TECHNICAL SERVICES DEPARTMENT

Subject:	Drawn:	Scales: DO NOT SCALE
Checked:	Date: April 2006	Drg. No.: 10180 / S002
Project: SOLID WASTE STRATEGY		
Title: La Collette Site Locations		