11 Waste Management

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WM: Introduction

11.1 This section of the Plan deals with policies and proposals relating to waste management in Jersey, which covers both the solid and liquid waste services. The solid waste service broadly includes industrial, construction and demolition materials, commercial and household refuse, incinerator ash and agricultural, clinical and hazardous waste. The liquid waste service includes the collection, treatment and disposal of commercial and household sewage, including the disposal of bio-solids (sludge) arising from the treatment processes. The liquid waste service also includes the collection and discharge of surface water in the sewerage systems and the management of particular designated watercourses in the island.

11.2 The policies included in this chapter reflect the 'Reduce, Manage and Invest' principle referred to in the strategic policy framework, in order to make better use of the investment available and reduce wider environmental impacts of waste management. As such, they look to:

- reduce the amount of waste created as a result of development (demand);
- ensure that waste is managed better through new developments and in their design and construction, including ensuring better recycling (manage); and
- allow more efficient and reduced investment in waste management infrastructure once other measures have effectively reduced the impact from new development and population change (invest).

11.3 In addition to planning controls, there are also regulatory requirements for waste handling and disposal facilities/operations, which are applied by the Minister for Planning and Environment through a licensing regime under the Waste Management (Jersey) Law, 2005. These controls are designed to avoid any appreciable adverse effect on the environment from waste management activities.

WM: Solid waste

WM: Introduction

11.4 Dealing effectively and responsibly with solid waste remains a big challenge for the Island. Solid waste is an unwanted by-product of the development process and represents a "misuse of resources". It needs to be reduced and managed safely and effectively to achieve environmental and economic benefits and help create sustainable development.

11.5 The main overriding aims of this section of the Plan are:

- To help deliver the States Strategic Plan and the Solid Waste Strategy;

- To secure an acceptable balance between the community's requirement to ensure that any proposals for waste management operations are environmentally acceptable or managing waste and the need to protect the local environment and the amenities and health of local residents;
- To give greater certainty as to the location and scale of future waste management facilities that are likely in principle to be acceptable; and
- To ensure that any proposals for waste management operations are environmentally acceptable.

WM: Objectives and indicators

11.6 The anticipated changes in solid waste management types and quantity, together with the evolving policy context, requires new planning objectives, as follows:

Objective WM 1

Waste management objectives

1. To help minimise the amount of solid waste generation through land use policies that facilitate waste reduction.
2. To help make the best use of the solid waste that is produced, by encouraging/securing more recycling, composting and energy recovery facilities and placing less reliance on disposal.
3. To help ensure that waste is managed at the most appropriate level in the internationally accepted 'Waste Hierarchy', as modified by the 'Solid Waste Strategy'.
4. To ensure the design and layout of new development supports sustainable waste management.
5. To make sufficient provision for future inert solid waste disposal, for when the reclamation site at La Collette II reaches the end of its life;
6. To make sufficient provision for other required solid waste management facilities identified within the evolving Solid Waste Strategy;
7. To provide sufficient opportunities for additional new solid waste management facilities, of the right type, in the right place and at the right time;
8. To protect and enhance the overall quality of the environment at residual waste disposal sites once landfill has ceased, by promoting the highest standards of restoration and aftercare and ensuring appropriate after-use.

Indicators WM 1

Waste management indicators

1. A reduction in the rate of growth of non-inert solid waste arisings
2. A reduction in the growth of municipal waste arising per-capita
3. Increases in the capacity of non-inert solid waste management facilities for re-use, recycling and composting, and energy recovery to match the requirements within the evolving Solid Waste Strategy
4. A continuing annual increase in the proportion of non-inert solid waste re-used, recycled and composted.
5. A continuing annual reduction in the tonnage of inert waste material requiring disposal by landfill at La Collette and other registered waste disposal sites.
6. A continuing annual increase in the proportion of inert solid waste material re-used or recycled.
7. The proportion of 'Site Waste Management Plans' approved as part of the planning application process.
8. The proportion of approved developments incorporating (or contributing to) waste collection and recycling facilities.
9. The granting of planning permission for and timely implementation of proposals for a replacement waste disposal facility to succeed the current La Collette II site.
10. The granting of planning permission for and implementation of proposals for a suitable composting facility.
11. The granting of planning permission for and implementation of proposals for a suitable Re-use and Recycling Facility.
12. Protection of existing solid waste management capacity until replacement capacity is provided or alternative provision demonstrated sufficiently as part of the development process.
13. Sufficient capacity within the overall stock of waste management facilities to deliver the evolving Solid Waste Management Strategy, including the provision of:

i. new composting and recycling facilities;
ii. sufficient mini recycling centres within new development; and
iii. new or enhanced facilities for bulking, sorting and transferring re-usable and recyclable waste.

14. The approval of plans for restoration and after care and beneficial after-uses for waste disposal sites.

15. Successful land restoration that returns sites to beneficial after-use.

WM: Current position

11.7 Figure 11.1 shows the amounts and destinations of waste produced in Jersey in 2010. In all some 277,000 tonnes of solid waste were managed during that year (excluding waste handled outside States operated facilities), which is significantly below the peak of 450,000 tonnes in 2008. By far the largest proportion of this waste by weight (61%) was 'inert' construction and demolition waste (i.e. waste which is stable in the presence of normal biological and chemical agents). This is mainly generated by the building industry and includes stone, soil and rubble. At present, most of this waste is land-filled at La Collette reclamation site. The remainder of the waste is 'non-inert' rubbish from construction, households, shops, offices and other commercial businesses. This consists of biodegradable and combustible waste and other municipal waste material. Approximately, two-thirds of the non-inert waste is 'municipal solid waste' collected from households, street cleaning and commercial premises served by the public waste collection service. The majority of commercial and household refuse (approx. 69%) currently goes to incineration from which energy is recovered.

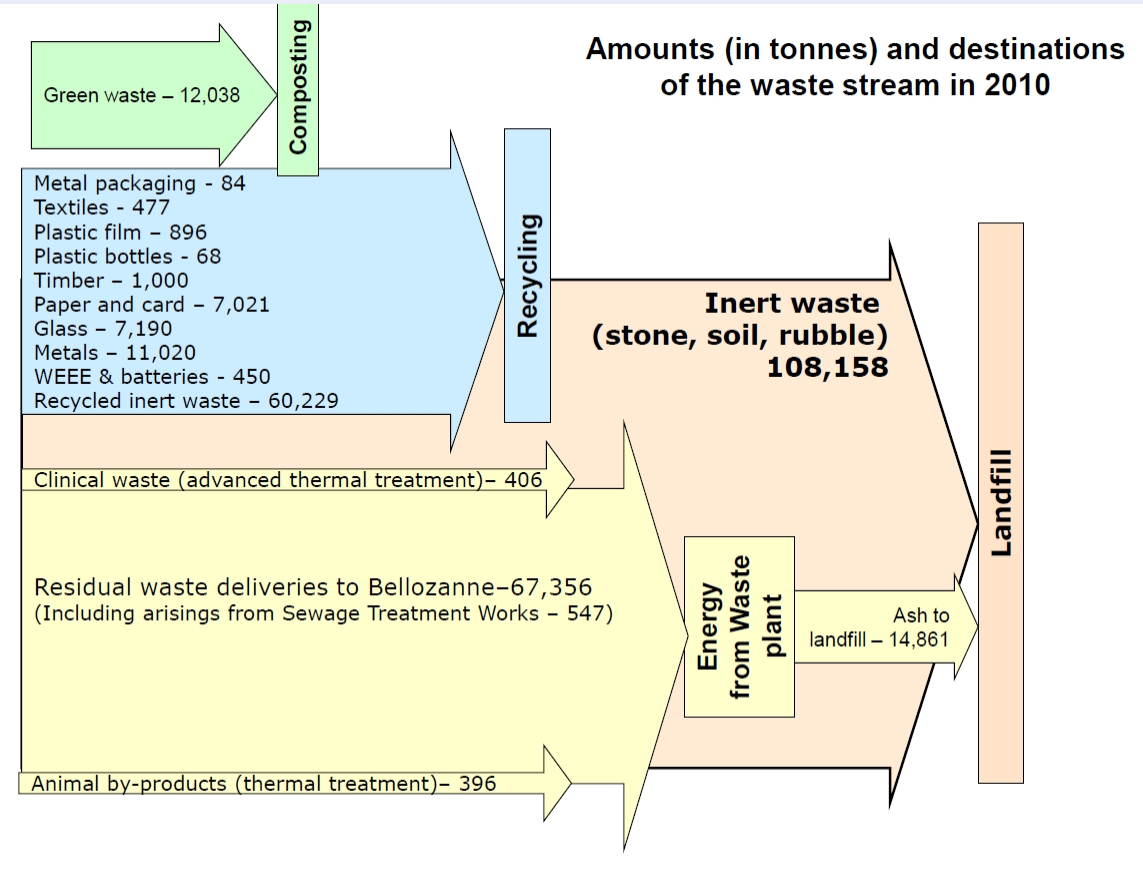

Figure 11.1 Waste Management Stream 2010

11.8 Many of the Island's existing solid waste management facilities/operations are currently concentrated at Bellozanne Valley. These include:

- ***The incinerator and energy from waste plant*** – this facility is old, unreliable and inefficient plant with unacceptable emission standards and has come to the end of its useful life;

- ***A temporary 're-use and recycling centre'***- a popular and successful facility opened in June 2007 offering Island residents the opportunity to recycle a wide range of materials, including paper, card, glass, cans, textiles, scrap metal, waste oil, batteries, waste electrical equipment, mobile phones, construction rubble and plastic bottles;

- ***Other waste disposal facilities***- including: hazardous waste collection and storage; a clinical waste incinerator; a sludge drier; an oil recovery operation; a temporary site for receiving green waste, an ash separation and treatment plant and ferrous and non-ferrous metal extraction.

11.9 The other main centre for solid waste management is La Collette reclamation site. This is presently home to:

- A new **'energy from waste plant'**- this recently completed 'state of the art' plant has replaced the obsolete energy from waste plant at Bellozanne and is now accepting most of the Island's residual 'non-inert' waste (i.e. remaining waste after recycling and composting have been attempted). It will produce sufficient electricity to run itself and power 10,000 homes.

- A ***'green waste composting plant'*** - an open "wind-row" facility that provides for controlled decomposition of uncontaminated organic wastes and is used to produce a quality soil improver;

- An ***'inert waste recycling/reclamation centre'*** - the main centre in the Island for recycling 'inert' construction, demolition and excavation waste into new products (e.g. quality recycled aggregates);

- ***Land-fill*** - the present reclamation site has operated as a land fill site since 1996 and it is used for the disposal of most of the Island's inert waste. In addition to demolition waste, the site is used to dispose of ash from the Energy from Waste plant, asbestos and glass. Glass is currently used to replace stone aggregate as a drainage medium in the outer wall lining process. All the inert waste which contains components that would harm the environment and / or pose health hazards (including ash, asbestos and spoil from contaminated sites) is given special treatment. Ash is disposed of in secure lined pits and asbestos is contained above ground in temporary storage.

11.10 There are a number of other solid waste management operations being undertaken in the Island, which include:

- ***Various waste minimisation schemes*** – for example educational initiatives in schools and States departments and the active promotion of home composting and washable nappies by Transport and Technical Services;

- ***"Bring Banks"*** – a number of these have been established around the Island near to residential/community centres where people can bring segregated waste materials (e.g. cans, paper, cardboard) for recycling;

- ***Kerbside recycling collection service*** - all the Parishes, with the exception of the Parish of St. Helier, have a kerbside collection scheme for recycling glass[1]. In August 2006, the Parish of St. John introduced a popular and successful pilot kerbside collection service for newspapers, magazines, food and drink cans and plastic bottles. Transport and Technical Services are continuing to promote the benefits of this scheme to all the other Parishes. Kerbside collections of recyclables have been initiated in some other parishes, including: the Parish of St. Helier and the Parish of St. Lawrence.

- ***Privately operated inert waste recycling schemes*** - these include recycling of inert waste by privately owned waste recycling contractors who generate their income from the sale of product. However, it also includes developers on large development sites where significant demolition and excavation takes place. These developers have to comply with approved 'Waste Management Plans' requiring on- or off-site recycling. However, in any event, they are increasingly seeking to reduce costs by reusing material or selling it into the local market.

- ***Glass Crushing*** – an operation to crush segregated glass by a private contractor for Transport and Technical Services.

- ***Export facilities*** - such facilities are available for hazardous waste (e.g. redundant chemicals), where it poses a particular threat to human health and/or the environment and requires special management care[2]. They are also available for waste that it is economic to send off-Island for recycling, such as paper and card, agricultural polythene film, timber, plastics, textiles and scrap metal.

- ***Animal by-products incinerator*** – This facility is currently located on the north side of Howard Davis Farm and processes the animal by-products waste

1 The Parish of St. Helier operates a 'Bring Bank' system for glass collection, but is planning to introduce kerbside collection.

2 Hazardous waste is stored in Jersey and exported to the UK for disposal in specialist waste management facilities, where it cannot be disposed of locally in an environmentally sound manner. This must be in compliance with the Basel Convention and the Waste Management (Jersey) Law, 2005. Any proposed shipments require the approval of the Environment Department and the UK Environment Agency before export can take place. The types of waste which require disposal in the UK include agrochemicals and pesticides, laboratory chemicals, contaminated oils, organic solvents and refrigerant gases

stream, including fallen livestock, BSE Specified Risk Material (SRM), abbatoir and butchers waste. The unit was commissioned in July 2008 to meet UK Process Guidance Note 5/3 (04) for animal carcase incinerators processing under 10 tonnes per day. Throughput of the plant is variable but typically 40 tonnes per month. Currently, the operation is licensed as temporary and may be relocated in the period of this Plan.

11.11 In addition to existing solid waste management facilities, there are currently plans for the development of a number of major new facilities in the next few years, which are at various stages in the design and development process. These are addressed throughout this section, and include:

- A new "in-vessel" composting facility;
- A permanent 'Re-use and Recycling Centre' (with sorting and baling plant) at Bellozanne;
- Additional community bring sites; and
- A clinical waste incinerator.

WM: Policy context

Solid Waste Strategy

11.12 In July 2005, the States approved a 'Solid Waste Strategy' (P.95/2005). This aims to change Community attitudes towards waste production and, in particular, encourage individuals and organisations to address the 'non-inert' waste issue. The Strategy is based on the general principles which underpin sustainable waste management, including:

- Reducing the amount of waste the Island produces;
- Making best use of the waste that is produced; and
- Choosing waste management practices which minimise the risks of immediate and future environmental pollution and harm to human health

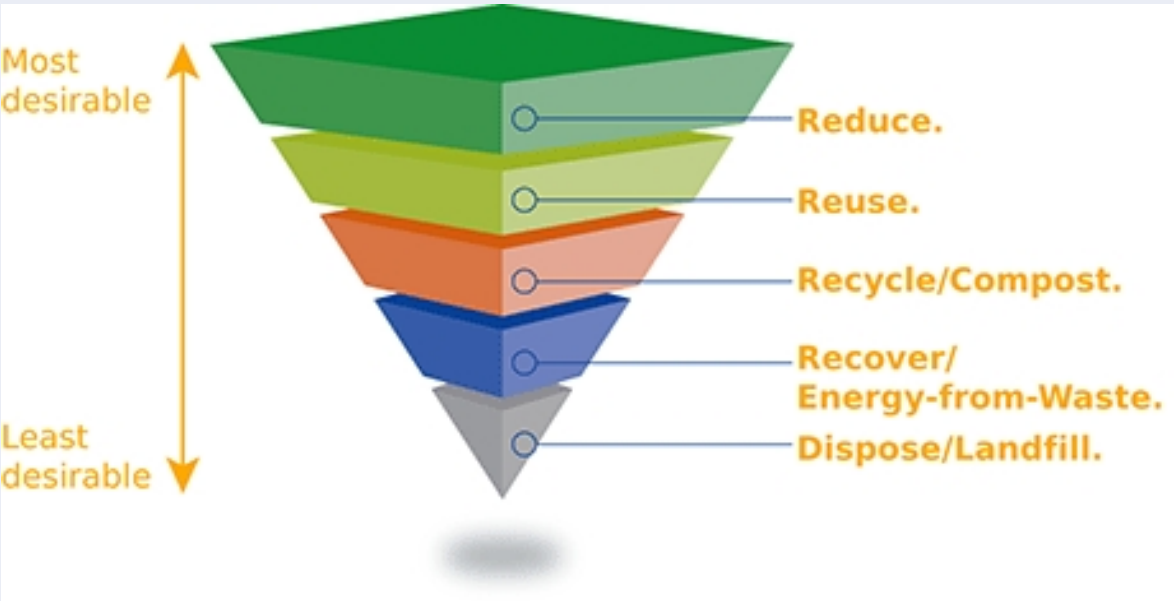

Figure 11.2 Waste Hierarchy

11.13 The strategy looks to achieve these objectives through a development of the internationally accepted 'hierarchy' of waste management options, which is effectively a best practice model. This 'Waste Hierarchy' ranks the options according to their relative environmental benefits and dis-benefits and looks to ensure that, before waste is disposed of in landfill, all alternative measures have been considered.

States strategic policy

11.14 The Strategic Policy context for waste management has changed since the 2002 Island Plan. In June 2006, the States approved a Strategic Plan which covered the 5-year period 2006-11 and was intended to provide an overarching policy direction for Jersey. This aimed to *"reduce per-capita waste arisings that reflect best practise globally"*. Also, as part of a commitment to maintain the natural and built environment, the Plan aimed to ensure that *"waste systems meet international standards and the use of resources is improved"*. It suggested this latter aim would be indicated by:

- Increased recycling and composting to at least 32% by the end of 2009;
- Higher emission standards achieved for within the new Energy from Waste plant;
- Reduction in per-capita consumption of resources; and
- Waste growth reduced in line with the 'Waste Strategy'.

11.15 The Strategic Plan 2006-11 also in identified as a priority, the update of the 2002 Island Plan with a new emphasis on policy and specifically stated that this should include *"planning for the next generation of inert waste sites"*.

11.16 The Strategic Plan 2009-14 sets out the Council of Ministers' priorities for the next 3 years and the long-term direction for the future of the Island, and, as such, provides the principal policy context for this Island Plan. One of the key priorities in the Strategic Plan is the need to "*maintain and develop the Island's infrastructure*" to meet the needs of present and future generations (including waste disposal). In support of this priority, the plan emphasises the importance of sound infrastructure to our environment, way of life and well-being. More specifically, it emphasises the need for the Island's waste disposal systems to meet international standards and proposes to invest in improved solid and liquid waste infrastructure.

11.17 The Strategic Plan 2009-14 identifies five key areas for focus over its lifetime which will require significant and substantial funding streams and early agreement in principle. This includes the identification and preparation of a new landfill site for the disposal of inert waste, when the existing site at La Collette is full.

WM: Policies and proposals

Waste minimisation and new development

11.18 The plan objectives to minimise the waste generated as part of construction activity and to make the best use of the waste that is produced (i.e. through recycling) are fully in accordance with the principles of sustainable waste management. Waste minimisation is the most important element of sustainable waste management because it:

- reduces the amount of waste generated in the first place, which must then be managed;
- reduces the potential pollution from waste disposal activities; and
- brings significant savings in raw material and waste disposal costs.

11.19 The potential benefits of waste minimisation are especially significant in Jersey, given the proportion of landfilled wastes currently derived from construction activities. Between the years 2005 to 2010, the annual landfilled wastes have variously comprised 64% to 84% of the Island's inert waste for disposal and since 1996, the major route for disposal of has been to the land reclamation site at La Collette. Reducing this type of waste would, therefore, increase the lifespan of the La Collette site and reduce the pressures associated with finding alternative landfill sites and with illegal disposal of waste.

11.20 In view of the above, the Minister for Planning and Environment is keen to ensure waste minimisation in the development process, to encourage the re-use and recycling of materials and so reduce the need for disposal. To this end, it will be a requirement for developers of major schemes (i.e. including developments of 10 or more dwellings, or with a floorspace of more than 1000m^2, or where the development is on a site of more than 1 hectare) and/or other developments which

generate a large amount of waste material during construction, to prepare and implement 'Site Waste Management Plans'. These are tools for minimising and managing waste on-site and should initially be prepared by the applicant at the site design/application stage, for approval before construction work begins. The initial draft should:

- identify the quantity of each type of waste material likely to be generated by the development;
- set out the steps taken to minimise wastes arising on the site;
- lay down procedures/commitments to sort, reuse and recycle construction waste so as to maximise the recovery of resources either on-site or through licensed contractors;
- address measures to secure the most appropriate means of disposal; and
- set down waste management actions and estimated targets for each type of waste produced.

11.21 In order to ensure compliance with the approved 'Site Waste Management Plan' and to prevent the potential for illegal waste activity, it will be a requirement that each plan be treated as a 'living' document. It will be the responsibility of the developer, or an appointed principle contractor to demonstrate how the approved 'Site Waste Management Plan' is being implemented and to update the Plan as construction progresses. All waste transactions (involving disposal, re-use, recycling or recovery of waste), should be accurately and clearly recorded or referenced in the Plan, to show evidence of deliveries etc and allow performance to be compared with waste management estimates in the approved draft. As such, the Plan will evolve into a log of all waste paperwork in one document and will always give a current picture of how work is progressing against the waste estimates. This evolving Plan/log must be kept somewhere accessible on the site and will allow for periodic checks and audits by the developer and officials carrying out compliance checks, to help ensure effective implementation. It will also provide the basis for reviewing and revising the Plan, when and if necessary. On completion of the project, the completed Plan (with records of all waste management actions) should be subject to a final review and reconciled against what was initially planned for. At this stage, the Minister for Planning and Environment should be provided with:

- evidence confirming that the Plan has been monitored on a regular basis throughout the project to ensure progress in accordance with the Plan; and
- an explanation of any differences between the first initial draft Plan and actual performance (i.e. where and why initial forecasts were exceeded or missed); and
- the reason for any revision/s to the initial Plan.

11.22 In view of current constraints on staff resources, the level of scrutiny of 'Site Waste Management Plans' will generally be light touch and involve the minimum frequency of officer site visits during construction, sufficient to ensure that the plans are in place and being implemented. However, officer checks may be at increased levels where:

- there are proposals for large-scale waste management activity;
- progress against the Plan is not being properly evidenced and documented;
- irregularities have been identified;
- planning controls associated with the plans (e.g. conditions imposed on planning permissions) are being breached; and
- compliance issues and/or illegal waste movements are suspected.

11.23 In most instances, where it becomes clear from checks on waste documentation that planning controls associated with 'Site Waste Management Plans' are being breached, the developer will be asked to agree and implement remedial steps to resolve the breach. However, in cases where developers or responsible contractors have intentionally not complied with 'Site Waste Management Plans', or have not taken required remedial action within the given timescale, consideration will be given to formal enforcement action, including pursuing prosecutions where deemed necessary.

11.24 To assist with this process for those carrying out construction work and for officials monitoring compliance with 'Site Waste Management Plans', the Minister for Planning and Environment will prepare supplementary guidance, including a sample template of information requirements at the design/application stage, construction phase and post-completion. The measures contained in 'Site Waste Management Plans' may also be secured through planning conditions and obligations, as appropriate.

Proposal 29

Waste minimisation and new development

The Minister will publish supplementary guidance on 'Site Waste Management Plans' to provide additional advice and assist with development control considerations.

11.25 In the first instance, developers should always give consideration to the opportunities for on-site management of waste where it arises. Good site practice and management of resources can significantly reduce wastage in construction and opportunities already exist for many major developments to make use of recycled building materials to varying degrees for infilling in connection with land preparation, landscaping and land restoration;the construction of roads, pavements and car parks; and the replacement of primary aggregates in some building materials

(e.g. concrete). It is also likely that, in future, technical standards and specifications will continue to change, to allow for the greater use of recycled materials in the construction process, with no appreciable loss of performance.

11.26 The Minister will normally only support major developments where effective measures are put in place to minimise waste production and optimise waste recycling during construction. This will present particular challenges for certain types of development, for example those proposing basement car parks, which involve the generation of large amounts of waste material. In such circumstances, it may be necessary to pursue a different design solution, if a sufficient proportion of the waste material generated cannot be recycled, re-used or recovered.

Policy WM 1

Waste minimisation and new development

In considering proposals for new development and in accordance with the principles of sustainable development, the Minister for Planning and Environment will encourage the minimisation of waste generated as part of construction activity and an increase in the recycling, re-use and recovery of resources.

The Minister will only permit major new developments and/or developments which would involve the demolition of major structures or the potential generation of significant quantities of waste material (including developments of 10 or more dwellings, or with a floorspace of more than 1000m^2, or where the development is on a site of more than 1 hectare), where:

- measures are taken to minimise the wastes arising and to recycle, re-use and recover as much as possible of the generated waste materials; and
- opportunities are taken to maximise on-site management of waste.

Where inert waste generated in these developments cannot be re-used on the site, it should, as far as possible, be diverted for recycling with a licensed contractor and only the residual unusable material should be disposed of to landfill.

The Minister will require a 'Site Waste Management Plan' to be submitted with all planning applications for these developments, setting out the steps to be taken to minimise and manage waste generation both on and off the site during construction. The measures contained in the 'Site Waste Management Plan' shall be approved by or on behalf of the Minister and may be secured by planning conditions and obligations, where appropriate. Where such plans are not acceptable, permission will not be granted.

'Site Waste Management Plans' should be continually evolving plans, which are implemented and updated by the developer or an appointed contractor throughout the construction phase. All waste transactions shall be accurately and clearly recorded in the Plan to maintain a continuously up-to-date record of how work is progressing in comparison with waste management estimates.

On completion of the development, the developer must make available the final version of the Plan for review and provide the Minister with:

- evidence that the Plan has been satisfactorily monitored;
- the reasons for any revisions made to the Plan; and
- an explanation of the differences between the initially approved Plan and actual performance.

Where planning controls associated with approved 'Site Waste Management Plans' are being breached, the developer will be asked to agree and implement remedial steps to resolve the breach.

The Minister will consider formal enforcement action where developers or responsible contractors have:

- intentionally not complied with a 'Site Waste Management Plan', or
- not taken required remedial action within the given time-frame.

New and expanded waste management facilities

11.27 Over the Plan period and in accordance with the aims of the Solid Waste Strategy, the Minister will support measures which:

- assist in reducing the quantity of waste presently generated,
- increase the reuse and recycling of waste and,
- reducing the level of waste that goes to landfill.

11.28 Given the quantity of waste produced in Jersey, it is essential that waste management facilities are provided to reduce the impact of resource depletion and harmful emissions on the environment. This is made all the more important given future plans for controlled economic growth, the likely increase in the size of the population, the predicted demographic of smaller households and the growing public awareness of waste management.

11.29 The new and improved strategically important waste management facilities required within the period of this Island Plan, will include:

- community mini recycling centres (or 'bring banks') for household or commercial waste. A significant increase in the number of these sites is required to achieve the recycling targets set out within the Solid Waste Strategy. It is proposed that Supplementary Planning Guidance on the recycling requirements for each type of development will be developed during the period of this Island Plan;

- a permanent household and commercial waste 'reuse and recycling centre'(or civic amenity site). This site is required for achievement of the recycling targets set out within the Solid Waste Strategy. It is likely to be a purpose-built, split-level facility to enable the separation for recycling of a wide range of recyclable materials and to be co-located with public green waste collection facilities and waste collection facilities;

- increased capacity of centralised materials re-use and recycling sorting/bulking and baling facilities, with equipment to manage materials that are to be separated for re-use, or exported for recycling. An increased provision is required to handle the increasing proportion of recyclable waste requiring management. The current capacity of recyclables is likely to increase from the current 30,000 tonnes per annum to 50,000 tonnes per annum by 2020;

- an enclosed composting facility using best practice technology. This facility is likely to be located on the current site for composting at the La Collette II Reclamation Site. The current facility is an open-window operation which requires upgrading and enclosure of all, or part, of the operation to ensure no unacceptable nuisance is caused to local residents and neighbouring uses;

- reception, storage, bulking and separation facilities for managing Waste Electrical and Electronic Equipment. Currently, waste televisions and other electrical goods are separated for recycling at the temporary Re-use and Recycling Centre at Bellozanne. These require export for further treatment and disposal;

- enhanced reception, storage, bulking and separation facilities for managing hazardous wastes prior to their export for further treatment and/or final disposal. The current waste management facilities at Bellozanne are likely to require upgrading and improvements in storage and handling arrangements with potential land-use implications, due to the requirements of changes in statutory legislation in Jersey and elsewhere;

- enhanced reception, storage and disposal facilities for the management of asbestos wastes on the Island. These include the separate management of licensed and un-licensed asbestos, which is likely to still arise in significant quantities during the period of this Island Plan.

11.30 There are also existing strategically important waste management and recycling facilities likely to require expanded provision during the period of the Island Plan. These include:

- an extended scrap metal recycling facility either on the current site in Bellozanne Valley or in another suitable industrial area. This is required to manage 'End of Life Vehicles' in a more sustainable way, separating out parts for re-use and recycling and hazardous wastes for disposal.
- increased area and/or capacity for aggregate recycling. There are currently several aggregate recycling facilities on the Island. To operate safely and effectively, and to increase the capacity to recycle materials such as glass and ash from the Energy from Waste facility, these facilities will require greater land area to operate.
- a permanent site for an animal waste incinerator. The current site at Howard Davis Farm has been granted temporary planning permission. A permanent facility in a suitable location will be required.
- timber recycling facilities. Currently there are several pallet recovery operations on the Island, separating re-usable pallets and breaking down unusable pallets for firewood. As markets for waste wood develop, an increased number and capacity of such facilities will be required.
- a replacement clinical waste incinerator. The current facility was constructed in 1997 and has an anticipated 15 year operating life. A replacement facility will be required within an industrial location.
- a new landfill site/s for future inert waste recycling and the disposal of residual unusable inert waste. The current La Collette II reclamation site is anticipated to be filled in 2016. However, this is dependent upon the rate of development in the Island during the period. The nature of any replacement facility means that a long lead-in time for obtaining approval to operate will be required.
- sites for contingency operation and waste storage in the event that any of the Island's strategic waste management facilities becomes un-operational for a prolonged period.
- various other facilities for the storage and treatment of waste, including facilities for treatment of hazardous wastes such as waste oils (e.g. cooking and mineral oils). It is likely that alternative treatment technologies using waste as a fuel will arise during the period of this Island Plan.

11.31 Some of these required waste management facilities may need new sites, while others will involve an expansion or modification of existing waste facilities. Some sites have already been identified for specific new waste management facilities (e.g. the planned new enclosed composting facility at La Collette). However, the Minister is not in a position, at this time, to designate new sites as part of the Island Plan. Instead, any applications for new facilities will be considered on their merits, having regard to criteria based policies.

11.32 It is important that care is taken in selecting the location of facilities, in order to preserve the amenities and health of those living and working nearby. A range of appropriate policy criteria is required to enable a thorough and consistent assessment of any proposals for new or expanded waste management activities. It will be especially important to demonstrate that the proposals are based on a proven need, are part of a coordinated/integrated approach to waste management and are appropriately located.

11.33 In deciding upon the suitability of sites for waste management purposes, consideration will need to be given to the following factors:

- the physical and environmental constraints on development, including the need to protect the amenities and health of existing and proposed neighbouring land users and the quality of the local environment;
- the cumulative effect of previous waste disposal facilities on the well-being of the local community and the quality of the local environment, balanced against the need to locate waste management facilities together to achieve efficiency; and
- the capacity of the transport infrastructure to support the activity.

11.34 In the interests of pursuing the principles of sustainable development, the emphasis needs to be placed on recycling previously developed land and on the protection of natural resources. With this in mind, the priority will be given to locating new waste management facilities on existing waste management sites, existing quarries, existing industrial land and where they can re-use other suitable 'brownfield' sites, including agricultural buildings.

11.35 Where the aim is to attract recyclable materials from the general public, the new facilities will generally be best located, where practicable, near the main residential areas and/or within easy access of the travelling public. This will help to reduce the number and distance of traffic trips and, therefore, minimise the energy used in transport to and from the facility.

11.36 The Minister for Planning and Environment will require proposals for new and expanded waste management facilities to be subject to a full Environmental Impact Assessment, where appropriate.

Policy WM 2

New and expanded waste management facilities

The Minister for Planning and Environment will support suitable proposals for new and expanded waste management facilities.

All proposals for new waste management facilities, including expansion of existing facilities, will be expected to demonstrate that they:

1. meet an identified/demonstrable waste management need;
2. support the 'Waste Hierarchy' set out in the Solid Waste Strategy and represent the best practicable environmental option for the waste stream(s) they will serve;
3. will not inhibit or prevent the development of more sustainable waste management options further up the 'Waste Hierarchy';
4. will allow for the recovery of materials and/or energy from waste, wherever practicable; and
5. will operate to the highest pollution control standards.

Priority will be given to proposals located at suitable sites with an existing waste management use. Where this is not possible, new permanent waste management facilities should be located on sites with the following characteristics:

1. suitable former waste management sites; or
2. existing operational quarries, as appropriate; or
3. previous or existing industrial land use; or
4. a port area of a character appropriate to the development;
5. suitable redundant agricultural buildings; or
6. other suitable derelict / previously developed land; and which
7. are accessible to existing Built-up Areas and the source of the waste and refuse managed within the site;
8. will not lead to unacceptable problems of traffic generation, highway safety, or parking; and
9. will not give rise to unacceptable conflict with other existing land uses in the vicinity.

The development of new waste management facilities on previously undeveloped land in the Green Zone will only be considered where there is a demonstrable need for the facility; the site is suitably accessible; and no other more suitable alternative sites are available, which would provide more benefits and/or less damage to the environment.

Proposals for new waste management facilities and expansion of existing facilities will only be permitted provided that they:

1. will not have an unreasonable impact on neighbouring uses, the local environment and human health by reason of noise, vibration, dust, odour, other airborne emissions, litter, attraction of vermin and large numbers of birds, leachates, ground conditions (including unstable land), water or gas emissions, including any effects on quality or quantity of water supply and drainage;
2. are designed to be compatible with the character of the surrounding area and will not have an unacceptable visual impact;

3. are designed and developed in an appropriate manner to accommodate the nature and hazards of the waste(s) concerned;
4. will not pose a serious environmental risk to air, water or soil resources that cannot be prevented, or appropriately controlled by mitigating measures;
5. will not have an adverse effect on biodiversity and protected species (see Policies NE1 and NE2),areas of recognised importance for nature conservation and built heritage, or on historic environments;
6. will have adequate arrangements provided within the site for parking, servicing and circulation of vehicles;
7. make suitable provision for the disposal of any residues arising from the facility;
8. include an acceptable programme of site management for the duration of the life of the facility;
9. will not unduly prolong the restoration and aftercare of a mineral working site; and
10. are in accordance with other principles and policies of the Plan.

The Minister for Planning and Environment will require an Environmental Impact Assessment to be carried out for any development likely to have a significant effect on the environment.

Proposals for new non-waste management uses on sites designated for solid waste management on the Island Proposals Map will not be permitted, unless related to and ancillary to the waste management use. The alternative development of these sites will only be considered where it can be demonstrated that alternative or replacement facilities are provided, the sites are no longer required for waste management purposes and the proposals are in accordance with all other principles and policies of the Plan.

Integrated waste management

11.37 The co-location of complementary waste management facilities/activities on one site can provide environmental benefits through the reduction of overall traffic volumes and by enabling flexible integrated facilities to be developed. Co-location can also allow for economies of scale (operational and transport) and assist the separation of waste from different types of recovery on one site.

11.38 The Minister will support the development of appropriate co-located facilities, including the development of suitable existing waste facilities which are well-located with good levels of accessibility and are capable of expansion and of operating a range of management methods, where opportunities arise.

Policy WM 3

Integrated waste management

The Minister for Planning and Environment will give favourable consideration to proposals for the co-location of waste management processes to achieve new larger integrated facilities where there will be operational, transport cost and environmental benefits, and the proposal will not unreasonably be at the expense of existing waste management operations located closer to the source of waste.

Any proposals for co-location of waste management processes should meet the criteria set out in Policy WM2 and be in accordance with other principles and policies of the Plan.

Regard will be taken of the cumulative effect of existing waste management facilities on a local community when assessing any application against this policy.

Recycling/composting facilities

Recycling

11.39 Recycling involves collecting materials from waste and processing them to produce marketable products and is now playing an increasingly important role in waste management. The Solid Waste Strategy suggests the level of municipal solid waste recycling in Jersey compares well with general levels in the UK, but is lower than some European countries (e.g. Denmark, The Netherlands and Belgium) and there is "room for considerable expansion". At the time, the 2004 recycling rate was recorded as 22% and it was recognised that there were considerable constraints on the amount of materials in the waste stream that can practically be recycled or composted in Jersey. These constraints included the relatively small size of the Island population and the associated economic and environmental impacts of transporting materials to recycling centres off-Island.

11.40 The decision whether to recycle materials or not depends upon a number of factors, including the availability of raw materials, energy consumption in collection and processing and any environmental implications. Not all recycling is environmentally beneficial. It is counter-productive to recycle if doing so has a greater impact upon the environment than disposing of the waste through incineration with energy recovery. Furthermore, a recycling scheme that might be cost-effective in the UK or France might not be viable in Jersey if the material has to be shipped out for recycling, even if there is considerable capacity to export

materials in the ships going to the UK or France. The local market for recycled goods is another important consideration, because for certain materials the economics of recycling becomes marginal and other waste management options further down the 'waste hierarchy' may be more appropriate. There are also considerable legislative and economic incentives associated with diversion of waste from landfill within the European Union, which encourage higher recycling and composting rates, but which are not available to Jersey where there is no biodegradable landfill.

11.41 The States Strategic Plan 2002-11 aimed to match the targets within the Solid Waste Strategy by increasing recycling and composting to 32% by the end of 2009. However, the improvements in municipal solid waste recycling since 2004 have prompted calls for the target to be increased, subject to resources being made available. In May 2008, the former Minister for Transport and Technical Services reviewed the anticipated population growth on the Island and developments in recycling and set a new 36% recycling target by 2018 as one which would be appropriate and could be sustained. The current Transport and Technical Services Minister has also reiterated this commitment to increasing recycling targets and has suggested that an aspirational target of 40% is appropriate, if the States and the parishes were able to work together to create new initiatives.

11.42 The Minister for Planning and Environment supports the aims of increasing the overall proportion of recycling within the Island, in order to reduce the amount of waste going to incineration and landfill.

Composting

11.43 The Solid Waste Strategy recognises, in particular, the importance of composting as a means of removing green biodegradable waste from the Island's overall waste stream. It sets a target for composting 90% of the available green waste by 2015, which it aims to achieve by developing a new composting facility, encouraging home composting and improving the bring collection system for domestic green waste.

11.44 Currently, composting at the States' Green Waste Composting Facility at La Collette makes the largest individual contribution to recycling of 'non-inert' waste. In 2010, over 12,000 tonnes of green waste from residents and businesses were recycled in this manner, representing approximately 11% of the total 'non-inert' waste arising. The waste is mostly composed of domestic garden waste, as well as outputs from landscape gardening. The current arrangements at the La Collette facility involve shredding the received material and composting it by an "open windrow" process where material is spread in open rows exposed to the wind and turned regularly to produce a quality soil improver.

11.45 This is regarded as a quality composting operation, which is subject to externally ratified quality assurance processes. However, the location of the facility has given rise to nuisance issues for neighbouring residents related to odour.

11.46 The public green waste collection associated with the composting operation has to be relocated away from La Collette, in view of the findings of the recent 'La Collette Hazard Review', undertaken in the aftermath of the Buncefield Fuel facility explosion. This concluded that it was not appropriate to locate waste facilities serving the general public close to the Fuel and Gas Storage facility. All development proposals within the safety zones associated with this facility will be judged against Policy NR8, with the health and safety of the public being a high priority consideration.

11.47 The Transport and Technical Services Department plans to construct a replacement centralised purpose-built enclosed composting facility at La Collette, if other odour reduction measures do not sufficiently reduce the perceived nuisance of odour from the current window operation. This will provide for received material to be shredded, turned and screened in a purpose-built building. Primary decomposition of the shredded material will then take place in a controlled enclosed environment with appropriate air filtering equipment, which will minimise the emission of nuisance odours and particulates and facilitate the collection of effluent.

11.48 For environmental and health reasons, including the potential negative impact on public or worker health from air emissions, the location of any new large-scale composting facilities will need very careful consideration. It may be necessary to ensure that there is a sufficient buffer between the facility and any nearby dwellings to ensure a precautionary approach to public health is maintained. In all cases it will be necessary to put in place good operational/engineering controls and work practices.

11.49 There are also emerging plans to improve the bring collection system for public green waste, by providing more accessible facilities and overcoming the current problems with public green waste collection. In January 2009, the Transport and Technical Services Department opened a temporary site as a reception area for domestic green waste at Bellozanne. It is centrally located and offers the opportunity for residents to deliver garden waste at the same time as delivering other recyclable waste at the nearby temporary Re-use and Recycling Centre.

11.50 The Solid Waste Strategy indicated the need for a purpose-built, permanent Re-use and Recycling Centre for the public, combining collection facilities for public green waste and recycling. Funding for this facility was due to become available in 2010, but has been rationalised following the economic downturn. The potential development of Bellozanne Valley under the Liquid Waste Strategy may require the current temporary Re-use and Recycling Facility to be removed. An alternative facility would need to be provided in this event prior to the current facility being closed.

Policy WM 4

Recycling / composting facilities

The Minister for Planning and Environment will positively encourage the recycling and reuse of waste and will support feasible proposals for the development of materials recovery facilities, facilities to store and process recyclable materials and a permanent (enclosed) composting plant where it can be demonstrated that:

- they will serve an identified need that cannot be met by existing facilities;
- the site is conveniently located in terms of access to service the main source(s) of waste;
- the proposals will not cause demonstrable harm to human health (see Policy WM2), or result in an unacceptable adverse impact on the character, environmental quality and amenities of the local area, by virtue of noise, vibration, dust, odour, or other emissions;
- operations involving the sorting and processing of waste for recycling purposes are carried out within a purpose-built or appropriately modified existing building, unless it can be demonstrated that part or all of the proposed operation can only be carried out in the open;
- the proposals meet the relevant criteria set out in Policy WM2 and accord with other policies in the plan.

The Minister for Planning and Environment will require an Environmental Impact Assessment to be carried out for any new or expanded centralised composting facility and any other proposed recycling facilities likely to have a significant effect on the environment.

Recycling centres and waste collection

11.51 For some years there has been a network of collection containers or 'bring banks' in Jersey which allow the public to deposit various waste materials for recycling, including textiles, aluminium cans, glass (St. Helier only) and newspapers. However, in recent years there has been a drive to improve the availability of such facilities throughout the Island, to increase accessibility for the public, avoid unnecessarily long vehicle trips and generally enhance levels of recycling, in response to local demand and the targets set within the Solid Waste Strategy.

11.52 It is recognised that this "bring" system is not the most sustainable method of collecting recyclable materials, not least because of the amount of energy expended and carbon emitted in journeys to and from the 'bring banks'. Clearly, the ideal would be to maximise the segregation of recyclable materials at source for 'kerb-side' collection. Advances are being made in this area, but in the interim,

the States has sought, in consultation with the Parish authorities, to produce a more co-ordinated network through the development of 'mini recycling centres' in each parish.

11.53 In most cases, the new 'mini recycling centres' will not require planning permission because they will not involve development by way of building work, or any other physical alterations to the land itself, or a material change of use of buildings or other land. Furthermore, where such a centre is deemed to be development, it is possible that the need for planning permission will be removed under Part 3 of the schedule of permitted development in the Planning and Building (General Development)(Jersey) Order 2008).

11.54 In view of difficulties in finding suitable sites for an extended bring bank system for recyclable materials, and to assist in maximising the segregation of recyclable materials at source, consideration should be given to requiring the provision of suitable waste collection infrastructure in appropriate new developments. Such facilities can have an adverse effect on the environment and amenities of the surrounding area (e.g. noise, odour, visual intrusion) and so the Minister will carefully assess their siting, design, screening and operation, when dealing with relevant applications. In some cases, the Minister may control these matters through appropriate planning conditions or planning obligations.

11.55 The States also currently provides a centralised temporary 'Reuse and Recycling Centre' at the existing Bellozanne waste management site. This has operated since June 2007 and has proved a popular and successful addition to the Island's recycling service. It offers Islanders the opportunity to recycle domestic household waste. The Solid Waste Strategy identifies the need for a new, permanent purpose-built 'Reuse and Recycling Centre' for "safe and convenient public access and providing receptacles for a range of separate materials". The proposed centre is considered essential to allow additional recycled materials to be accepted and segregated and the Strategy recommends that this should include an integrated bulking and baling facility to manage source segregated centred materials (i.e. from the bring bank system) which are to be exported for recycling.

Policy WM 5

Recycling centres and waste collection

The Minister for Planning and Environment will support proposals for:

1. new centralised Re-use and Recycling Centre site/s;
2. other Re-use and Recycling Centres/"bring banks", including 'mini recycling centres' where they will develop and improve the existing States' coordinated network; and
3. enhancements to existing Re-use and Recycling Centres, where they will improve their operational capacity;

subject to the provision of satisfactory information relating to their siting, design, screening and operation.

In order to enable and encourage recycling and sustainable waste management, the Minister will seek to ensure that appropriate storage is provided for waste and recyclables in all new development. Storage should be provided within all new development for waste facilities that are:

- for both recycling and residual waste;
- of adequate capacity;
- safe and accessible to users and waste collectors;
- sited and designed to minimise nuisance to users and neighbours;
- designed with sufficient flexibility to allow for reasonable future changes in waste collection services; and
- in keeping with the design of the development.

Consultation with the Parishes and the Minister for Transport and Technical Services on the suitability of such facilities will take place prior to approval of new developments.

Where the development of re-use and recycling collection facilities / bring banks is considered appropriate, but cannot be provided on site for reasons accepted by the Minister, their provision in a suitable location off-site will be required by use of planning obligations.

The Minister will require an Environmental Impact Assessment to be carried out for any development likely to have a significant effect on the environment.

Inert waste recycling

11.56 Inert waste arises principally from construction and demolition activities and accounted for over 61% by weight of Jersey's solid waste in 2010, which is considerably less than the peak of 76% in 2008. Most of this is delivered to the land reclamation site at La Collette. From 2001 to the end of 2010 annual construction and demolition waste received at La Collette decreased considerably from a high of 375,000 tonnes to a low of 108,000 tonnes. This general reduction in levels might be explained, in part, by:

- planning policies introduced in the 2002 Island Plan concerned with sustainable solid waste management and resource conservation. These policies include, in particular, requirements for 'Site Waste Management Plans' for all developments likely to produce a significant amount of construction waste;

- the gate fee charged for the disposal of inert waste at La Collette and the associated financial disincentive for developers to use this facility; and

- the more recent impact of the economic downturn on construction activity.

11.57 It is believed that this has led to many more materials being reused/recycled on development sites and the selling of excess product into the local market. It has also spurred on the recent growth of the privately operated recycling market, where private contractors acquire material from development sites and act as recycling operators. Clearly, the growth in this activity has, in particular, benefited directly from the gate fees charged at La Collette for receipt of waste.

11.58 In 2008, the amount of construction and demolition waste received at La Collette rose dramatically before falling away significantly. This can be explained, to a large extent, by the commencement of work at the 'Castle Quays' development on the Waterfront (i.e. the former 'West of Albert' reclamation site), which was scheduled to produce over 100,000 tonnes of excavated waste material.

11.59 It is anticipated that the levels of construction and demolition waste received at La Collette will rise again as the economic situation improves, because, in addition to normal waste arisings, there will continue to be large quantities of material produced by other planned Waterfront developments on previously reclaimed land. This includes the 'Esplanade Quarter', which it has been estimated could produce approximately 717,500 tonnes of excavated material over a 12 to 18 month period.

11.60 The main inert waste recycling facility in Jersey is located at La Collette. The current operator was awarded a five-year contract in 2006. The company has made a substantial investment in plant and equipment, which has the capacity to process some 350,000 tonnes of waste per annum. The facility produces quality recycled aggregates and other materials and, in its first two years of operation, has played a major part in improving inert waste recycling rates. Between 2007 and 2010, the plant produced on average some 67,000 tonnes of recycled inert waste annually. The improved recycling performance has been assisted by the new plant and the introduction of new protocols for achieving required standards for recycled materials used for building purposes.

11.61 Notwithstanding performance to-date in recycling aggregates, it remains important to continue to encourage recycling of as much inert waste as possible, so as to:

- recover potential value and ensure optimum use of the materials;
- reduce the demand for newly quarried primary minerals;

- reduce the amount having to be disposed of/landfilled (including extending the useful life of the La Collette Reclamation site); and
- meet States approved recycling targets.

11.62 However, it must also be recognised that there are limits to the extent to which inert waste can reasonably be recycled. For example, existing technical standards and specifications must be met, which place a limit upon the ability of recycled material to replace primary aggregates in development projects.

11.63 In the light of the above, it is considered there is likely to be a continuing need for the provision of permanent and temporary inert waste recycling facilities in the coming years. Temporary recycling facilities are likely to be directly associated with major construction/demolition projects, including major residential, commercial, highway and airport proposals.

11.64 Given the nature of inert waste recycling operations, issues relating to noise, dust, visual intrusion and transportation must be carefully considered in response to future applications. Demolition and development sites, and active mineral extraction sites and landfill sites are generally considered acceptable locations for the handling and processing of secondary and recycled materials, where proposed facilities are in accordance with Policy WM2.

11.65 There is also a need to plan for replacement of the existing centralised recycling facility at La Collette, when the reclamation site is closed to receipt of inert waste. It is considered that any such facilities might be best located at inert landfill sites, including the proposed landfill site at La Gigoulande Quarry, where recycled aggregates can be obtained from inert waste and used on-site for concrete, blocks and aggregates. Other possible sites might include any approved reclamation site, other suitable existing operational quarry sites, or appropriate industrial locations.

11.66 Any proposals for new inert waste recycling operations must be undertaken in compliance with the 'Waste Management (Jersey) Law' 2005 and will require a 'Waste Management Licence'.

Policy WM 6

Inert waste recycling

The Minister for Planning and Environment will support and permit proposals for permanent or temporary facilities for the recycling of inert wastes into alternative aggregates/and other recycled materials where it can be demonstrated that there is an identified need for the facility and that it:

- forms an essential part of an integrated and sustainable waste management strategy;

- is suitably located to avoid, as far as possible, major residential areas;
- will not result in an unacceptable environmental impact that cannot be prevented or appropriately controlled by mitigating measures;
- will not sterilise significant mineral reserves;
- will have easy access to main roads with sufficient capacity for waste traffic movement;
- will allow for appropriate restoration and aftercare of sites; and
- accords with the requirements of policy WM2.

However, proposals for new or extended inert waste recycling facilities shall only be permitted in the most suitable locations, such as the existing land reclamation site at La Collette II, the proposed landfill site at La Gigoulande Quarry, other active mineral or landfill sites, appropriate existing waste management sites, suitable general industrial sites or port areas, or major demolition and construction sites.

Proposals for inert waste recycling facilities at active mineral workings or existing waste management facilities will be permitted for a temporary period not exceeding the permitted /operational life of these facilities and where there is no conflict with restoration proposals.

Proposals for temporary facilities to recycle waste material generated in associated with construction, demolition and highway projects will generally be supported, subject to them being linked to the life of the particular project in question.

The Minister for Planning and Environment will require an Environmental Impact Assessment to be carried out for proposed major permanent inert waste recycling facilities and other such facilities likely to have a significant effect on the environment.

Waste to energy and material recovery facilities

11.67 In recent years there has been an increasing requirement for energy and materials recovery facilities to capture value from waste after recycling and composting has been undertaken.

11.68 Jersey has a history of using waste as a source of energy. The former energy from waste plant in Bellozanne Valley served the Island from 1979 and has recently been replaced by the new plant at La Collette. The new plant has the capability to handle up to 105,000 tonnes of waste per year (compared with the 80,000 tonnes currently being managed through the Bellozanne plant) and will be able to cope with the bulk of the Island's non-inert refuse for 25 years. It would also be capable of generating between 6% and 8% of the Island's electricity requirements. Until now, all ash has been disposed of in lined sealed pits at La

Collette. The new Energy from Waste plant will separate the hazardous fly ash (which is separated from flue gases by the Flue Gas Treatment process) from the useful bottom ash, which arises from the grate. This will enable approximately 90% of the total ash to be recycled into construction materials in due course.

11.69 In accordance with the above, La Collette will be designated as the site within this Island Plan for non-inert waste disposal. It is unlikely that any additional large-scale energy from waste or materials treatment plants will be required in the Island in the lifetime of this Plan. However, it will be important to keep the progress of all recovery and waste treatment technologies under review, in view of the potential advantages they may come to offer. Small-scale treatment plants, for example, for recovering energy value from waste oils, may come forward.

11.70 In the event that any proposals for waste treatment plants and recovery plants do come forward, there will be a requirement for the developer to demonstrate need and show that they are part of an integrated approach to waste management in the Island.

Policy WM 7

Waste to energy and material recovery facilities

The Minister for Planning and Environment will only support additional waste to energy and material recovery (e.g. incineration, pyrolysis, or gasification plant) as part of an integrated approach to waste management where:

- the need for the facility can be demonstrated;
- the proposed facility will operate to the highest pollution control standards;
- the site is environmentally acceptable;
- there are no other more suitable alternative sites available which provide more benefits and/or less damage to the environment;
- the facility includes appropriate measures to recycle, compost and recover materials or energy that represent best available technology.

Proposals for incineration or other thermal waste processes shall incorporate measures to maximise energy recovery both in the form of heat and electricity, taking account of prevailing technology, economics and characteristics of the waste stream involved. Where such proposals do not include the recovery of energy, they will not be permitted.

The Minister will require an Environmental Impact Assessment for any development likely to have a significant effect on the environment.

Residual waste and terrestrial landfill sites

11.71 It is recognised that 'disposal' is the least desirable method of waste management. However, landfill will continue to be required for the disposal of residual waste, when all options further up the 'Waste Hierarchy' have been exhausted. This residual waste includes:

- non-hazardous inert waste, which cannot be re-used in the construction industry;
- flue gas treatment plant residue;
- incinerator ash not used in construction;
- asbestos; and
- potentially, spoil from contaminated sites.

11.72 Traditional terrestrial landfill opportunities for inert waste have not been available in Jersey, with the result that the Island has increasingly turned to land reclamation. The principal location for inert waste disposal is currently the land reclamation site known as "La Collette II". This site covers approximately 68 acres and a large proportion of it has already been reclaimed. Waste received at the site which contains components that would harm the environment and/or pose health hazards, if released, is disposed of in secure specially engineered lined pits, in accordance with the relevant 'Waste Management License'.

11.73 One of the main waste related issues to emerge during the Island Plan Review process stems from concerns about the limited future life expectancy of the La Collette land reclamation site and how the Island will deal with residual waste disposal when the site reaches the end of its life. To inform the review process, Hydraconsultant Ltd, were commissioned to assist in gaining a more accurate determination of the remaining life of La Collette II reclamation site for waste disposal. The study findings are set out in a published report entitled "Interim Report: Inert Waste Arisings and Landfill Capacity", May 2008.

11.74 The study examines the nature of the reclamation site, agreed plans for the extent and levels of fill (including super fill), historic figures on the tonnage of the material being deposited at the site and the rate at which land has been created. It also recognises the principal factors affecting the remaining life of the reclamation site, including:

- Changes in the level of construction activity (N.B. Taking into account the large additional quantities of material, over and above normal inert waste arisings, as a consequence of the major Waterfront development projects planned for the 'Esplanade Quarter' and 'Castle Quays');

- Implementation of Waste Management Plans requiring on-site recycling;
- Activity of private contractors acting as recycling operators and bypassing La Collette;
- Impact of gate fee at La Collette imposing a financial disincentive to use this facility; and
- Improved rates of recycling being achieved at the Inert Waste Recycling Reclamation Centre.

11.75 In the light of the above, the consultants estimated that the reclamation site will be closed to the general receipt of inert waste in 2018 (assuming no additional landfills/coastal reclamations are created). This estimate accounted for most of the approved super filling, but allowed for the southern area of super fill to be retained until 2024 for the storage of ash and other hazardous inert wastes (assuming that the disposition of this material is still possible long after the site is closed to the receipt of other inert waste). If this location is adopted for the long-term disposal of ash etc., it may allow any future infill sites to accept non-hazardous inert waste only during the initial years of operation.

11.76 More recently, during the 'Examination in Public', the Transport and Technical Services Department has revised the main closure date to 2016 (given the predicted rates of disposal). This serves to emphasise the necessity for deciding upon the location for a replacement secure inert waste disposal site before La Collette is full, as recommended in the Solid Waste Strategy, to ensure continuity of disposal opportunities. There is limited scope for further permanent super filling at La Collette II, other than on a temporary basis, if the site is to be used efficiently to meet strategic land use requirements. However, much will depend on emerging plans associated with the East of Albert Regeneration Strategy.

11.77 The Solid Waste Strategy identifies a number of other strategic options which might be explored regarding future waste disposal, including:

- quarry fill and restoration;
- identifying and developing further land reclamation sites;
- export; and
- sea disposal.

11.78 It is maintained that the only two realistic options for the disposal of residual inert wastes are either further land reclamation (involving land fill to recover land from the sea), or 'terrestrial land fill'/quarry restoration. The option of exporting the waste goes against the "proximity principle" (i.e. that waste

should generally be disposed of as near to its point of generation as possible). It is a basic principle of sustainable waste planning to avoid, as far as possible, the use of resources for long distance transport of useless material. Likewise, the option of disposal at sea would be environmentally unacceptable and is against the Convention on the Prevention of Marine Pollution by Dumping of Wastes (The London Convention).

11.79 The preferred option for future waste disposal remains 'terrestrial land fill' in the form of quarry fill, given the considerable environmental arguments against further land reclamation and the potential advantages associated with infilling voids in worked-out mineral workings. These advantages can include the removal of unnatural and visually detrimental landscape features, landscape restoration and facilitating the beneficial after-use of sites that might otherwise remain under-utilised. Opportunities may exist, for example, for creative use to benefit wildlife and recreation. There are a number of large working quarries in Jersey (described in the Minerals Section of the Plan), which offer opportunities for future landfill. These are subject to varying degrees of environmental sensitivity and constraint and each would present different operational and technical challenges that would need to be overcome before managed landfill could take place. However, a sufficient range of environmental controls exist (e.g. Environmental Impact Assessments and Waste Management Licenses) to make sure waste disposal is controlled in a safe manner.

11.80 The preferred site option for future waste disposal is La Gigoulande Quarry in St. Peter's Valley. In recognition of the need for continued management of inert waste and the potential to use waste for the restoration of quarries, the 2002 Island Plan previously identified and designated La Gigoulande Quarry as the Island's next landfill site, subject to the outcome of an Environmental Impact Assessment. However, in 2007, planning permission was given to increase the depth of mineral extraction at the western end of the quarry, which effectively deferred when the quarry is able to accept inert waste for disposal. Much will depend on future extraction rates, as to when a suitable void will be made available at the quarry for the secure disposal of inert waste. There have been concerns that at existing average extraction rates the void at the site will not become available to receive waste by the time La Collette reclamation site is full. However, the operators of the respective sites have given assurances that any overlap period can be properly managed to avoid the Island's waste disposal routes being placed in jeopardy. If needs be, this could be achieved by stockpiling inert waste for the interim period at La Gigoulande, or by temporary superfilling (land raising) for an interim period at La Collette.

11.81 In any event, the types of waste for disposal to La Gigoulande Quarry must be carefully considered in consultation with the Minister for Transport and Technical Services and in line with the Solid Waste Strategy and the Waste Management (Jersey) Law 2005. Whilst the majority of waste would be expected to be non-hazardous inert waste, special consideration could be given to the

appropriateness of using La Gigoulande for the disposal of certain hazardous inert wastes, including flue gas treatment residue and incinerator ash, if the geology proves suitable, when opportunities are exhausted at La Collette II.

11.82 As part of its most recent planning application in 2007, the operators of La Gigoulande Quarry (Granite Products) calculated that the capacity of the void area being created at the western part of the quarry will be approximately 1,560,000 tonnes. Using average rates for inert waste disposal at La Collette between 2004 and 2007 of 212,000 tonnes per annum (i.e. excluding the short-term peaks associated with the Waterfront developments) and taking into account future aggregate recycling potential (@ say 40 - 50% of waste materials) it is estimated that the life of the proposed infilling operations in the western part of the quarry (alone) would be approximately 12 to 15 years.

11.83 The operators have proposed that the site be positively restored to a landform which is generally consistent with that prior to the quarry workings and which is in keeping with the character of the surrounding countryside. The proposed after use predominantly comprises agricultural land and woodland. Although submitted as part of the previous application, a decision on the restoration plans was deferred and so still requires planning permission.

11.84 The Environmental Impact Assessment prepared and submitted with the most recent application suggests that the proposed landfilling, with appropriate mitigation, should not have any significant adverse impacts on the environment with regard to population (i.e. through the effects of traffic, visual intrusion, noise, vibration and other nuisance), flora and fauna, soil, air and climate and material assets. Indeed, it concluded that many of the impacts would be either positive, or neutral.

11.85 Whilst La Gigoulande Quarry is the preferred option for future landfill in the Island (possibly combined with land reclamation, where there is a proven strategic need), there could be other proposals from the private sector for the development and operation of terrestrial landfill sites, including proposals from other quarry operators. For example, proposals could be brought forward for controlled landfill at Simon Sand and Gravel, which would provide opportunities to restore dune habitats in the area and provide linkages with the Blanches Banques SSI to the south (i.e. Jersey's last remaining sand dune system). It is important, therefore, to have appropriate policy criteria in place for the consideration of any such proposals.

11.86 The only other options for permanent terrestrial landfill are 'land raising' and infilling of a valley/s and filling in old derelict mineral workings. None of these options are considered appropriate. The first two are likely to have a seriously detrimental impact on local landscape character, local wildlife and agricultural or other valuable open land. As to the third option, many, if not all, old derelict

mineral workings in the Island will not be suitable for waste disposal, because of their restricted size and form, or the lack of suitable access, or because they have acquired significant conservation importance.

Policy WM 8

Residual waste and terrestrial landfill sites

The Minister for Planning and Environment will seek to ensure the continuity of disposal opportunities for residual inert waste and residual treated non-inert waste during the Plan period and beyond, by making provision for appropriate/suitable terrestrial landfill.

La Gigoulande Quarry is designated for use as landfill, subject to the outcome of an up-to-date Environmental Impact Assessment.

The types of waste and methods of disposal at this site will be determined in accordance with the Minister for Transport and Technical Services' requirements and the evolving Solid Waste Strategy. However, permission will only be granted for proposals which involve landfill with residual waste materials that have been subject to recovery processes, or from which value cannot be recovered.

Proposals to ensure that any longterm environmental impacts of landfill at the site are satisfactorily controlled, and to ensure longterm restoration of the site, will be supported in principle, provided they satisfactorily address the following issues:

- Impact on human health;
- The impact on local amenity;
- Traffic impact;
- Impact on water resources;
- Visual impact;
- The extent to which recyclable waste is used in the landfill; and
- Other issues arising from the Environmental Impact Assessment process.

Proposals which would prejudice the use of this site for landfill will not be permitted.

Proposals for terrestrial landfill sites elsewhere in the Island will not be permitted, except where the proposals:

- contribute to the restoration of suitable existing mineral workings and bring back land to productive use;
- do not lead to sterilisation of significant mineral reserves;

- would not result in an unacceptable adverse environmental impact that cannot be prevented or appropriately controlled by mitigating measures; and
- would meet the detailed criteria set out above in respect of La Gigoulande Quarry.

Permission will not be granted for land raising using inert or non-inert waste unless:

- it provides essential interim capacity;
- it forms part of the co-ordinated approach to waste management set out in the evolving Solid Waste Strategy; and
- there is a demonstrable gain in benefits sufficient to outweigh harm arising from the proposal.

Any such permission would, in any event, only be acceptable on a temporary basis.

Land reclamation

11.87 Historically, there has been incremental reclamation of the foreshore of St. Helier for at least 200 years. However, since the 1960's land reclamation has been undertaken on a relatively large scale as the sole means of inert waste disposal. The principal reclamation areas that have been in-filled over this period include La Collette I and the area to the West of Albert Pier, which were completed in 1981 and 1996 respectively. When the current land reclamation scheme at La Collette II is complete, the total reclaimed area from the three sites will be in excess of 160 acres.

11.88 In addition to providing a valuable waste disposal facility, land reclamation has, over many years, provided the bonus of making available prime development land to meet the community's needs for homes, businesses and social and leisure activities. There can be little doubt that land reclaimed from the sea has resulted in less greenfield development than would otherwise be the case. In this way, it can be argued that land reclamation has made an important contribution to protecting the quality of the Island's remaining countryside areas, which have long been recognised as being among the Island's finest assets.

11.89 Creating development areas around La Collette has locational advantages, given the proximity to town with its significant resident population and potential workforce, the accessibility to a wide range of community facilities and services, the existing utilities and infrastructure provision, the reduced need to travel and the opportunities to use more sustainable forms of transport (i.e. walking, cycling and public transport). Perhaps most importantly, however, further land reclamation at La Collette could prove beneficial in serving important strategic interests of the

Island associated with the long-term expansion needs of the port and the potential requirements to locate or relocate infrastructure in the area, including the gas and fuel farms.

11.90 There would be significant longterm strategic advantages in relocating the commercial port to the La Collette area, which could achieve greater operational efficiency and effectiveness together with improved access, berthing and protection for shipping and more rationalised landside and marine operations. The release of the existing port area could also create a major development opportunity for much-needed homes and other uses. Feasibility work is on-going in this regard. It is also likely that the relocation of the hazardous gas and fuel farms will be regarded as a strategic necessity, in the light of the extraordinary incident at Buncefield, as a safety measure and to avoid unduly constraining potential development of the La Collette II reclamation site for commercial and other uses. Indeed, preliminary consideration has already been given to potential relocation to the south of La Collette, either offshore or as an extension to the existing reclamation site (N.B. In addition to the option of resiting the facility within the existing reclamation site).

11.91 Notwithstanding the above, there are some major disadvantages in pursuing the land reclamation option. There would be considerable expense involved in engineering a new site and some potentially serious environmental impacts, including:

- the potential detrimental visual impact of landfill for many years in a sensitive coastal location;
- further loss of areas of ecologically valuable marine habitat, which is arguably of higher importance and more sensitive than terrestrial habitats;
- less predictable impacts, such as on tidal flows and sedimentation patterns around the coastline; and
- potential incursion into a Ramsar site.

11.92 In recent years the States has recognised the value of, and sought to protect the Island's precious marine environment, including the inter-tidal zones. Further land reclamation from the sea would not be consistent with previous States' policy decisions and commitments in this regard, including the recently approved Integrated Coastal Zone Management Strategy, 'Making the Most of Jersey's Coast', 2008. The 2002 Island Plan introduced the notion of a 'Marine Protection Zone' extending from Mean High Water to the territorial limits, in order to safeguard and ensure sustainable use of the Island's marine resources. The relevant policy governing the 'Marine Zone' (Policy NE5) has been carried forward into this Island Plan and effectively presumes against further marine land reclamation. The only exception to this previously was a proposed small-scale reclamation site at St. Aubin. However, this proposal has since been opposed by a local forum and has not been included within the current plan. The Integrated Coastal Zone Management Strategy also adopts the 'precautionary principle' in this regard and discourages further land reclamation.

11.93 Perhaps most notably, any extension of La Collette II reclamation site to the south or east would intrude into and be contrary to the designated South-East Coast Ramsar site (see Policies SP4 and NE1). The Ramsar site was approved by the States in 2000 and extends from the seaward edge of the tanker berth at the Harbour to the tip of Gorey Pier. This is a wetland of international importance. It is one of the largest intertidal reefs in Europe and an important wintering habitat for waders and wildfowl and its designation as a Ramsar site places clear obligations on the States to conserve the area and ensure wise use. The Environment Department has identified four potential adverse impacts of future land reclamation on the marine environment of the Ramsar site and the sea outside it, as follows:

- **Direct loss of sea and inter-tidal habitat.** This would need to be carefully studied;
- **Impact on sedimentation patterns and indirect impact on marine habitat elsewhere.** This was recognised as a problem when La Collette II was proposed and changes to sedimentation have had an adverse impact on St. Aubin's Bay;
- **Impacts on hydrology / saline flow.** Previous studies have concluded that further southwards extension of La Collette would adversely impact on St. Clement's Beach; and
- **Risk of pollution.** From activities such as off-loading petro-chemicals into the fuel farm.

11.94 It is an overarching principle of the Ramsar Convention that a wetland should remain designated as a Ramsar site and that the whole of its original extent should remain designated, whenever possible and appropriate. However, the Convention does give contracting parties the right to delete or restrict the boundaries of listed wetlands because of its urgent national interests. The Contracting Party in this instance is the UK Government and so, if it wished to pursue land reclamation in the designated Ramsar site area, the States must first persuade the UK Government that its justification constitutes the equivalent of an 'urgent national interest'. Where this is accepted, the Contracting Party is required by the Convention to provide adequate compensatory measures for the loss of conservation interests.

11.95 In view of the above, and given the alternative option available for terrestrial landfill, it is considered that land use policy should, as a general rule, continue to give priority to terrestrial landfill over marine land reclamation. However, it has to be recognised that there may be circumstances where it would be appropriate to permit further land reclamation, for example, where there is deemed to be a proven urgent strategic interest, which cannot be met by terrestrial landfill or other more acceptable means and which outweighs other material planning considerations, including local environmental impacts. Where land reclamation proposals are supported, it may be necessary to divert waste destined for disposal from terrestrial landfill to the reclamation site. Any such proposals,

because they would involve depositing material into the sea in UK waters, would also require a license under Part II of the Food and Environment Protection Act, 1985.

Policy WM 9

Land reclamation

Proposals for new land reclamation sites, for the disposal of residual inert waste, will only be permitted, where:

- it is proven to be in the Island's urgent strategic interest;
- the strategic interest cannot be met by more suitable landfill or development options elsewhere;
- there is a demonstrable gain in benefits sufficient to outweigh harm arising from the proposal;
- the proposals are subject to a satisfactory Environmental Impact Assessment;
- adequate compensatory measures for loss of conservation interests are put in place; and
- the fill (other than where it is required for engineering purposes) is restricted to inert residual waste materials that have been subject to recovery processes, or from which value cannot be recovered.

Any proposals will need to satisfactorily address the following environmental issues:

- impact on human health;
- impact on marine habitat and species;
- impact on sedimentation patterns;
- impact on hydrology / saline flow;
- the risk of pollution;
- traffic impact;
- impact on local amenity (including adverse levels of disturbance near the site or on routes to and from it, from noise, vibration, dust, fumes, gases, odour, illumination, litter, or pests);
- visual impact; and
- other issues arising from the Environmental Impact Assessment process.

No proposals for land reclamation will be approved in the designated Ramsar area or in areas which would have an adverse effect upon the intrinsic environmental values of the Ramsar area, unless:

- they satisfy the above criteria;

- there are adequate compensatory measures to secure the overall value of the Ramsar site series by way of quality and area;
- there is a favourable response from the Ramsar Council of Parties; and
- the proposals accord, as far as practicable with approved Ramsar management plans and other principles and policies of the Plan.

Restoration of landfill sites

11.96 The Minister for Planning and Environment will demand high and consistent standards of restoration of landfill sites (including terrestrial landfill and land reclamation sites) at the earliest practicable date. Indeed, if there is serious doubt as to whether satisfactory restoration can be achieved at a particular site, then permission for landfill may not be granted. There is, therefore, a need for a programme of proposals for site restoration, aftercare and beneficial after-use to be submitted for consideration with any planning application. These proposals will also need to be addressed in the required Environmental Impact Assessment.

11.97 In most cases, the Minister will require full working and restoration plans to accompany proposals. However, there may be instances where the initial restoration plans can be no more than a framework of broad aims. In such cases, these aims will need to be kept under regular review throughout the period of use of the site and more detailed restoration proposals will need to be submitted closer to the end of the infilling exercise.

Policy WM 10

Restoration of landfill sites

Restoration and after-use schemes for proposed land reclamation and terrestrial landfill sites shall be submitted with the development proposals and included in their associated Environmental Impact Assessments, which demonstrate that the site will be restored to an appropriate use within a reasonable time-frame.

The Minister for Planning and Environment will support the restoration of sites to other beneficial uses which accord with the policies and proposals of this Plan.

Restoration proposals should demonstrate a positive enhancement of both the site and the landscape character of the area and will be required to commence at the earliest opportunity, where possible.

The Minister for Planning and Environment will also seek to ensure that, where appropriate, adequate provision is made for other environmental enhancements and public benefits, including the creation of appropriate wildlife habitats, respect for existing features and habitats of conservation interest, the creation of new public access to land, and the provision of land for local public amenity.

All restoration proposals should have regard to and accord with the objectives of the Countryside Character Appraisal and the Biodiversity Strategy.

A scheme for aftercare, following restoration, will be required for sites which are to be restored for agriculture, woodland or amenity use and the operator and/or landowner will be expected to make provision for the long-term maintenance and management of the land.

The Minister for Planning and Environment will seek to secure necessary restoration and landscaping works and appropriate aftercare by means of conditions attached to planning permissions, or through planning obligations agreements.

Development in the vicinity of waste management facilities

11.98 Waste management facilities perform a vital function in the treatment and disposal of the Island's waste and the Minister for Planning and Environment will approve such facilities in suitable locations. In determining planning applications for these facilities, careful consideration is given to the potential adverse impact on neighbouring land uses. It is recognised, however, that despite continually improving environmental standards, the operations carried out in such facilities can have adverse impacts on the environment and amenities of surrounding areas. Certain facilities may, for example, pose potential risks associated with noise, odour and birds.

11.99 It is important, therefore, to use planning controls to ensure that proposed developments in proximity to existing and approved waste management facilities and any associated potential sources of pollution are suitable and not subjected to unacceptable adverse impacts. By so doing, it will also prevent unnecessary risks to the continuation of permitted activities on waste management sites. In this regard, consideration will need to be given to the sensitivity of proposed uses in the vicinity of waste management facilities. In some instances, residential and other sensitive uses may not be regarded as appropriate.

Policy WM 11

Development in the vicinity of waste management facilities

Proposals to develop land in the vicinity of existing or approved waste management facilities will only be permitted where they:

- will not prejudice or unduly restrict the permitted activities of the waste management facility;
- will not give rise to unacceptable adverse impacts in terms of people, traffic or the environment.

LWM: Liquid waste

LWM: Introduction

11.100 The foul sewerage network covers a large proportion of the Island and some 86% of properties (approximately 30,600) are currently connected to it. The remaining 14% (approximately 5,000) are served by a number of private sewage treatment plants, septic tanks, and where these are not feasible, by tight tanks.

11.101 With the exception of a small and fairly modern packaged treatment plant at Bonne Nuit and a gravity link direct to the Bellozanne Sewage Treatment Works from the north, the sewerage network discharges to First Tower Pumping Station, via a series of smaller pumping stations, rising mains and gravity sewers. From there, the sewage is pumped to the main Sewage Treatment Works at Bellozanne. The sewerage system generally works well during dry weather, but comes under severe pressure during very wet weather.

11.102 Under normal conditions, flows to the works are treated to a high standard, but there are some technological and loading issues which make it difficult to maintain the standard of the final effluent at all times, especially during storm flow conditions. Indeed, the works is currently struggling to meet its discharge consent and would fail to meet the nitrogen standards required to comply with the 'EU Urban Wastewater Treatment Directive' to avoid eutrophication in St Aubin's Bay. A precautionary approach has been taken to identify the Bay as sensitive, subject to the findings of the St Aubin's Bay Eutrophication Study, which is currently underway. The works would also require improvement to comply with tightened bacteriological standards in the revised 'EU Bathing Water Directive'. The deadline for full compliance in Europe is 2015.

11.103 A particular problem associated with the existing Bellozanne Sewage Treatment Works is the short sea outfall which discharges final effluent into St. Aubin's Bay. This currently extends to the mid-tide water mark, which is not good practice for a bathing area and is contrary to UK best practice.

11.104 Particular problems associated with the current sewerage system include:

- Parts of the system where its capacity is exceeded during extreme rainfall events. This is due to the volume of surface water which enters it either directly or indirectly, including illegal surface water connections.
- The capability of the network to accommodate additional flows from new development or from extensions to existing properties

11.105 These problems result in overloading of the Sewage Treatment Works and drainage system and can potentially cause difficulties in meeting health and environmental standards.

LWM: Objectives and indicators

Objective WM 2

Liquid waste management objectives

1. To help minimise the amount of liquid waste generation through land use policies that facilitate waste reduction;
2. To reduce the risk of pollution to the water environment from foul water systems from development;
3. To encourage the provision of sustainable surface water drainage techniques in the design and layout of new development;
4. To make sufficient provision for planned liquid waste management facilities.

Indicators WM 2

Liquid waste management indicators

1. A reduction in the volume per capita being managed at the Island's Sewage Treatment Works.
2. The annual proportion of approved development incorporating water conservation and recycling facilities.
3. The annual proportion of approved developments which are to be: connected to the public foul sewer; served by packaged treatment plants; and served by tight tanks and septic tank systems.

4. The annual proportion of approved developments incorporating sustainable surface water drainage systems.
5. The granting of planning permission for and timely implementation of proposals for a replacement Sewage Treatment Works and infrastructure to enable the successful implementation of the Liquid Waste Strategy.

LWM: Current position

11.106 The existing Legal requirements can be summarised against the following two Jersey Laws:

- **Water Pollution (Jersey) Law 2000**
    - Ensure activities do not cause pollution.
    - Establish and issue discharge permits and ensure that no condition of a discharge permit is contravened.
- **Drainage (Jersey) Law 2005**
    - Establish and issue Trade Effluent Consents to foul sewer.
    - Provide, maintain, improve and extend a system of public sewerage facilities so that Jersey is and continues to be effectively drained.
    - Provide for the emptying of public sewers and deal with the contents by sewage disposal works or other means.

11.107 The collection, treatment and disposal of sewage can have environmental and health impacts at the point of discharge, at any point in the system, at overflows, at the discharge point from the Sewage Treatment Works and at the disposal point for the sludge. Groundwaters, surface waters (streams and lakes) and coastal waters are all at risk with potential impacts on water supplies, agriculture, fisheries and tourism.

11.108 In addition to the above health impacts, customers can be impacted by odour, flooding (either from overloaded sewers or inadequate watercourses), sewer collapses, sewer blockages and/or aesthetic deterioration (sewage litter).

11.109 However, good management of the system ensures that these issues are kept to a minimum, ensuring that the impact on the environment is minimised.

LWM: Policy context

States strategic policies

11.110 Although Jersey has particular constraints that impact on the options for liquid waste management, the States has made strong commitments to deal with waste in the most environmentally sensitive manner. The Strategic Plan 2006-2011 made a commitment to maintain and enhance the natural and built environment and aimed to promote "clean air, clean water and uncontaminated land" and "*a physical infrastructure which supports the economic and social needs of the Island*". It suggested that these aims would, among other things, be indicated by:

- A reduced number of pollution incidents;
- An increase in effluent treatment works compliance;
- Annual maintenance costs for infrastructure at least equal to minimum investment identified to maintain assets; and
- No pollution incidents caused by lack of maintenance of infrastructure.

11.111 The Plan also included specific commitments to:

- Develop a sustainable liquid waste policy to comply with European Union standards;
- Secure adequate investment and implement a programme of maintenance to ensure waste management infrastructure is maintained to at least minimum standards; and
- Ensure that the physical infrastructure, including the water supply and waste strategies, is able to cope with any population increase.

11.112 A key priority of the Strategic Plan 2009-14 is also"to maintain and develop the Island's infrastructure". To this end, the Strategic Plan proposes to invest in improved solid and liquid waste infrastructure. Included among the key areas for focus over the lifetime of the Plan is a major project for maintaining the Island's sewerage infrastructure for the treatment and disposal of the Island's liquid waste.

Liquid Waste Strategy

11.113 The Minister for Transport and Technical Services is currently in the process of preparing a Liquid Waste Strategy, to cover its requirements over the next 20 years. This is to ensure that liquid waste will be dealt with safely and efficiently, including allowing for projected population and tourism growth. The work to date has established the need for substantial future investment in sewage and sludge treatment and the liquid waste service.

International obligations

11.114 Being a Crown dependency, Jersey is not part of the European Union (EU). However, in "2000 and Beyond" and in the Environmental Charter of 1996, the States made a commitment that Jersey Law would require standards at least equivalent to those of the EU. Also, successive Strategic Plans have made commitments to meeting international standards.

11.115 Compliance with the International Conventions and EU Directives will be used to drive the Liquid Waste service. Key aspects under these Directives and Regulations are:

1. Bellozanne Sewage Treatment Works would need improvement to meet the EU Urban Wastewater Treatment Directive on nitrogen discharge limits of 10mg/l.
2. Bellozanne Sewage Treatment Works has an unstable performance and occasionally fails to meet the requirements of the EU Bathing Water Directive in relation to colliforms and streptococci standards. The Directive sets a deadline for improvements by the end of 2015.
3. EU Directive on the Use of Sewage Sludge in Agriculture and UK Sludge (Use in Agriculture) Regulations (1989). These control the application of sewage sludge to agricultural land. They are potentially going to be tightened.

LWM: Policies and proposals

Liquid waste minimisation and new development

11.116 Where the production of foul waste cannot be avoided, every effort should be made to minimise the volumes that have to be managed. This will be important for households which rely on tight tanks, septic tanks and other private sewerage systems. In addition, this will be important for the management and future development of the Sewage Treatment Works and disposal system by:

- Improving capacity and reducing unnecessary stresses on the system;
- Reducing energy consumption;
- Reducing the extent of necessary and potentially expensive upgrading; and
- Improving the standard of final effluent discharge.

11.117 Policy NR2 aims to encourage water conservation and recycling wherever practicable, primarily to reduce the consumption of an expensive and scarce resource. However, the measures put forward to achieve these ends are also important for reducing the overall volume of foul sewage discharged from developments and smoothing demand flows. Those measures which might be effective in this regard include:

- Installation of effective showers (over baths);

- Reduced capacity of toilet flushes;
- Use of "grey water" for toilet flushing;
- Use of flow restrictors to taps; and
- Use of low water use appliances.

Policy LWM 1

Liquid waste minimisation and new development

In considering proposals for new development, the Minister for Planning and Environment will seek to encourage water management measures to minimise the volumes of sewage effluent that has to be managed.

Applicants should submit details of the steps taken to minimise volumes of sewage effluent with their planning applications, either in a separate report, or as part of a 'Site Waste Management Plan'.

Such measures may be secured by planning conditions and obligations, where appropriate.

Regard will be made to constraints on the capacity of the existing Sewage Treatment Facility and Drainage System in consultation with the Minister for Transport and Technical Services.

Foul sewerage facilities

11.118 The availability of foul sewerage infrastructure and the suitability of proposed foul water systems are material considerations in dealing with planning applications and the Minister for Planning and Environment, in consultation with the Minister for Transport and Technical Services, will need to be satisfied that the foul sewerage arrangements are satisfactory.

11.119 The Minister for Transport and Technical Services has been charged with the responsibility for extending the foul sewerage system to as many areas of the Island as practicable, economic and environmentally viable. Currently some 86% of Island properties are connected to the foul system. Plans for future development and renewal of this system are presently being drawn up as part of the emerging 'Liquid Waste Strategy', which should ensure adequate capacity in the foul sewerage system for the foreseeable future, subject to funding. Notwithstanding this, there remain a large number of properties, predominantly in the rural areas, that are not connected to a foul sewer. These rely on a variety of techniques, including septic tanks and soakaways, tight tanks and private sewage treatment plants.

11.120 New developments which rely on such techniques may, either individually or cumulatively, increase the risk of pollution to the water environment, due to overloading, poor maintenance, inadequate soakaways, irregular emptying of sludge and the limited effective life of such systems. Given the potential hazards associated with such systems, the primary aim is to ensure that most new development is connected to the Island's public sewerage systems. Responsibility for the cost of making a connection and/or providing increased capacity in the public sewers and pumping stations, will be the applicant's, and this may be the subject of a legal agreement.

11.121 Where connection to the foul sewerage system is not economically feasible, the Minister may be prepared to consider a private packaged treatment plant incorporating a combination of processes which offers full treatment of sewage effluent. However, proposals for adequate primary and secondary treatment and maintenance of the system will need to be clearly demonstrated.

11.122 The use of tight tanks may be considered in exceptional circumstances, where mains sewerage or packaged treatment plants are not feasible options.

11.123 In determining the suitability of any of the above techniques, the Minister will aim to satisfy himself that the proposal is acceptable in the long-term, on the basis of:

- Information provided by the developer, which should include a statement as to why a connection to the public sewer is not economically feasible;
- Comments provided by appropriate bodies and consultees, including the requirements of the Minister for Transport and Technical Services; and
- Planning and Building Law considerations.

11.124 Planning permission will be refused for development, where the physical arrangements proposed for on-site sewage treatment are unsatisfactory, or where a 'Discharge Permit' would not be forthcoming due to pollution risks. Furthermore, temporary measures, where the intention is to connect to the sewerage systems at a later date will not normally be granted, if the short-term proposals are likely to give rise to adverse environmental, amenity or public health problems.

Policy LWM 2

Foul sewerage facilities

Development which results in the discharge of sewage effluent will not be permitted unless it provides a system of foul drainage that connects to the mains public foul sewer (to the satisfaction of the Minister for Planning and Environment in consultation with the Minister for Transport and Technical Services).

Responsibility for the cost of making a connection and/or providing increased capacity in the public foul sewerage systems and pumping stations, so as to accept any additional flow from the development, will be the applicant's, and this may be the subject of a legal agreement between the applicant and the Minister.

In exceptional circumstances and where it has been demonstrated by the applicant that connection to the mains public foul sewer is not economically feasible, taking into account viability and practicability, consideration may be given to a packaged treatment plant offering full treatment, provided it is demonstrated that;

1. the final effluent from the development will meet standards and conditions set by the Minister for Planning and Environment and the Minister for Transport and Technical Services; and
2. adequate provision is made for future operation, monitoring / telemetry and maintenance throughout the life of the plant, which is to the satisfaction of the Minister for Planning and Environment in consultation with the Minister for Transport and Technical Services and which is supported by a planning obligation agreement and meets the terms of the conditions of any required "Discharge Permit".

Planning permission may be granted in exceptional circumstances for small-scale development which results in an increase of foul sewage discharge and relies on non-mains sewerage disposal, including existing septic tanks (where these have been shown to be performing adequately) and tight tanks. Such developments might include: extensions and alterations to existing residential properties; conversions of existing non-residential buildings to create no more than two dwelling units or other similar small-scale uses; incidental buildings within the curtilage of domestic dwellings; essential agricultural workers' accommodation; and other small-scale developments; where these would otherwise be considered appropriate having regard to policies Policy NE 6 'Coastal National Park', Policy NE 7 'Green Zone' and other relevant policies of the Plan.

In such cases, the applicant must successfully demonstrate that;

1. Connection to mains drains is not feasible;
2. The installation of a packaged treatment plant would be unreasonable;
3. The increase in the amount of effluent as a result of development will be negligible;
4. Ground conditions are appropriate and the development plot is of adequate size to provide an adequate sub-soil drainage system;
5. Development will not create or add to a pollution problem;
6. The development will not place an unacceptable burden on amenity or cause public health or environmental problems;

7. Adequate provision is made for maintenance and monitoring; and
8. The development is in accordance with other principles and policies within the plan.

Where it is proposed to increase the potential sewage discharge to an existing non-mains sewerage system, which may give rise to the problems referred to above, there will be a requirement to make suitable improvements to the system, which may include a requirement to replace an old septic tank with a new packaged treatment plant.

For the avoidance of doubt, proposals for the use of septic tank systems, tight tanks and other such systems will not be permitted where:

1. A 'Discharge Permit' is unlikely to be forthcoming; and
2. The proposals are put forward as a temporary measure with the intention of connecting drainage to the public sewerage system at a later date and may give rise to problems referred to above.

Applicants are required to submit sufficient information regarding the means of sewage disposal to allow a proper assessment of the proposals. Where this information is not provided, the application will be refused.

Regard will be made to constraints on the capacity of the existing Sewage Treatment Facility and Drainage System in consultation with the Minister for Transport and Technical Services.

Proposals for the development of land in the vicinity of sensitive foul sewerage facilities, as indicated on the Proposals Map, including the package treatment plant at Bonne Nuit, tanker discharge points and pumping stations with odour control units, will only be permitted where they will not or unduly restrict the activities of these facilities.

Surface water drainage facilities

11.125 Rain falling on buildings and hard surfaces is unable to infiltrate into the ground, so it needs to be drained artificially in order to prevent problems of localised flooding downstream. New development tends to extend the area of impermeable ground, so increasing surface water run-off. Conventional drainage systems have involved removing rainfall from impervious surfaces in developments as quickly as possible and piping it away to discharge it to the public sewerage system or nearby watercourses and water bodies. These can often lead to problems, including:

- **downstream flooding** – caused by high rates of surface water flow for shorter periods

- **poor water quality** in streams and ground water due to certain contaminants contained in surface water outfalls (e.g. oil, organic matter and toxic chemicals). .
- **lowering the water table** – reducing the amount of water available for infiltrating into the ground will reduce the volume of ground water storage leading to a drop in ground water levels and the base flow of streams.
- **ecological damage** – the above factors, combined with the erosion and deposition associated with higher flows and the reduction in oxygen level due to the suspension of high levels of silt can seriously damage natural habitats, flora and fauna.

11.126 In order to prevent the surface water drainage from new developments damaging the environment, the Minister for Planning and Environment is keen to support an alternative approach designed to manage surface water run-off in a more sustainable way. Sustainable drainage systems (SuDs) use softer engineering solutions, which seek to mimic natural drainage processes and help to promote wider environmental objectives.

11.127 Sustainable drainage systems can take many forms, including soakaways, filter drains/trenches, swales, retention ponds/tanks and basins, hydro-brakes on pond and tank outfalls, permeable paving for footpaths, yards and car parks, green roofs and sensitively re-engineered channels or reed beds, depending on the nature of the development and the area.

11.128 As a general rule, the Minister will seek to ensure that surface water run-off is managed in line with the following drainage hierarchy:

- store rainwater for later use (see Policy NR2: 'Water Conservation';
- use infiltration techniques, such as permeable/porous paving, soft landscaping and soakaways;
- attenuate rainwater in ponds and basins and other open water features for gradual release to a watercourse;
- attenuate rainwater by storing in tanks or sealed water features for gradual release to a watercourse;
- discharge rainwater direct to a watercourse;
- attenuate rainwater by storing in tanks of sealed water features for gradual release to a public surface water sewer; and
- discharge rainwater to a public surface water sewer.

11.129 The Minister will publish supplementary guidance on sustainable drainage to provide additional advice and assist with development control considerations. However, in designing the drainage for new developments, applicants should take into account the following issues at the project design stage:

- integration of sustainable drainage systems into the overall design and layout;
- opportunities for the remediation of any contaminated land, where necessary;

- opportunities for wildlife habitat creation;
- agreements required for maintaining and operating the systems; and
- arrangements necessary for monitoring long-term performance.

Proposal 30

Surface water drainage systems

The Minister will publish supplementary guidance on sustainable drainage to provide additional advice and assist with development control considerations.

11.130 Developers will be required to fund sustainable drainage systems where these are practicable and legal agreements will be used to ensure maintenance and control of run-off to approved levels in perpetuity.

11.131 Where discharge of surface water to the public sewerage system is unavoidable, the responsibility for the cost of making a connection and/or providing increased capacity to accept the additional flows, will be the applicant's, and this may be the subject of a legal agreement.

Policy LWM 3

Surface water drainage facilities

The Minister for Planning and Environment will expect proposals for new development and redevelopment to incorporate Sustainable Drainage Systems (SuDs) into the overall design wherever practicable.

Applicants will be required to ensure that surface water run-off is managed as close to its source as possible in line with the following drainage hierarchy:

- Store rainwater for later use in accordance with Policy NR 2 'Water capacity and conservation';
- Use infiltration techniques, such as porous surfaces;
- Attenuate run-off in open water features for gradual release to a watercourse;
- Attenuate run-off by storing in tanks or sealed water features for gradual release to a watercourse;
- Discharge run-off direct to a watercourse;
- Attenuate rainwater by storing in tanks or sealed water features for gradual release to a public surface water sewer; and
- Discharge rainwater to the public surface water sewer.

Sustainable drainage systems will not be required where it can be demonstrated by the applicant that there are practical reasons for not doing so, such as:

- They would be likely to cause significant land or water pollution; or
- The site's ground conditions would preclude their use; or
- The size of the site precludes their use; or
- They would cause damage to adjacent buildings or sites.

Discharges of surface water to groundwater, or to local watercourses and water bodies will be required to meet quality standards and conditions set by the Minister and will not be permitted where this would lead to pollution.

Applicants will be expected to incorporate remedial measures into drainage systems to avoid the risk of pollution from oil and other chemicals, where appropriate.

Discharge rates will normally be required to be limited to pre-existing natural rates of run-off so as to avoid causing or exacerbating flooding, either locally or remotely. However, in appropiate circumstances, where flood risks to adjacent properties are highest, there may be a requirement to reduce the pre-existing discharge of run-off.

Discharges of surface water to the public sewerage system will not be permitted unless approved by the Minister for Transport and Technical Services and, if accepted, will be required to be separate from foul sewage. Responsibility for the cost of making a connection and/or providing increased capacity in the public sewerage system and pumping stations, so as to accept the additional flow from the development, will be the applicant's and may be the subject of a legal agreement between the applicant and the Minister.

Where appropriate, planning conditions or legal/planning obligation agreements will also be imposed or sought to ensure that Sustainable Drainage Systems are provided and maintained in the long-term.

In all cases, applicants will be required to submit sufficient information regarding the means of surface water disposal to allow a proper assessment of the development proposals. Where this information is not provided, the application will be refused.

Proposals for new development which would impact on the discharge of surface water will not be permitted, unless satisfactory provision is made for surface water disposal, to the satisfaction of the Minister in consultation with Jersey Water and the Minister for Transport and Technical Services.

Regard will be made to constraints on the capacity of the existing Sewage Treatment Facility and Drainage System in consultation with the Minister for Transport and Technical Services.

Sewage treatment works and sea outfall

11.132 The age and condition of the existing Bellozanne Valley Sewage Treatment Works, referred to previously, combined with projected growth in the population over the next 30 years and improving effluent standards, has prompted a review of the options for sewage treatment, as part of the on-going Liquid Waste Strategy.

11.133 Acceptable locations for Sewage Treatment Works are constrained by topography, the need to optimise accessibility to the populations served, the need to avoid major revisions in the existing sewerage systems and the need for close proximity to the sea for discharge of the final effluent. Normally, such considerations would indicate that the existing works should be improved and developed to provide the capacity to meet future requirements. Proposals for new works are only likely to be granted where the development cannot be satisfactorily accommodated at the existing site, and the proposed new development meets normal planning and environmental considerations.

11.134 A Liquid Waste Strategy is being developed which includes two alternative locations for consideration for the principal Sewage Treatment Works. These are:

- Retaining and improving the existing Bellozanne Sewage Treatment Works, or
- A replacement works on reclaimed land at La Collette.

11.135 Either location option could provide conventional sewage treatment with a long sea outfall to discharge the effluent into deep water/non-sensitive waters. Alternatively, a higher standard of sewage treatment (including nitrification to the Urban Waste Water Treatment Directive standard) could be provided together with a shorter outfall into St. Aubin's Bay. This outfall would be longer than the existing one, because of the need for it to be submerged at all times. Clearly, there are economic, social and environmental advantages and disadvantages with each option.

11.136 A detailed study of the environmental impacts of the different sea fall outlets will be prepared.

Policy LWM 4

Sewage treatment works and sewerage outfall

The Minister for Planning and Environment will support proposals for the development, enhancement and extension of the existing principal sewage treatment works, within the identified operational site for waste management at Bellozanne, provided the proposal complies with other relevant policies in this plan.

Proposals for a new/replacement principal sewage treatment site will be supported where it can be shown that:

- the development is more appropriate than accommodation at the existing site;
- the alternative site is suitable for the use and is demonstrably the best performing of the alternative locations reasonably available;
- the proposal is necessary to support planned population growth, or major new development, or a required improvement in effluent standards;
- there is a demonstrable gain in benefits sufficient to outweigh any potential harm arising from the proposal;
- the proposals are subject to a satisfactory Environmental Impact Assessment; and
- the proposals comply with other relevant policies in the Plan.

The Minister will also support the construction of a longer sea outfall to replace or supplement the current short one, in combination with appropriate treatment at the existing principal sewage treatment works or any approved replacement works, provided the proposal complies with other relevant policies of this plan.

Any proposals for a new or extended sewage treatment works and/or a modified sea outfall will need to satisfactorily address the following health and environmental issues and must have:

- an acceptable health impact;
- an acceptable impact of discharges on the quality of sea water and marine or terrestrial habitats;
- no unacceptable risk of pollution;
- no significant unacceptable traffic impact (land and sea);
- an acceptable impact on local amenity, including no adverse levels of disturbance near the site or on routes to and from it, from noise, vibration, dust, fumes, gases, odour, illumination, litter or pests;
- satisfactorily dealt with other issues arising from the Health and Environmental Impact Assessment processes and from the aims of the Marine Zone; and
- an acceptable visual impact.

For the avoidance of doubt, ultra-violet disinfection or an equivalent system will be required at all sewage treatment works so as to safeguard bacteriological quality for bathing and fisheries.

Regard will be made to constraints on the capacity of the existing Sewage Treatment Facility and Drainage System in consultation with the Minister for Transport and Technical Services.

Proposals for the development of land in the vicinity of the existing principal sewage treatment site, or any approved replacement site will only be permitted where they:

- will not prejudice or unduly restrict the permitted activities of the sewage treatment works; and
- are in accordance with other principles and policies of the Plan.