

**Technical Paper W2
Existing Waste Management
Capacity in Cornwall
Draft Technical Report
Cornwall Council**

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1 Introduction

Cornwall Council, in its role as the local Waste Planning Authority, is required to make provision for the management of 'controlled' wastes¹. The mechanism for managing the provision of a network of infrastructure to manage controlled wastes in Cornwall is the Local Plan. This technical paper looks at the capacity of existing waste facilities in Cornwall and forms part of the evidence base supporting policies in the Cornwall Local Plan.

This report should be read in connection with the two reports listed below:

- An Assessment of the Future Waste Arisings in Cornwall up to 2030,
- An Assessment of the Additional Waste Management Provision Required in Cornwall up to 2030.

Together they are intended to provide an understanding of the level of provision that will be required for waste management facilities in Cornwall up to 2030.

The Cornwall Local Plan will consider the need for waste management facilities within Cornwall; whether there is a need for additional facilities; and if there is, where these should be located.

Before it is possible to establish future waste management capacity requirements, it is necessary to identify the level of current capacity available within the framework area, and in the case of landfill sites, to understand the lifespan of the facility.

This information is necessary to identify critical points within the plan period when it will be necessary for new facilities to become operational.

This report identifies the waste management facilities currently permitted within Cornwall and describes the licensed capacity at 2009, which is permitted by the Environment Agency. In the case of landfill, the permitted void capacity and lifespan of the facility.

The Environment Agency produces standard waste data tables for each of the regions of England; these set out the throughput a certain sites as well as the capacity of landfill and incineration facilities. The data published for 2011 indicates that Cornwall had a landfill capacity of 2,822,000 cubic metres for non-hazardous materials, 41,000 cubic metres for restricted non-hazardous material and 571,000 cubic metres for inert material.

Table 1.1 shows the total licensed capacity for the four main controlled waste streams in Cornwall: Local Authority Collected Waste (mainly

¹ Local Authority collected waste, commercial and industrial waste, construction, demolition and excavation waste, hazardous waste and waste water

household) (LACW); Commercial & Industrial Waste (C&I); Construction, Excavation and Demolition Waste (CD&E) and Hazardous Waste. These capacities are further broken down into three different types of facility: recycling /re-use facilities, other recovery facilities and disposal facilities².

Table 1.1 Summary of capacity for each waste stream

	Local Authority Collected Waste (household)	Commercial & Industrial Waste	Construction, Demolition and Excavation Waste	Hazardous Waste
Total annual permitted capacity for recycling/re-use (tonnes)	259,318 permitted (including composting). Operational 213,898	589,978	101,999 tonnes per annum (Not including exempt sites).	100,000 tonnes (oil)
Total annual licensed and permitted capacity for recovery (tonnes)	240,000 tonnes permitted (not operational)	46,150 permitted (not operational) plus remaining capacity from the CERC		
Total permitted landfill voidspace in cubic metres	2 million cubic metres	2.3 million cubic metres	549,095 cubic metres	0

Figure 1.1 shows the main facilities accepting Cornwall's household waste and Figure 1.2 shows the main facilities accepting Cornwall's commercial, industrial and construction waste.

Figure 1.1 Main facilities accepting Cornwall's household waste

² Re-Use– products that have become waste can be checked, cleaned or repaired so that they can be re-used – preparing for re-use
 Recycling – waste materials can be reprocessed into products, materials, or substances.
 Recovery – waste can serve a useful purpose by replacing other materials that would otherwise have been used
 Disposal – the least desirable solution where none of the above options is appropriate.

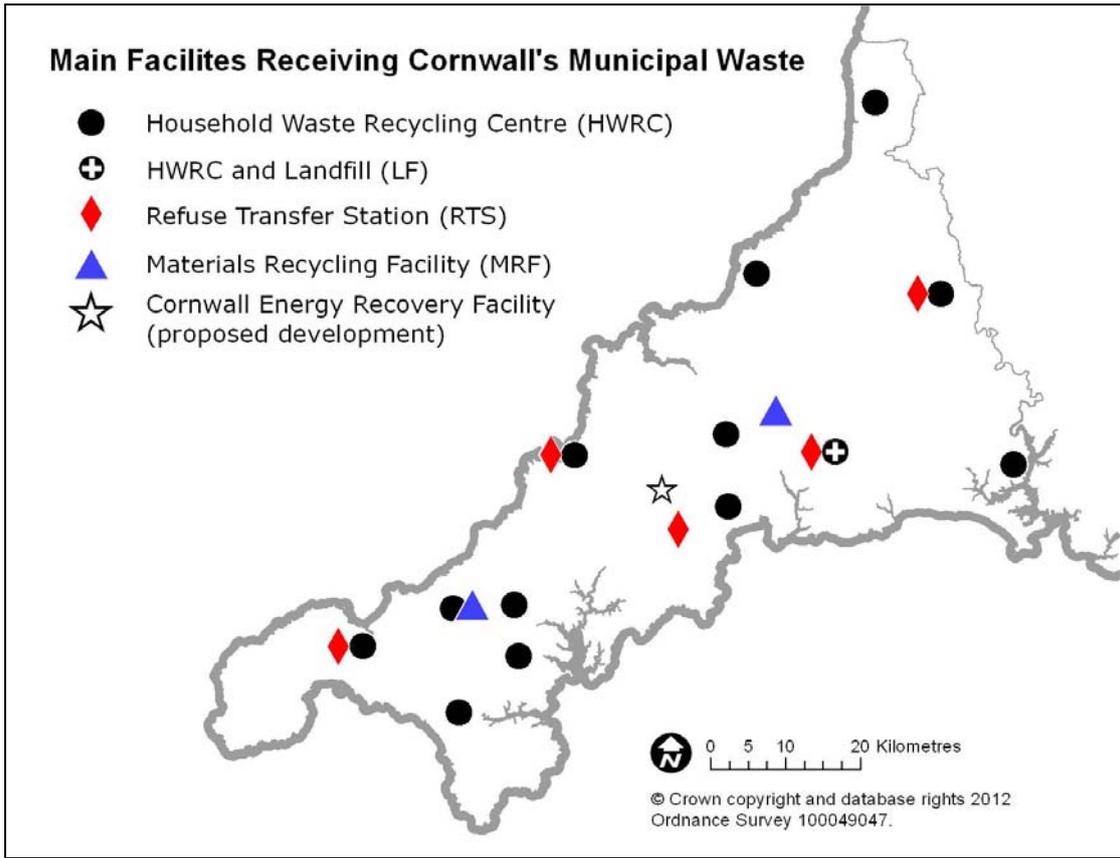
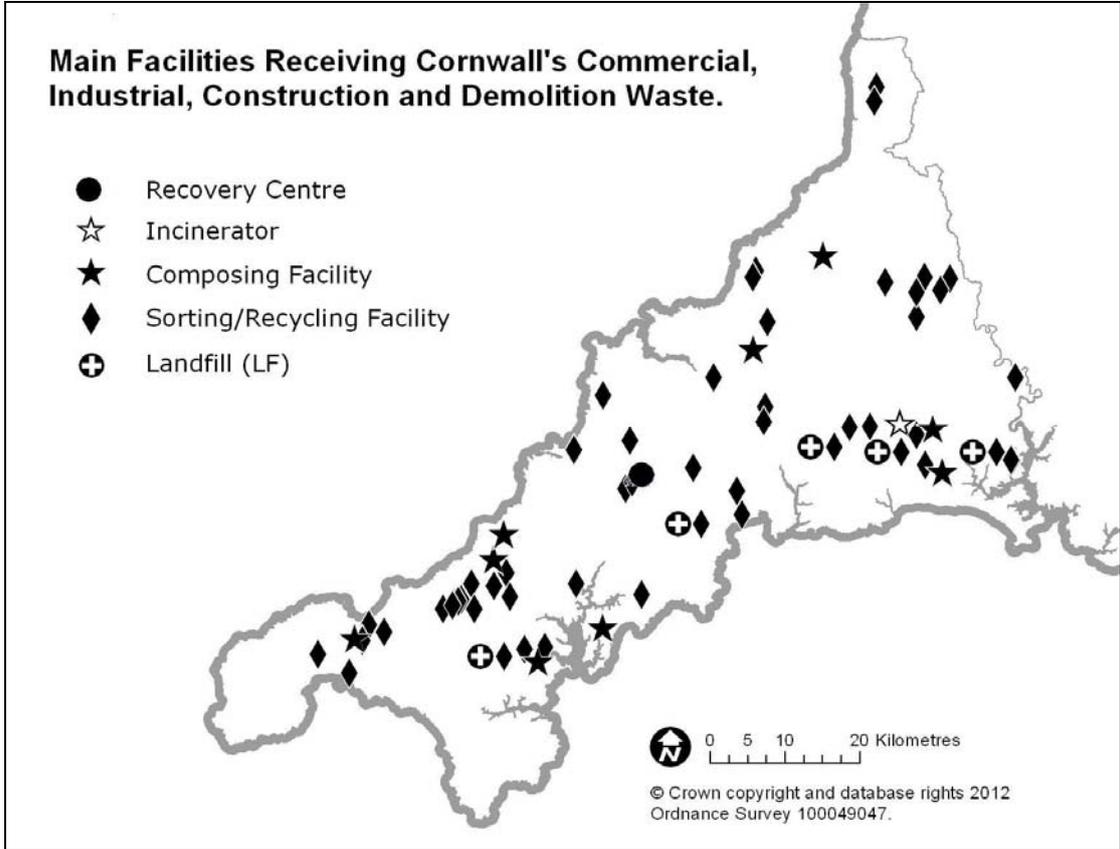


Figure 1.2 Main facilities accepting Cornwall's commercial, industrial and construction waste



2 Recycling centres accepting primarily household waste

The annual capacity of permitted facilities taking recyclable materials from the Local Authority Collected Waste stream is shown in Table 2.1. The total permitted annual capacity amounts to **93,898** thousand tonnes.

Table 2.1 Recycling centres accepting primarily household waste

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Bodmin HWRC (Wheal Prosper)	24999
Bude HWRC (Tiscott Wood)	2450
Connon Bridge HWRC	24999
Dudnace Lane HWRC	N/A
Falmouth / Penryn HWRC	N/A
Helston HWRC (Gays Hill)	10000
Newquay HWRC & Refuse Transfer Station	24999
Saltash HWRC (Tamar View)	24999
St Austell HWRC	14000
St Erth HWRC & Refuse Transfer Station*	25000
Tintagel HWRC (Bowthick)	2450
United Mines HWRC	24999
Launceston HWRC	2450
TOTAL	93,898

Source: Environment Agency, 2009

*This site also accepts some Commercial & Industrial Waste.

The facilities in Table 2.2 accept mainly waste from households along with some commercial and industrial waste; this is then processed and packaged for onward transfer. These sites are exempt from the need for a specific permit from the Environment Agency, up to a specified annual amount.

Table 2.2 Other household waste sorting, recycling, recovery and transfer facilities.

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Bodmin Materials Recycling Facility	Exempt 50,000
Pool Materials Recycling Facility	Exempt 25,000
Total	75,000

Source: Environment Agency, 2009

3 Commercial, industrial and construction waste sorting/ recycling/ recovery and transfer facilities

Some twenty six sites offer a recovery/recycling service for commercial & industrial waste. These sites (listed in Table 3.1 and shown in Figure 1.2) recover materials such as glass, card, paper, plastics, tyres, liquids (oils etc), metals, wood, textiles, electronic equipment and white goods.

Table 3.1 Other sorting/recycling/recovery and transfer facilities

Site Name	Environment Agency Licence Capacity per annum (tonnes)	recycle	composting	recovery	transfer	Disposal with energy	Disposal	Type
A & R Recycling, St Day	0	✓			✓			H/C&I
Launceston (Bangors) Waste Transfer Station	11,700				✓			H/C&I/Inert
Chenoweth's Business Park, Ruan High Lane	25,000	✓	✓		✓			Inert
Chypraze Farm, Summercourt	25,000							H/C&I/Inert
Connon Bridge Refuse Transfer Station & Clinical Waste Transfer Station	160,000				✓			H/C&I

Site Name	Environment Agency Licence Capacity per annum (tonnes)	recycle	composting	recovery	transfer	Disposal with energy	Disposal	Type
Cory Environmental - Newham Depot, Truro	5,000	✓			✓		✓	H/C&I
CSG Sealand, Saltash	0			✓				Haz
Dave Peat Waste Ltd Doublebois, Liskeard	2,284						✓	C&I
Dinscott Waste Transfer Site, Kilkhampton, Bude	5,000	✓		✓	✓			C&I/Inert
Domellick Manor, St Dennis	50,000	✓		✓	✓		✓	Inert/C&I
Forth Kegyn Transfer Station, Pool	24,999	✓						H/C&I/Inert
Glebe Quarry Transfer Station, Roche	25,000							C&I/Inert
H & A Waste Services Ltd, Redruth	4,999	✓			✓			H/C&I
Herniss Farm Transfer Station, Falmouth	24,999	✓		✓	✓		✓	H/C&I/Inert
Kennards House Waste Transfer Station, Launceston	4,999	✓		✓	✓			H/C&I/Inert
Kernick Depot, Falmouth	4,999							
Lean Quarry Waste Transfer Station, Liskeard	75,000	✓			✓			H/C&I/Inert /Haz
Masters Skips Ltd, St Austell	4,999	✓			✓	✓		H/C&I/Inert
North Quay Recycling Centre, Hayle	73,749							H/C&I/Inert
Roodcroft Transfer Station, Hatt, Saltash	39,000		✓	✓	✓	✓		H/C&I/Inert

Site Name	Environment Agency Licence Capacity per annum (tonnes)	recycle	composting	recovery	transfer	Disposal with energy	Disposal	Type
St Austell Refuse Transfer Station Tregongeeves	24,999				✓			H/C&I
St Eval Recycling Company, St Columb	52,000	✓	✓		✓	✓		Inert
The Waste Transfer Station	24,999	✓		✓	✓			H/C&I/Inert /Haz
Vale Mill (Bu-Mar), Redruth	15,600				✓		✓	Inert
Valley View Transfer Station	4,999							H/C&I/Inert
Woodlands Transfer Station, Summercourt	5,000	✓			✓		✓	H/C&I/Inert
Parc-an-Chy Transfer Station, Scorrier	24,999	✓			✓			Inert
Hallenbeagle Cory Site	35,000	✓			✓			H/C&I
Hallenbeagle Green EfW Investments Ltd Site	30,000	✓						C&I
TOTAL	757,323							

Source: Environment Agency, 2009

Two recycling (along with recovery and transfer) facilities benefit from planning permission at Hallenbeagle, Scorrier. The first facility, operated by Cory Environmental, proposes 35,000 tonnes per year of commercial and industrial waste to be processed for recycling with a potential for 115,000 tonnes of transfer capacity. It is anticipated that this will initially be transferred for landfill. However, the permission allows for potential recovery off-site through the onsite production of Refuse Derived Fuel (RDF). A second facility operated by Green EfW Investments Ltd has been granted planning permission to process 30,000 tonnes per year of commercial and industrial waste for recycling.

Sites that recycle only inert waste have been included in the construction & demolition capacity waste stream in summary table 1.1 (These include DRS Demolition, Parc-an-chy and Chenoweth's Business Park totalling

101,999 tonnes per annum). All other recycling sites have been included in the total for the Commercial and Industrial waste stream (294,994 tonnes per annum). Including Metal Recycling Facilities from table 4.1, this provides a total of 589,978 tonnes per annum capacity.

4 Metal Recycling Facilities

There are various metal recycling and end of life vehicle facilities throughout Cornwall from very small specialist car breakers to larger scale facilities. The Environment Agency's licence for the smaller specialist facilities provides capacity up to 2,500 tonnes. In reality these sites are unlikely to have the ability to accept the maximum amount that the licence allows.

Table 4.1: Annual licensed capacity at permitted metal recycling facilities

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Auto Recycling Centre, St Austell	2,499
B & H Haulage Scrap Metal Removers, Launceston	2,500
Broadagri, St Day	2,500
Burnt House Garage, Dobwalls	4,999
Camborne Car Spares - C & J Autos, Camborne	2,499
Combella Vehicle Recyclers Ltd, Roche	25,000
D C R Auto Spares, Launceston	4,999
Duchy Motor Spares, St Austell	2,500
Duckworths Car Spares, Chacewater	5,000
Flashman Metal Recycling Centre, Gunnislake	24,999
Illogan Car Spares, Illogan	2,500
John Orchard And Company (Chosen View)	24,999
Launceston Car Breakers	2,499
Malcolm Drew Ltd, St Day	4,999
Marshalls Motors	4,999
Methrose Works	74,999
Old English Cars	2,499
Roy Rundle Car & Commercial Repairs	5,000
Seaview Recovery	2,500
Sims Metal Management – Bodmin	4,999
Sims Metal Management – Camborne	12,500
South West Tyre & Rubber Recyclers	4,999
Southern Garage - Chris Davey Car Parts	4,999
Southwest Renault, Peugeot & Citroen Spares	2,500

Summercourt Scrapyard, Summercourt	25,000
T C B (Performance Parts) Ltd	2,500
T Ware & Sons	5,000
The Scrap Yard	4,999
Wheal Alfred Metal Recycling Ltd, Hayle	24,999
TOTAL	294,984

Source: Environment Agency, 2009

5 Hazardous waste treatment

Hazardous waste facilities in Cornwall include the following two facilities that treat oil. Oil is considered to be part of the hazardous waste stream.

Table 5.1: Hazardous waste treatment

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Environmental Sealand Services, Saltash	75,000
Falmouth Oil Services Ltd, Falmouth	25,000
Total	100,000

Source: Environment Agency, 2009

6 Composting Sites

Composting facilities which manage green waste from municipal, commercial and industrial waste streams are shown in Table 6.1.

Table 6.1: Composting facilities

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Splattenridden, Hayle	25,000 tonnes
Tinten On Farm, St Tudy	25,000 tonnes
Bryn Farm	40,000 tonnes
Bake Farm, Trerulefoot	60 tonnes on site at any one time
Coosewartha Farm, Redruth	60 tonnes on site at any one time
Higher Kergillack Farm, Falmouth	60 tonnes on site at any one time
Hepwell Farm, Quethiock, Liskeard	60 tonnes on site at any one time
Lower Tregreen Farm, Davidstow	60 tonnes on site at any one time
Ropewalk Farm, St Agnes	60 tonnes on site at any one time
Tregaire Barton, Porthscatho	60 tonnes on site at any one time
TOTAL	90,000 (plus 420 on farms at any given time*)

Source: Environment Agency, 2009

These sites are shown in Figure 1.2.

*In order not to overstate the available capacity the 420 tonnes licensed on farm land has been calculated as 420 tonnes per year (rather than using an estimation of the possible levels of process which might be achieved on each farm over a year).

7 Recovery facilities

Recovery facilities accept household, commercial and industrial waste and use that waste to generate energy. Table 7.1 shows those permitted sites and their capacity.

Table 7.1 Permitted capacity for energy recovery

Site Name	Environment Agency Licence Capacity per annum (tonnes)
Cornwall Energy Recovery Centre St Dennis (not operational)	240,000
Hallenbeagle (Green EfW Investments Ltd)	40,000
Penair Pig Farm	*23,500
Total	289,560 tonnes

It is anticipated that the Cornwall Energy Recovery Centre (CERC) plant will become operational in 2016. The operators have indicated that approximately 2000 tonnes per annum of non-combustible material may need to be disposed of by alternative methods. This plant is intended primarily to manage LACW (municipal) waste, but any spare capacity will be available to the Commercial and Industrial waste stream.

A facility at Hallenbeagle operated by Green EfW Investments Ltd has been granted planning permission that will process 40,000 tonnes for recovery per year through energy from waste. This plant is intended primarily to cater for Commercial and Industrial waste.

Penare Pig Farm, Fraddon energy recovery facility was granted an extension of time in 2012 and is licensed to recover 23,500 tonnes of waste. *However, 7,800 tonnes relates to pig slurry and 9,560 tonnes relate to waste water. These wastes fall within the Agricultural and Waste Water waste streams. The remainder (6.140 tpa) are expected to come from the Commercial and Industrial waste stream.

8 Disposal Facilities

8.1 Landfill disposal

Landfill sites have been divided into two main categories. First, those accepting 'non-hazardous mixed waste', generally sourced from waste collected by the local authority (Local Authority Collected Waste (LACW)) and commercial and industrial waste. Secondly landfill sites that can

accept only inert waste such as that arising, generally from the construction and demolition waste stream.

There are currently two permitted and operational landfill sites that can take non hazardous mixed Local Authority Collected Waste and Commercial and Industrial waste. These are Connon Bridge Landfill Site (Taphouse, near Liskeard) permitted until 2018 and Lean Landfill (Horningtops, near Liskeard) permitted until 2032. Connon Bridge predominantly accepts Cornwall's Local Authority Collected Waste (household) but also takes some Commercial and Industrial waste. Lean Quarry currently accepts mainly Local Authority Collected Waste (household) from Plymouth City Council and West Devon Borough Council, as well as Commercial and Industrial waste.

United Mines Landfill site formerly accepted Cornwall's Municipal waste. However, this is now closed, permission has expired and the site no longer accepts any municipal or commercial and industrial waste.

Herniss Farm previously accepted Commercial and Industrial Waste and inert Construction and Demolition Waste for landfill. However, the landfill element of this site is now closed.

8.2 Annual capacity

The annual licensed capacity for Connon Bridge landfill site and Lean Quarry landfill is set out in Table 8.1.

Table 8.1: Licensed annual capacity of permitted landfill sites accepting Local Authority collected Waste / commercial & industrial Waste.

Site Name	Environment Agency Licence Capacity per year (tonnes)
Connon Bridge Landfill	250,000 (this will be restricted to 40,000 tonnes per year once the CERC is operational)
Lean Quarry	300,000
Total	550,000 per annum.

There are also a number of sites across Cornwall that accept construction, demolition and excavation waste. These sites are operated by the private sector and less information is available about the quantity and composition of the waste they receive. However, the Environment Agency (EA) keeps a record of the tonnage processed at these sites.

Table 8.2 Licensed annual capacity of permitted landfill sites in Cornwall accepting inert Construction, Demolition and Excavation waste

Site Name	Environment Agency Capacity (tonnes)
Roodscroft Landfill	152,000
Tiscott Wood Landfill Site	75,000
Herniss	0
Total	217,000 per annum

Source: Environment Agency, 2009

8.3 Landfill Void Capacity

Table 8.3 shows the void capacity for Construction, Demolition and Excavation landfill sites in August, 2011 with the end date of planning permissions where applicable.

Table 8.3 Void capacity for Construction, Demolition and Excavation Landfill Sites August, 2011

Site Name	Existing permitted void (cubic metres)
Tregongeeves Quarry Landfill	20,575 (no end date on planning permission)
Tiscott Depot Landfill Site	21,000 (no end date on planning permission)
Herniss Farm	0
Roodscroft Landfill Site	507,520 (permission expires November 2020)
Total	549,095

Source: Environment Agency, August 2011

Strategic policy in the pre-submission Local Plan seeks to ensure that construction, demolition and excavation waste is utilised in quarry restoration. An initial assessment has been carried out to consider potential quarries that could make use of the 659,000m³ of projected arisings of construction, demolition and excavation waste for restoration purposes. The void space area of each suitable quarry has been calculated and a minimum final void depth of 4 metres has been assumed. From this initial assessment voidspace is technically available to accommodate in the region of 2,200,000 cubic metres of construction, demolition and excavation waste.

Table 8.4 Landfill void capacity in Cornwall for non-hazardous mixed waste landfill sites shows landfill void capacity for non-hazardous mixed waste sites in Cornwall at the end of 2010.

Table 8.4 Landfill void capacity in Cornwall for non-hazardous mixed waste landfill sites

Site Name	Existing permitted void (m ³) 2010	Planning permission expiry dates
Connon Bridge	2,000,000	2018
Lean Quarry	2,300,000	2032
United Mines Landfill	0	Expired
Total	3,510,000	

Connon Bridge currently accepts all of Cornwall's Local Authority Collected Waste (household). The landfill site was recently granted an extension in capacity for an additional 800,000 m³ (restricted to 40,000 tonnes per year once the Cornwall Energy Recovery Centre (CERC) is operational). This is subject to the applicant signing a s106 legal agreement stating that

the permission will expire on 31st December 2018 and that they will not seek a further time extension.

Although, the majority of Cornwall's municipal residual (after recycling/re-use) waste would be accepted at the Cornwall Energy from Waste Centre (CERC), there would still be a need for additional capacity for the disposal of any over-sized or non-combustible material and as a backup to CERC maintenance downtime.

Lean Quarry currently accepts waste from Plymouth and West Devon as well as industrial and commercial waste. Planning permission for landfill at the site will end 03 August 2032.

Construction has commenced on an Energy from Waste Plant at Devonport Dockyard. Once operational it is likely that there will be a significant reduction in the disposal of municipal waste from Plymouth at Lean Quarry.

The spatial distribution of existing operational landfill facilities are displayed within Figure 1.1 and Figure 1.2.

9 Other waste disposal facilities

Peake (GB) Ltd has an operational incinerator at Stoneybridge, Liskeard that processes animal carcasses from the onsite abattoir and clinical waste. The facility does not recover energy. The facility has a licensed maximum capacity of **5,241** tonnes.