



## chapter 12 Minerals

Developing a prosperous economy - to develop a more enterprising, vibrant and diverse local economy that strengthens local businesses and enterprises, which will attract investment, share prosperity and create better employment opportunities for locals

Maintaining a clean and sustainable environment - to create a more attractive environment that is safe, clean and tidy as well as being a more healthy and diverse natural environment.



# Minerals

## Introduction

12.1 The city contains the farthest south western exposure of workable limestone in England. It provides an important resource for the local economy, particularly the construction industry. While there are other areas in Devon where limestone is quarried, their value as an alternative is limited because of constrained expansion opportunities and increased transport costs. Plymouth's limestone, with its potential for significant expansion, will be important to the sub-regional economy for a long time to come.

## Context

12.2 Limestone is a key feature of the city's physical geography. A band of Middle Devonian Limestone forming a long exposure up to a kilometre wide runs across the southern side of the city from The Hoe, through Cattedown to Sherford. The rocks are well-bedded medium to pale grey limestone – reserves of which have been proved to a considerable depth. This limestone belt creates the distinctive features that contributes to the character of the city's waterfront, such as The Hoe and Mount Batten.

12.3 Limestone quarrying has been a significant feature of the city since its early development. The stone has been used for a variety of notable projects such as: the Plymouth Breakwater; the Eddystone lighthouses; Royal William Victualling Yard; Devonport Dockyard and many other important buildings throughout the 17th, 18th and 19th centuries.

12.4 The limestone from Plymstock Quarry has been used to manufacture cement on-site. The quarry was closed in 1999 as the case for the continued extraction of the limestone as an aggregate was considered marginal. This former quarry is now proposed for re-development as a new sustainable residential neighbourhood with a mix of supporting uses.

12.5 Limestone has been extracted and processed at Moorcroft Quarry from the 1800's, but will cease (at pit 4) during 2006. The new quarry, at Hazeldene, was granted consent in 1994. It is accessed through a tunnel that passes under

Haye Road, allowing the limestone extracted from Hazeldene to be processed at the existing plant in Moorcroft Quarry. The current extraction rates at Hazeldene Quarry suggest that it has about 50 years of permitted reserves at present output levels.

12.6 Additional limestone reserves have been proven to the east and north of Hazeldene. While the location of the proposed new community at Sherford, in South Hams, will result in the loss of the reserves to the east, the limestone resource to the north has the potential capacity, subject to planning permission, to supply the local economy well into the next century. Proposals for extraction of limestone from former and abandoned quarries to the south and west of Plymstock are not likely to come forward in the foreseeable future. There are no other known mineral deposits within Plymouth for which it is necessary to provide a minerals planning framework.

## Approach

12.7 Minerals are a finite, but vital resource. Draft RSS Policies provide for the supply of aggregates and other minerals to contribute to national requirements and to maintain land banks for at least seven years. Policy RE12 also provides for the identification of sites for the recycling of secondary aggregates (which will be addressed in Plymouth's Waste Development Plan Document).

12.8 It is the LDF's role to ensure that adequate supplies of minerals are provided to meet foreseeable needs, and that known mineral reserves are safeguarded from unnecessary development. Provision of supplies to meet current needs is achieved in the form of 'land banks' (sites with permission) and future supplies are protected in 'minerals safeguarding areas' (areas of potential future mineral extraction, but which do not yet have planning permission for their extraction). The LDF must also consider the development needs of the city as a whole and seek a sustainable balance between planning for mineral supply and the city's growth.

12.9 This approach will be amplified in the North Plymstock (and Minerals) AAP, reflected in South Hams District Council's Sherford AAP and the emerging Devon Minerals Development Framework.

## Strategic Objective and Policies

### Strategic Objective 12

#### Delivering Future Mineral Resources

To deliver an appropriate balance between the need to safeguard the long term supply of minerals and delivery of strategically important development in the eastern corridor, helping to make Plymouth a place where people, business and an outstanding natural environment converge to bring about sustainable prosperity and well-being for all. This will be achieved through:

1. Safeguarding the continued extraction and processing of mineral resources from existing permitted quarries.
2. Safeguarding mineral reserves for future extraction in a manner which supports the sustainable development objectives of the city and sub-region, notably the development of the new community at Sherford and its longer term potential extension back towards the city.
3. Balancing the impacts of mineral extraction with environmental protection and amenity of adjoining occupiers of land and buildings.
4. Reducing the consumption of non-renewable mineral resources by encouraging reuse and recycling of construction and demolition waste.

### Targets

Progress towards achieving this objective will be measured against the following targets: -

1. Identification of land consented for mineral extraction and processing and an appropriate buffer zone in the North Plymstock (including Minerals) Area Action Plan.
2. Identification of Mineral Resource Protection Area in the North Plymstock (including Minerals) Area Action Plan.

## Policy CS23

### Safeguarding Mineral Resources

The Council will safeguard mineral resources in North Plymstock from other forms of development that would prejudice future mineral development. In order to do so the North Plymstock (including Minerals) Area Action Plan shall identify a Mineral Resource Safeguarding Area to include Hazeldene Quarry and land to its north. This shall include a buffer zone, which may extend beyond the limit of the known viable reserve, to safeguard future extraction of the limestone reserve.

Minerals development within a buffer zone will not be permitted where it would adversely affect the amenities enjoyed by existing or future occupiers and users of nearby dwellings and buildings, or other adverse impact on significant natural or historic features.

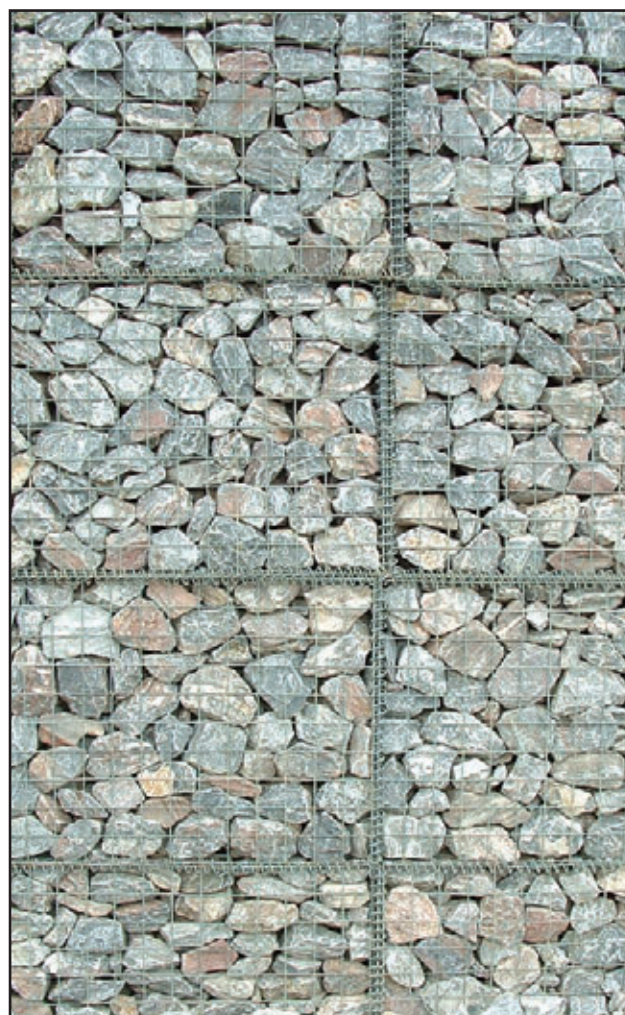
Non-mineral development which would be sensitive to mineral extraction, its subsequent processing, and result in the permanent sterilisation of limestone will be resisted within the Mineral Safeguarding Area.

Non-mineral development in the buffer zone will not be permitted where it would adversely effect existing mineral extraction or possible future mineral development.

12.10 Mineral resources can only be worked where they exist. A function of the planning system is to ensure the long-term future supply of the limestone, because it is important to the local economy and construction industry. This policy seeks to safeguard the potential future extraction of the proven limestone resource under land to the north of the existing Hazeldene Quarry. This is required to ensure a long-term limestone supply as an alternative to the loss of the limestone beneath the new community proposed at Sherford. In order to implement Sherford there will be a need for the owner of the mineral resource to agree to give up their consented land banks and potential reserve in favour of this alternative extraction area.

12.11 This policy also identifies safeguards for the future operation of quarries, and in relation to public safety and amenities, given that the limestone extraction process, which incorporates blasting, can have a significant impact well beyond the extent of the actual quarry edge. Some of this impact can be mitigated by the environmental bund, constructed around the perimeter of the quarry. However, there is still a need for a buffer zone to ensure that development is not subject to unacceptable impacts from quarrying, but also to safeguard the quarry operation, which might otherwise be sterilised by the imposition of environmental controls arising from nuisance complaints. The buffer zone also limits the extent of quarrying activity, so that the local community can be confident of the protection of their amenity and local environmental quality.

12.12 The policy will be implemented by the Council by the detailed definition of the safeguarding area and future buffer in the North Plymstock Area Action Plan and then through the consideration and control of development proposals submitted within the defined area.



## Policy CS24 Mineral Development

Applications for mineral extraction in the Mineral Safeguarding Area will be permitted, provided that:

- 1 The extent of the proposal is satisfactory in relation to the mineral buffer zone and need to protect the amenity of existing occupiers adjoining land and buildings and the future development and use of adjoining land.
2. The development demonstrates that, through its design and operation, it integrates with the planned development of the new community at Sherford.
3. The development provides an environmental bund to protect the occupiers of adjoining land from the physical and visual impact arising from mineral extraction. The environmental bund should also provide for a recreation cycle and footpath to link public open space at the new community with recreational land and routes in the vicinity of Saltram.
4. The method, monitoring and phases of the development are acceptable in relation to its environmental impact.
5. There are no unacceptable adverse impacts arising from the development upon interests of acknowledged importance, which can't otherwise reasonably be compensated for or mitigated against.
6. There are demonstrable benefits of the development for the local economy and to the sustainable development and growth of the city.
7. There are satisfactory after care and restoration proposals.
8. The transport impacts are satisfactorily managed.
9. Assessment demonstrates that there will not be an unacceptable impact upon the water environment, with particular regard to protection of ground water resources and flood risk.
10. The development provides for submission of an Environmental Statement at review periods and a methodology to respond to any unforeseen and significantly detrimental environmental impacts arising from mineral extraction.

12.13 Planning applications are likely to be submitted for the extension of Hazeldene Quarry early in this plan period. This policy is required to provide a framework of the relevant planning considerations that such a proposal will raise, and to guide and control such a development in a way which balances the future supply of limestone with environmental and amenity concerns and future sustainable growth of the city.

12.14 Given the proximity of the limestone resource to existing and planned future development there is a particular need to carefully balance the control, extent and potential impact of future extraction on neighbouring uses, whilst also making best use of the limestone reserve. Aspects of the new community infrastructure, namely recreational routes, can be facilitated by the extension of the mineral extraction area. The potential duration of quarrying activity, due to the capacity of the

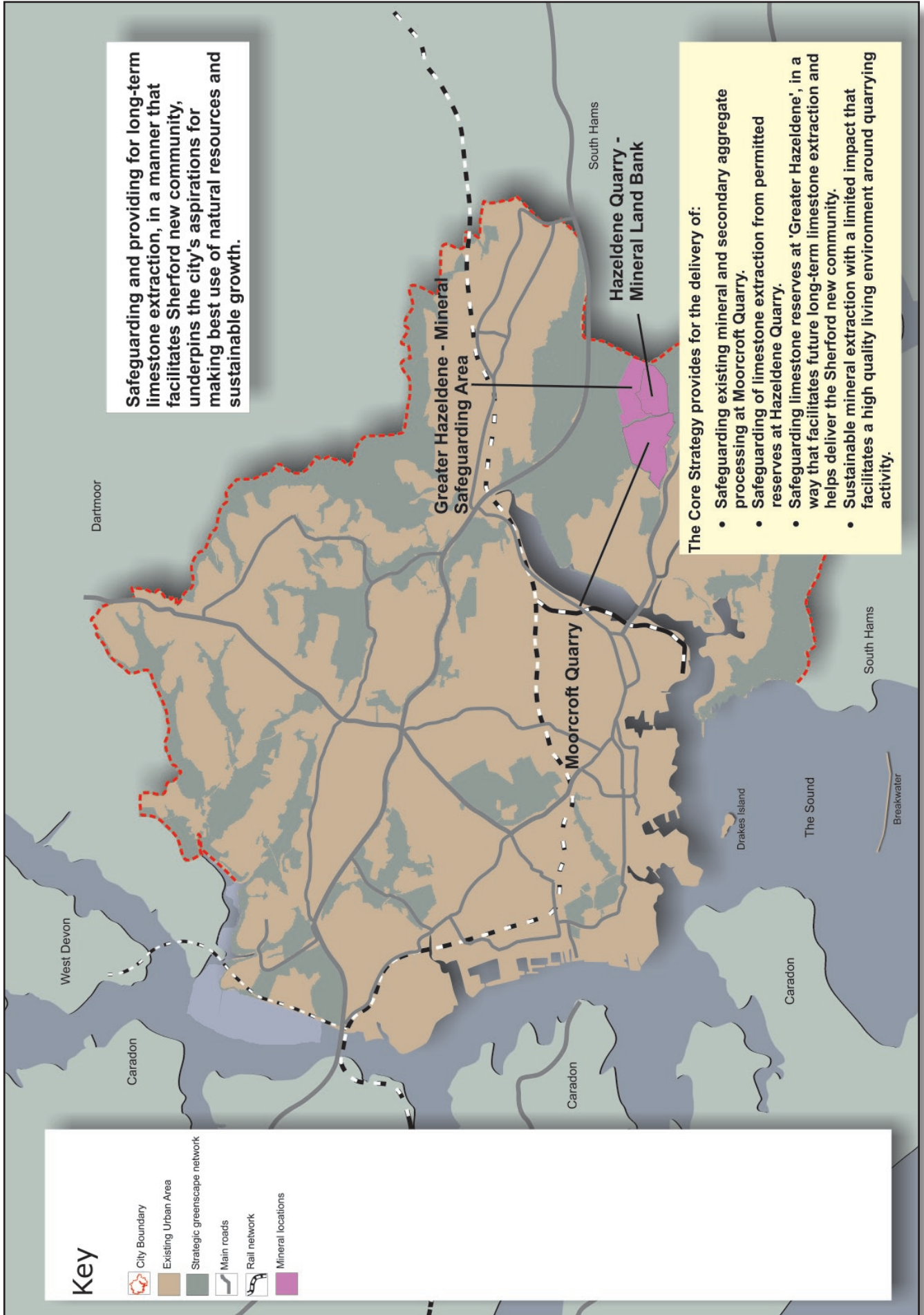
reserve, could be as long as 250 years. It is difficult to predict the environmental impact of mineral extraction beyond a reasonable period of time. Therefore there is a need to agree a phased approach to any consent with either a series of consents and/or, by agreement with the developer, the inclusion of review stages - to enable the proper long term environmental impact of the mineral extraction to be monitored and account taken of unforeseen adverse environmental impacts.

12.15 The policy will be implemented by the Council through the exercise of its statutory planning powers when considering and determining planning applications.

#### Key Sources:

- British Geological Survey – Geology Map
- Aggregate Industries – Map showing Greater Hazeldene known extent of Limestone reserve July 2006.

Diagram 9 - Minerals







## chapter 13 Waste

Maintaining a clean and sustainable environment - to create a more attractive environment that is safe, clean and tidy as well as being a more healthy and diverse natural environment.



# Waste

## Introduction

**13.1** Plymouth has been reliant on a single landfill site as the primary method of waste disposal since the early 1960's. However, this waste disposal facility at Chelson Meadow has reached the end of its life and will close in mid 2008. This presents both a challenge and an opportunity for the city. The challenge is to establish an alternative way to deal with our waste in the short term, but with the opportunity to lay the foundations for a more sustainable waste management solution for the future.

## Context

### National / Regional

**13.2** The first place to start tackling the waste problem is to reduce the amount of waste we produce; i.e. waste minimisation. However, this will still leave a significant amount of waste to deal with and, with Plymouth's growing population, the total amount of waste is likely to rise.

**13.3** European and UK guidance and legislation require waste management authorities to establish new waste management systems, that divert waste from landfill in favour of other more sustainable methods of waste management and treatment; i.e. 'waste recovery'. To measure progress towards this, the Council is required to contribute to achieving national landfill diversion, recycling and waste recovery targets.

**13.4** The draft RSS supports this approach by requiring the city to become as self-sufficient as possible in the management of the waste it produces. If full self-sufficiency is not appropriate, the Waste Planning Authority is expected to reach agreement with a neighbouring authority on alternative arrangements, having full regard to the sequential approach for the location of such facilities.

### Future Waste Requirements

**13.5** In order to meet these requirements new facilities will have to be provided in Plymouth. Depending on levels of waste growth and the

success of waste minimisation, by 2021 between 741,000 and 1,426,000 tonnes of waste will be generated within the city. In order to meet national waste diversion and recovery targets for the municipal waste stream this means that, by 2021, we will need to have provided waste recovery capacity for somewhere between 132,000 and 170,000 tonnes of municipal waste. In the same period, there will need to be further waste recovery capacity, between 57,000 and 115,000 tonnes, for commercial and industrial waste.

### The Waste Management Strategy

**13.6** In response to this the Council is preparing a revised Municipal Waste Management Strategy which will set out how municipal waste should be managed and treated in a sustainable, yet affordable way. It will establish waste management targets for the city, encourage a reduction in the amount of municipal waste generated and propose the various types and sizes of new facilities needed to manage and treat the waste we produce. This will establish a framework for the procurement of infrastructure and services, in whole or part, for municipal waste collection, management and treatment. The Council may have a role in facilitating the delivery of sites required, e.g. through Compulsory Purchase if necessary, but the infrastructure and services are likely to be provided by the private sector on a long term contract.

## Approach

**13.7** The long term waste management strategy views Plymouth as becoming a city that:

- Is as self-sufficient as possible in managing and treating its waste
- Will have a socially, environmentally and economically responsible approach to waste production and its subsequent management and treatment
- Promotes waste minimisation - by allowing everyone to play a role in delivering sustainable waste management
- Reduces the amount of waste being sent to landfill - by increasing the amount of waste material that is re-used, recycled, composted and has value recovered from it such as energy from waste

- Works positively with neighbouring authorities to explore the potential of providing sustainable waste management and treatment facilities within the city. This may also have the capability to manage waste arising from the area around Plymouth.

**13.8** The LDF's task is to propose broad locations for new waste recovery facilities, particularly for the large scale treatment facilities. i.e. 'strategic' waste management facilities to deal with: municipal waste; commercial and industrial waste; and construction and demolition waste. It will also provide a framework for the identification of other sites or areas, where smaller waste management facilities should be located, such as: local recycling centres (e.g. bottle and paper banks), small waste sorting and transfer stations and scrap metal and car recycling. The LDF will also include planning policies to control and guide the type and location of waste development to appropriate locations, and to encourage waste minimisation.

**13.9** A potential problem in seeking to achieve self-sufficiency in the provision of waste recovery capacity is the risk of being overly reliant on the delivery of strategic facilities from the few potential sites in the city. Therefore, the planning strategy for strategic waste management sites must include the identification of alternative options for sites.

**13.10** This provision will not, however, include new landfill capacity inside the city, as no new suitable and viable landfill sites within the city can be identified. Therefore, part of the long term planning strategy for waste still relies on the provision of landfill capacity outside the city, but within reasonable proximity to it. This means that the Council will seek to work with the neighbouring waste planning authorities, to achieve strategic waste management allocations on appropriate sites on the edge of the city and in close proximity to it. Implementation would be controlled through the planning process to reflect the preferred sequential approach and their relative sustainability performance.

**13.11** In the short term, because of the pending closure of Chelson Meadow and long lead in times to procure an appropriate alternative, the only viable option will be to use an existing alternative disposal facility, for residual wastes, outside but within reasonable proximity of the city. The volumes of waste being sent to such a facility will reduce in time as strategic waste treatment facilities within Plymouth become operational. This short term strategy will require provision of a new waste transfer station and facilities to achieve significant increases in landfill diversion through improved recycling and composting. Elements of this short-term approach are therefore complementary to the delivery of a long term strategy for waste.

**13.12** In order to establish an appropriate 'planning framework' for waste-related development, the LDF includes strategic waste objectives, targets and policies in this the Core Strategy - although these will be reviewed regularly to align with national and local waste strategies. The detailed waste development policies and allocation of sites will be contained in the Municipal Waste Development Plan Document. The Waste Management Strategy will inform the content of the Waste Development Plan Document as to the type and size of waste facilities that need to be accommodated in the city in so far as municipal waste is concerned.

**13.13** The proposed spatial approach to waste is shown on Diagram 10 for illustrative purposes.

## Strategic Objective and Policies

### Strategic Objective 13

#### Delivering Sustainable Waste Management

To establish a spatial planning framework in the LDF that supports the Regional and Council's Municipal Waste Management Strategy, helping to make Plymouth a place where people and businesses produce less waste and are provided with long term sustainable and affordable waste management and treatment facilities. This will be achieved through:

1. Supporting and encouraging waste minimisation, particularly during construction, and during the life and use of buildings.
2. Supporting and encouraging re-use, recycling and composting of waste, by:
  - a) Providing for recycling in new developments.
  - b) Ensuring development can be served by appropriate waste collection methods to support recycling systems.
  - c) Providing for land to accommodate re-use and recycling processes and facilities.
3. Allocating sufficient and appropriate land within the city that is capable of accommodating a range of strategic waste management and treatment facilities. Providing sufficient capacity to meet Plymouth's needs and, if possible, additional capacity to manage and treat waste from adjoining areas.
4. Providing a positive planning framework to support the accommodation of sustainable commercial and industrial waste management facilities. Providing local waste management facilities, either on strategic waste management sites or at a range of other smaller sites.
5. Providing a positive planning policy framework that enables sustainable waste-related development, which will have an acceptable impact on local and global environmental quality.

### Targets

Progress towards achieving this goal will be measured against the locally developed waste management targets, which are to be prepared as part of the emerging Municipal Waste Management Strategy. National and Regional waste management targets will provide the framework for the development of local waste management targets.

The LDF Annual Monitoring Report will identify the extent to which sites are effectively allocated and subsequently developed, in support of the Municipal Waste Management Strategy.

## Policy CS25

### Provision for Waste Management

The Council will facilitate the provision of new or enhanced waste management and treatment facilities, of sufficient capacity to manage waste arising in the city, and potentially from adjoining areas, through the allocation of sufficient land for strategic and local waste management and treatment infrastructure. This will consist of:

1. A range of sites to accommodate Strategic Waste Management and Treatment infrastructure of sufficient capacity to manage and treat the municipal, commercial and industrial, and construction / demolition waste arising in Plymouth and adjoining areas. The combination of sites would be expected to be able to accommodate a range of waste management and treatment facilities and technologies, including: recycling and composting ; bulk waste transfer; and treatment of waste by mechanical, biological and thermal (with energy recovery) methods, but not disposal by landfill.

The allocation of such sites in the Waste DPD should explore potential in the following general areas:

1. Coypool
  2. Chelson Meadow (existing waste management facility)
  3. Moorcroft Quarry
  4. Prince Rock
  5. Land west of Ernesettle
2. A range of small sites of up to 1 ha each which can accommodate commercial and industrial or municipal waste transfer, recycling and recovery facilities.
  3. Local civic amenity site(s), each of in the region of 0.5 to 1 ha of land, to serve the north of the city and Plympton.
  4. Enhancement of the existing Weston Mill Civic Amenity Site or development of a new site of in the region of 0.5 to 1 hectares, to serve the western part of the city.

Priority will be given in the allocation of sites and the consideration of planning applications to previously developed or existing industrial sites.

**13.14** This policy sets out the strategic land requirements needed to deliver an appropriate range and choice of sites, that are capable of accommodating large and small-scale facilities to manage and treat the waste we produce in Plymouth. Strategic facilities can be provided on one or several sites. It is not possible to specify the amount of land needed, as this is determined by the nature of facilities and the degree of their shared infrastructure. It is possible to provide a strategic waste management facility on a site of approximately 2 ha. However, this should be regarded as a minimum for a single strategic facility and it does not take account of the potential need to include a number of different waste treatment process, on one or more sites. There is also a need to provide different facilities for different waste streams, which therefore require a number of different

sites. In addition, the policy also expects that such sites should, if possible, also include capacity to accommodate waste arising outside, but in close proximity to the city. This policy reflects not only the principles expected from national waste planning guidance, but also the waste policies of the (draft) Regional Spatial Strategy.

**13.15** It is a key function of the Local Development Framework to provide a plan-led context for the identification of sites for strategic waste facilities. However, the number and size of strategic waste treatment facilities that will eventually be required are essentially limited. It is not appropriate to plan for 'close fit' between need and sites. The plan needs to strike a balance between providing for certainty, but also for flexibility and market choice. It also needs to be recognised that provision, particularly at Ernesettle, should be delivered in a way that avoids adverse impacts on the integrity of the Natura 2000 sites.

**13.16** The evidence base for waste management and planning issues has identified that there are only a very few sites in the city where strategic waste facilities could be accommodated. Given the importance of delivery of such sites, it is considered appropriate for this policy to indicate the general locations that should be considered in the Waste Development Plan Document for the provision of strategic facilities. The detail of site allocations will appear in the Waste DPD. This will also be informed by the emerging Municipal Waste Management Strategy, which will provide a better indication of the potential types and scale of facilities needed.

**13.17** This policy will be implemented primarily through the allocation of sites in the Waste Development Plan Document and reflected in the appropriate Area Action Plans. However, the policy will also be used where appropriate in the consideration of planning applications.



## Policy CS26 Sustainable Waste Management

The Council will promote sustainable waste management by:

1. Promoting waste minimisation through the provision of waste audits for major developments.
2. Requiring the integration of facilities for waste minimisation, re-use, recycling and composting in association with the planning, construction and occupation of new development.
3. Establishing a planning policy framework for the control of waste management development that identifies suitable locations for such development. Providing guidance on minimising potential social, environmental and economic impacts that are likely to arise in the development of waste infrastructure.
4. Working with neighbouring authorities and the South West Regional Assembly to identify and promote the provision of appropriate waste management, treatment and disposal sites on the edge of, or close to, the city in their waste development plans.

**13.18** This policy sets out the key considerations for development proposals that will generate waste, to facilitate a more sustainable approach to waste management. It will no longer be acceptable to build developments with no regard to the waste produced by the building and occupation of that development. There will be a need to encourage as much waste minimisation as possible, and to ensure that new developments effectively integrate with the more sustainable waste management and treatment systems that have been established, and will be further improved upon, through the Municipal Waste Management Strategy.

**13.19** This policy also sets out the key considerations that waste management and treatment development proposals should have regard to. It provides the basis of a framework for the preparation of more detailed waste development control policies and allocations in the Waste Development Plan Document.

**13.20** To provide a full range of options for the establishment of strategic waste management and treatment facilities, it will be necessary for the Council to engage with its neighbouring waste management and planning authorities to explore sustainable waste development options, in addition to those already identified in the city. This will enable a flexible and responsive planning framework in the procurement and delivery of sustainable waste management infrastructure.

#### Key Sources:

- The Regional Waste Strategy for the South West (2004) – Regional Assembly.
- Future Waste Requirements (2005) - ENTEC
- Waste Sites Assessments (2005) - ENTEC
- Waste Options Report (2005) – ENTEC

Diagram 10 - Waste

