Plymouth 002: Waste DPD Examination
Session 1—Wednesday, 6th February, 2008

1. Issues to be Examined
The Inspector has identified the following issues that will be examined:

- Do the sites allocated provide sufficient capacity to deal with the waste arising, in accordance with the guidance in PPS10?
- If so, is this sufficiently demonstrated in the DPD?

This statement focuses upon these issues by: firstly looking at the policy context for the provision of waste management capacity; noting the predicted waste arisings and existing capacity to manage arisings; translating arisings into potential spatial requirements; outlining the site search work that was undertaken to identify potential sites, noting the sites that were chosen and included in the waste DPD; and finally looking at related matters such as a potential sub-regional role that could be provided by new waste management facilities.

Paragraph 18 of PPS10 provides the key context stating that Waste planning authorities should....be able to demonstrate how capacity equivalent to at least ten years of the annual rates set out in the RSS could be provided.

The document under examination aims to provide new waste management capacity distributed according to clear policy objectives based upon a robust analysis of available data and an appraisal of options. This includes policy objectives set out particularly in PPS10 that are geared towards the achievement of sustainable waste management.

The focus of this statement is on municipal solid waste (MSW) and commercial and industrial waste, although comment is made on other waste streams that are considered in the DPD.

2. Policy Context
In meeting the needs of the City for the period to 2021, this DPD must respond to, and be in conformity with, a number of obligations set out in national, regional and sub-regional policy. The following provides a summary.

European and National Policy
The Council must respond to the objectives of national policy, as set out in paragraph 3 of PPS10. These require, inter alia, the Council to deliver a planning strategy that supports the implementation of the national waste strategy and the requirements of European (notably the Waste Framework Directive and various related pieces of legislation including the Landfill Directive) and other waste management legislation. Policy and legislation is aimed at encouraging councils and their communities to take more responsibility for managing their own waste and providing sufficient management facilities in a way that contributes to the waste hierarchy. Disposal facilities (including landfill) will also be required to accommodate a
decreasing amount of residual waste. Disposal is, however, treated as the last option; the City must address the need to reduce, recycle and, recover value from the waste it produces.

The Council must therefore aim to provide sufficient opportunities (ie sites) to address waste needs, which should be considered alongside, and be consistent with, it’s other development needs such as transport, housing, economic growth, natural resources and regeneration. The positive contribution that waste management can make to sustainable communities should be recognised.

Informed by the municipal waste management strategy and the Regional Spatial Strategy (RSS), the Plan should provide capacity for a period of at least ten years from adoption, whilst considering the longer-term time horizon of the RSS. In the South West, this runs to 2026.

**Regional Policy**

The RSS confirms the high priority attached to the Council’s obligation to secure its own waste management infrastructure. Policy W1 of the RSS states that “Waste Planning Authorities will make provision in their Waste Development Frameworks for a network of strategic and local waste collection, transfer, treatment (including recycling) and disposal sites to provide the capacity to meet the indicative allocations for their area shown in Appendix 2, for 2010, 2013 and 2020.”

**Sub-Regional Policy**

The policies of the 2005 Devon Waste Local Plan were saved in September 2007 under the provisions of the 2004 Planning and Compulsory Purchase Act. The plan objectives include those concerned with the requirements of the waste management hierarchy (Objective 5), minimising the transport of waste (Objective 6) and self-sufficiency in waste management (Objective 7) through the provision of an integrated network of facilities (Objective 8). Core policy WPC1 *Sustainable Waste Management* states that planning applications for waste management facilities will only be permitted where they accord with these objectives.

### 3. The Amount of Waste to be Managed

The Evidence Base, largely derived from the 2005 Entec Report with updates for recent figures on MSW, sets out the basis for the forecasts of waste arisings and gives an indication of possible requirements over the period of the DPD. 2021 is the end date for the DPD. High, medium and low scenarios are provided and these ranges are reported in the Submission Waste DPD. The Evidence Base provides some assessment of capacity where this is known, although detailed information on capacity is not provided in the Submission Waste DPD. Instead general conclusions are drawn from the database and are reported in the Preferred Options Report leading to the allocation of two strategic sites for the management of MSW and industrial and commercial waste.

Paragraph 4.7 of the Submission Waste DPD states that, by 2021, the City can expect to manage between 197 000 and 253 000 tonnes of MSW per annum. Drawing on National and European targets, paragraph 4.12 translates this into between 65 000 tonnes and 83 000 tonnes of recycling and composting capacity and between 132 000 tonnes and 170 000 tonnes of recovery capacity (of which recycling and composting are component parts). In 2005/6 around 29 000 tonnes of household waste was recycled or composted.
Paragraph 4.7 also notes that industrial and commercial waste arisings may be in the range of 147,000 tonnes and 295,000 tonnes per annum. Drawing on regional targets paragraph 4.14 translates this into between 65,000 tonnes and 130,000 tonnes of recycling and composting capacity and a further 57,000 tonnes and 115,000 tonnes of recovery capacity. The remainder (a further 17%) of this waste stream may be landfilled. This waste stream however is more difficult to predict as the base data is not as up to date and as comprehensive as for the MSW stream. It is further difficult to estimate existing capacity although there are facilities for the recycling of metals, paper and other wastes that are licensed by the Environment Agency. Data from the Evidence Base suggests that around 63,000 tonnes of waste was handled at non-landfill sites in 2000/01.

For both of these waste streams the Submission Waste DPD recognises the step-change required in view of the dominance of landfill at present and the significant new infrastructure required. The only strategic waste management facility within the City at present is Chelson Meadow landfill but this is due to close in 2008 and residual waste will be sent out of area via the recently constructed transfer station at Chelson Meadow (there is also some recycling and composting capacity at Chelson Meadow).

Also of relevance is the potential need to provide facilities for waste arising from outside the Council area. As with Plymouth, both Torbay and Devon Waste Disposal Authorities have identified a need to divert significant tonnages of biodegradable waste from landfill in order to comply with their Landfill Allowance Trading Scheme (LATS) obligations. As landfill opportunities are diminishing, all Councils are projecting to exceed their original LATS allocations (Plymouth and Torbay from 2009/10 and Devon from 2012/13). The Councils have recently submitted an Expression of Interest to DEFRA for private finance initiative (PFI) funding to support an energy-from-waste (EFW) residual treatment sub-regional facility to address wastes that cannot be recycled or re-used.

Plymouth has been recognized in the South West Regional Assembly’s Waste Management Strategy to be a potentially suitable location for a municipal waste treatment facility to treat non-recyclable waste arising in the sub-region. The status of the city within the RSS and the relative density of its population means that a facility could comply with the proximity principle. Furthermore the MWMSs of each council focus on minimising the amount of residual waste that needs to be treated and have all been fully consulted on. They are sufficiently aligned in that they would all support an EfW residual treatment technology and do not preclude the development of a sub-regional shared facility. Plymouth’s recently adopted MWMS allows the consideration of a sub-regional residual waste treatment solution although as it preceded the national Waste Strategy for England 2007 (WSE2007), it does not reflect the higher household recycling and composting targets included within it.

Waste modelling in the Expression of Interest suggests that in excess of 100,000 tonnes of MSW may be available for recovery from South Hams, Teignbridge, Torbay and West Devon. So when considering the infrastructure required to meet Plymouth’s own needs, which as noted above are significant and represent a step change, the DPD needs to be mindful of the potential need for capacity to deal with wastes coming from outside the City.

4. Identifying Potential Sites

A thorough site search was completed within the Plan area that was initially based upon a three stage process: the identification of sites/areas that have potential for the location of a waste
management facility; the identification of sites/areas that are constrained due to a high level of policy protection and should be excluded from further consideration; the identification of those sites/areas that are also constrained due to policy protection and waste development may be excluded. Options for both strategic and local waste management facilities emerged but no potential sites for landfill were identified.

The allocations made within the DPD respond to the quantities of arisings identified and the likely infrastructure that may be needed to provide for sustainable waste management. In providing for local waste management facilities, the DPD recognises that the northern part of the plan area is not served by a civic amenity site and Policy / Proposal W6 indicates that a site should be provided as part of the Derriford / Seaton Area Action Plan or the Sustainable Neighbourhoods (Key Site Allocations) DPD. Otherwise the DPD provides for the extension and enhancement of the Weston Mill Civic Amenity Site (Policy / Proposal W5) whilst the strategic allocations noted below also provide local recycling opportunities.

Two strategic allocations are provided to deal with MSW and industrial and commercial wastes whilst a third at Moorcroft Quarry is provided for the recycling of construction and demolition wastes. The DPD recognises that this waste stream is significant but is volatile and difficult to predict. It is estimated that the allocation could provide capacity for in excess of 200 000 tonnes per annum. Recycling of demolition and construction wastes is also encouraged at the point of arising.

5. The Adequacy of the Allocations

Recycling and Recovery Capacity

Tightly aligning waste management site provision to arisings is difficult as the types of facility / technology provided, which is yet unknown, can have a significant impact on the site capacity. Nevertheless, there is guidance (and included below are references from DCLG, the Environment Agency and Welsh Assembly Government) that can assist in this process. A summary is provided in Box 1.

<table>
<thead>
<tr>
<th>Box 1: Facility area requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ODPM Planning for waste Management Facilities : A Research Study 2004</strong></td>
</tr>
<tr>
<td>Strategic recycling facilities:  50 000 t facility would require 1-2 ha</td>
</tr>
<tr>
<td>In-vessel composting:  25 000 t facility would require 2-3 ha</td>
</tr>
<tr>
<td>Small scale thermal treatment / gasification / pyrolysis:  50 000 tonnes would require 1-2 ha</td>
</tr>
<tr>
<td>Large scale thermal treatment:  250 000 tonnes would require 2-5 ha</td>
</tr>
<tr>
<td><strong>Environment Agency Waste Technology Data Centre</strong></td>
</tr>
<tr>
<td>Small scale thermal treatment / gasification / pyrolysis:  60 000 tonnes would require 1-2 ha</td>
</tr>
<tr>
<td><strong>Waste Strategy Unit, Welsh Assembly</strong></td>
</tr>
<tr>
<td>Small scale thermal treatment / gasification / pyrolysis:  80 000 tonnes would require at least 1-2 ha</td>
</tr>
</tbody>
</table>

A broad indication of the site requirements is set out in the following section applying a mid-point (between high and low forecasts) in the range of potential requirements for each waste stream.
MSW
Assuming a recycling and composting requirement of 74,000 tonnes by 2021, less the 2005/06 recycling and composting rate of 29,000 as an indication of existing capacity, then there is a potential shortfall of 45,000 tonnes capacity. For strategic recycling facilities this would equate to a site area of 1-2 ha, however, the land area required for in-vessel composting would be greater with a mix of facilities potentially being around 3 ha or more.

For further recovery, a mid point figure would be 77,000 tonnes (which includes a reduction for the recycling and composting rate) which would equate to a site requirement of 2 or more ha. Should MSW from the sub-region be included in the assessment then capacity approaching 200,000 tonnes would be required which would equate to a larger scale EfW facility and a site requirement of 2-5 ha.

Industrial and Commercial Waste
A similar assessment of this waste stream would indicate that around 98,000 tonnes of recycling and composting capacity would be needed. If we assume that there is current capacity for 65,000 tonnes (waste handled at sites in 2000/01) then further capacity would be needed for 33,000 tonnes of waste which would equate to a site requirement of 1-2 ha or more if composting infrastructure is included.

For further recovery, 86,000 tonnes of capacity would be needed which would require a facility of around 2 ha or more.

Conclusions
Even at these mid-range figures combined infrastructure requirements are likely to be in excess of 10 ha and clearly this would increase significantly should the higher range forecasts prove to be correct and/or substantial quantities of waste are imported for recovery. The Waste DPD in allocating sites needs to incorporate flexibility to deal with changing circumstances and technology requirements.

Landfill
No provision is made for landfill disposal and the City will be reliant upon facilities within the sub-region and potentially beyond for the disposal of hazardous wastes. The actual quantity of materials for landfilling is expected to decline substantially over the plan period and the Council will have regard to the amount of material it can dispose without financial penalty under the LATS scheme (around 31,000 tonnes towards the end of the plan period). For MSW, a worst case may be assumed to be 33% of arisings as at 2021 (say around 70,000 tonnes) however it is known that the Council will be seeking to maximise recovery so that levels of landfill are well below the LATS allowance. There will be a residue from whatever recovery technology is employed however a proportion of this may be re-used (as a secondary aggregate for example) whilst a proportion will be hazardous.

Based upon regional targets an estimate of the amount of industrial and commercial waste that may be landfilled (17%) is possible which may be around 50,000 tonnes, declining to 37,000 tonnes should recovery targets be achieved.
6. The Proposed Allocations

In summary the strategic allocations for MSW and industrial commercial wastes are:

- 16 ha at Coypool although it is envisaged that 6 ha would be available for waste infrastructure;
- 8.1 ha at Ernesettle.

A key concern of PPS10 and its accompanying guidance is that allocated sites must be deliverable. Whilst, the strategic sites identified within the DPD are both considered available, deliverable and likely to be required, circumstances can change over a plan period. Reliance upon a single site would expose the Council to significant risk of failure to meet its obligations.

This concern is indicated best by the Council’s exploration of the potential need to use of its Compulsory Purchase powers in respect of the Coypool site in 2006 at a time when its availability was extremely uncertain.

7. Conclusions on the Submission Waste DPD

The Submission Waste DPD provides ranges for the likely recycling/composting and other recovery capacity requirements and allocations are made for strategic facilities against this analysis. The Council’s own strategy and the assessment of MSW is evolving and this could lead to recovery targets that go well beyond statutory requirements and further impact on facility needs. The approach in the DPD is intended to provide some flexibility both in terms of the presentation of data and in the sites that are provided. This is considered to be critical to provide a framework for future infrastructure development to ensure that the Council can respond and contribute to sustainable waste management. It would be possible, however, for the DPD to provide some more information on indicative capacities to be clearer on how forecasts and capacities are aligned. This needs to be dealt with carefully as it will be the mix of facilities that will ultimately determine the area required.

The following table provides, as an example, a summary of potential requirements and for ease of presentation uses the mid-point between the high and low arising forecasts.
Table 1: Summary of Potential Management Requirements for MSW and Commercial and Industrial Waste (tonnes) at 2021

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MSW</td>
<td>225 000</td>
<td>74 000</td>
<td>29 000</td>
<td>45 000</td>
<td>77 000</td>
<td>74 000</td>
<td>31 000</td>
<td>43 000+</td>
<td>100 000</td>
</tr>
<tr>
<td>C&amp;I</td>
<td>221 000</td>
<td>98 000</td>
<td>65 000</td>
<td>33 000</td>
<td>86 000</td>
<td>37 000</td>
<td>N/A</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>446 000</td>
<td>172 000</td>
<td>94 000</td>
<td>78 000</td>
<td>163 000</td>
<td>111 000</td>
<td>31 000</td>
<td>43 000+</td>
<td>100 000</td>
</tr>
</tbody>
</table>

Column 1 is the mid-point between the high and low arisings forecasts
Column 2 is the mid-point between the high and low recycling and composting forecasts
Column 3 is the existing capacity estimate for recycling and composting and Column 4 is an estimated shortfall
Column 5 is the mid-point between the high and low recovery forecasts (excluding the R&C figures)
Column 6 assumes the remaining waste will be landfilled and Column 7 provides the Landfill Allowance Trading Scheme figure for MSW
Column 8 provides an indication of the potential for further recovery assuming the Council does not landfill beyond its LATS allowance
Column 9 provides an estimate of waste that may be available for recovery from other authorities in the sub-region

It is considered that the allocation of two strategic sites is the best way forward for the DPD and this is supported by the analysis in this submission. It is further contended that out of area landfill is inevitable as no further disposal options can be identified. Working closely with other authorities in the sub-region is therefore a key element of the Council’s approach to waste management, reinforced by the potential to import wastes for recovery as and when infrastructure is put in place in the City.