



**SEVERN ROAD RESOURCE RECOVERY CENTRE**

**CHAPTER 17 CUMULATIVE IMPACTS**

**Viridor**

**SLR REF 402.0036.00374**

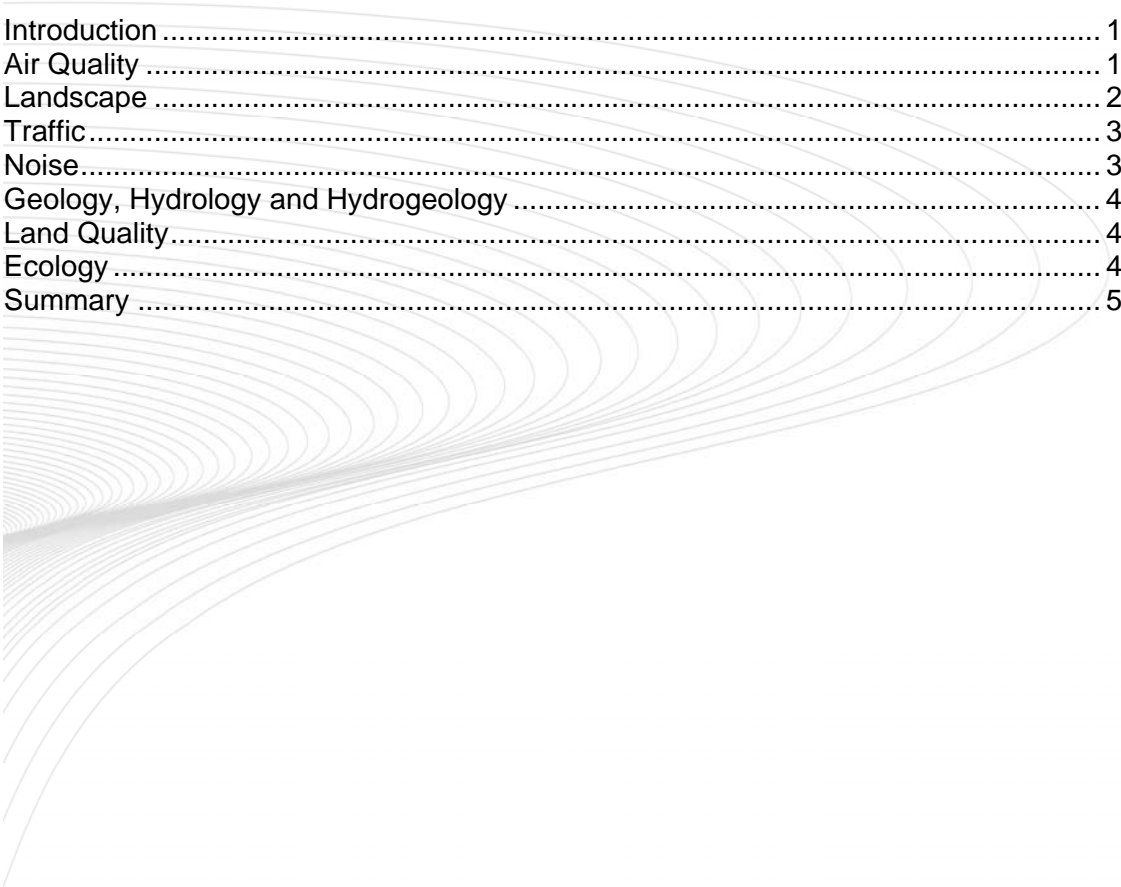
**September 2009**



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## INTRODUCTION

- 17.1 This section assesses the potential cumulative impact generated by the proposed development. Throughout the technical chapters and associated appendices contained within the Environmental Statement, the impacts that the development could potentially have on the site and the surrounding area has been assessed. This chapter draws together the findings of all the technical assessments and outlines whether any cumulative impacts may emerge from the interaction between different environmental impacts.
- 17.2 Cumulative impacts relate to the way in which different impacts can affect a particular environmental resource or location incrementally, for example, combined noise, dust and traffic emissions on a dwelling from a new road scheme.
- 17.3 In essence, cumulative impacts are those which result from incremental changes caused by other past, present or reasonable foreseeable actions together with the proposed development. Therefore, the potential impacts of the proposed development cannot be considered in isolation but must be considered in addition to impacts already arising from existing or planned development.
- 17.4 The application site is currently vacant but was formerly an active industrial site for many years and the redundant plant still remains on the site. Existing developments within the vicinity of the site include the M5 motorway, Severnside Works and Seabank Power Station.
- 17.5 Drawing on the results of the ES information, a summary of the potential cumulative impact the proposals could generate is provided below.

## AIR QUALITY

- 17.6 The detailed atmospheric dispersion modelling that has been carried out, see Appendix 7.1, Volume 3 of the ES, identifies that there are a number of sources of emissions to air in the vicinity of the application site and that they are associated predominantly with traffic and industrial activities in the Avonmouth area. Emissions from these existing sources have been included in the baseline ambient air quality data used in the assessment ensuring that cumulative effects have been considered when assessing the impact of the SRRRC.
- 17.7 In addition to ensure an even more robust assessment, the cumulative effects of the proposed SITA EfW plant in South Gloucestershire and the recently approved Cyclamax development in Avonmouth have both been considered even though neither are built yet. Also as the SITA plant has not yet been submitted as a planning application a number of assumptions have had to be made regarding the potential effects of that development. The results of this cumulative assessment are set out in Table 7-5 of Appendix 7.1, Volume 3 of the ES. This concludes that it is the already permitted

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Cyclamax plant that has a localised impact and a much higher maximum ground level concentration of NO<sub>2</sub> than either the proposed development or the SITA proposal. This is primarily due to the much shorter stack height of the Cyclamax plant when compared to the SRRRC and the assumptions made about the SITA plant.

- 17.8 It is therefore concluded that the proposed development will only make a minor contribution to existing ground level concentrations and no significant cumulative impacts are considered likely.
- 17.9 The potential impacts of dust, litter, odour and bioaerosols during operation have also been considered and the risk of significant generation of emissions during operational phase is insignificant.
- 17.10 The findings of the assessment of combustion emissions from the proposed EfW facility has found that for all pollutants the maximum predicted long-term and short term impacts would be negligible.
- 17.11 The impact of emissions on sensitive ecosystems are not predicted to be significant as process contribution is a very small increase on current levels, typically less than 1%, and neither critical levels nor critical loads are exceeded as a result of EfW combustion emissions.
- 17.12 The findings of a DMRB assessment of the effects of the development traffic on air quality at the closest sensitive receptors to affected roads indicates that the significance of impacts would 'negligible'.
- 17.13 In summary, in terms of air quality, the proposed Severn Road Resource Recovery Centre is not predicted to lead to exceedences of applicable standards for either human or ecological receptors.

### LANDSCAPE

- 17.14 The existing Avonmouth area is an established industrial zone and the application site is a former industrial site where the redundant plant still remains, including a chimney stack of 65m. To the north of the site is located the Seabank power station and to the west is a planning permission for two wind turbines with a maximum height of 131m to the tip of their blades and a hub height of 85m. The potential interaction between these developments has been considered in the landscape and visual assessment as they form the baseline against which the proposed development is assessed.
- 17.15 The aim of the building design is to produce a high quality 'landmark' building that is capable of having a positive effect on views and the landscape of the local area.
- 17.16 Given the scale and size of the proposed buildings the design is successful in reducing the perceived mass of the building sufficiently to minimise landscape and visual effects.

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- 17.17 The removal of the existing site structures and replacement by a high quality modern building is considered positive. Combining this with the industrial context of the site, means that the resultant effects are reduced further and to a level not considered significant.
- 17.18 It is therefore considered that the proposed building would meet its aim of having a positive effect on the views and landscape of the area.

### TRAFFIC

- 17.19 The Transport Assessment assessed the potential traffic and transport impacts of the Severn Road Resource Recovery Centre) and took account of the traffic generation associated with the committed Deep Sea Container Port and Cabot Park planning applications.
- 17.20 The assessment concluded as follows;
- The existing site access junction will be improved to current highway standards.
  - The existing safety record of the highway has been reviewed and it has been concluded that there is no pattern of accidents that is suggestive of a highway layout deficiency that leads to unacceptable safety risks. Furthermore, the impact of development traffic would be immeasurably small. Consequently, the proposed development is acceptable from a highway safety perspective.
  - The trip attraction potential of the development has been considered on a first principles basis and the traffic flow increases do not justify full environmental impact assessment.
- 17.21 With regard to the above, it is considered that the development proposals would not discernibly or materially worsen the existing operation of the highway network and that all highway improvements meet the required design standards. By virtue of this, the development proposal is acceptable in traffic and transport terms and would not lead to an adverse highway situation in combination with committed development in the area.

### NOISE

- 17.22 To provide an indication of the cumulative impact of noise, a noise assessment was carried out with reference to British Standard and other government guidance. The assessment has considered both the potential for the construction and operational proposals to give rise to noise and vibration impacts at the closest noise-sensitive receptors.
- 17.23 The assessment has found that:
- construction noise levels are predicted to be well below the 75dB criterion adopted for this assessment at all receptors;

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- perceptible levels of vibration from the construction works is improbable at the nearest vibration-sensitive properties, however, it has been recommended that vibration levels are subject to a watching brief; and
- site-related heavy goods, light goods and passenger vehicle movements would have no impact on the existing measured ambient noise levels at any of the properties assessed.

17.24 In summary, the cumulative impact of all operations and vehicles movements associated with the proposed development would have no impact on the existing measured ambient noise levels at any of the properties assessed.

### GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

It is not considered that the proposed development will generate a negative cumulative impact on the local water environment. Overall, it is concluded that, with respect to geology, groundwater and surface water, there would be no significant residual impacts of the proposed development with the proposed mitigation measures in place. The development will not increase flood risk on other sites in the vicinity.

### LAND QUALITY

17.25 It is concluded that the site's previous use, residual made ground and the neighbouring landfill have reduced the quality of the land to some degree. However, the human health assessment performed to date demonstrates that the soils on this site should not pose an unacceptable risk to the health of future site workers and visitors. It is not considered that the proposed development will generate a negative cumulative impact on local land quality.

### ECOLOGY

17.26 The site has no nature conservation designations within or adjoining the site and the potential impacts on the species that are currently using the site are capable of mitigation to avoid any significant adverse effects and given the relatively low level of potential impacts no cumulative effects are considered likely in this regard.

17.27 The potential effects of air quality emissions on ecological receptors has also been considered and no exceedences of applicable standards are predicted. Following construction, it is considered that the site will offer improved wildlife habitats, to those that exist on the site at present.

### SUMMARY

- 17.28 The environmental assessment process within this ES considers the potential for cumulative impacts to arise, as a result of the proposed development in conjunction with other developments within the vicinity of the site.
- 17.29 These assessments have concluded that the SRRRC will not cause negative cumulative impacts when considered in addition to existing and forthcoming developments in the vicinity of the site. In addition, the SRRRC will provide local jobs and provide a sustainable waste facility, which also produces renewable energy.