

Cascades Leisure Centre

Operational Waste Management Strategy

Gravesham Borough Council

30 November 2022

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This document has 11 pages including the cover.

Document history

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1. Introduction

Atkins has been commissioned by Gravesham Borough Council to produce an Operational Waste Management Strategy, to support a Planning Application for the re-development of Cascades Leisure Centre.

The scheme will include a replacement leisure centre building, outdoor facilities including children's play area and netball and tennis courts, 257 parking spaces, an access road and green/vegetation areas and proposed gross internal area of 7,038 m² (GIA).

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2. Waste Volumes

The following sections provide a breakdown of estimated waste types and volumes.

2.1. Waste Indices

Estimates of waste for this scheme have used British Standard 5906:2005¹ which recommends providing space for five litres of waste per m² of floor area for land uses such as leisure centres.

Review of the area schedule for the Leisure Centre has indicated that 5,280.79 m² (from the total 7,038 m² GIA) is expected to generate waste, which is the area used for the calculations below.

The Gravesham Borough Council guidance² does not suggest how waste should be split for commercial schemes such as this, however considering the requirement to reduce waste and to implement the waste hierarchy as part of the 'Energy and Environmental Control Strategy' by Gravesham Community Leisure Limited, the waste from the Leisure Centre will be split as below:

- Recycling: 55%;
- Residual waste: 40%; and
- Food waste: 5%.

Using the indices and waste breakdowns above, the waste volumes are estimated in the table below.

Table 2-1 - Waste Volumes (litres/week)

Residual	Recycling	Food	Total
10,562	14,522	1,320	26,404

It is estimated that the Leisure Centre will produce a total of 26,404 litres of waste per week.

All waste can be collected weekly by Gravesham Borough Council. Where private contractors are used, this same frequency should be part of the contract.

Further to the above bulky waste, such as furniture and IT equipment etc, will also be generated on an ad hoc basis.

¹ BSI Group (2005). BS EN 5906 Waste management in buildings — Code of practice.

² Gravesham Borough Council: Planning Guidance on Waste Collection Requirements: September 2019

3. Storage Requirements

Based on the volumes of waste shown in Table 2-1, Table 3-1 below summarises the number of bins which will be required to store the waste.

Due to the volumes of waste that will be generated, 1,100 litre Eurobins will be used to store residual waste and recycling and a 240 litre wheeled bin will be used to store food waste.

For the purpose of the calculations, the 1,100 litre Eurobins requirements have been calculated on the basis that once void space is taken into account, 1,000 litres of residual waste or recycling is expected to fill the bin.

Furthermore, once operational, the number and split of bins may change to reflect actual waste arisings produced by the Leisure Centre.

Table 3-1 - Bins required

Residual 1,100 litre Eurobin	Recycling 1,100 litre Eurobin	Food 240 litre wheelie bin	Maximum No. of Bins Needed
11	15	6	32

The information below shows how much space the bins will occupy in the external bin store (location shown in Appendix A).

The dimensions for the type of bins to be used is listed below (height, width):

- 1,100 litre Eurobin – 1.37 m x 0.98 m (1.35 m² per bin).
- 240 litre wheelie bin – 1.06 m x 0.74 m (0.79 m² per bin).

The dimensions are only for the footprint of the bins and additional space will be needed for manoeuvring etc. Further to this the bulky waste, will also require space for storage on an ad hoc basis.

Table 3-2 - Space required for each bin type

Residual 1,100 litre Eurobin	Recycling 1,100 litre Eurobin	Food 240 litre wheelie bin	Maximum Space Needed
14.85 m ²	20.25 m ²	4.74 m ²	39.84 m ²

4. Additional Requirements

Leisure Centre staff will bring the waste to the bin store and place it within the correct bins. Gravesham Borough Council will then collect waste from the bin store on a weekly basis.

4.1. Bins

All bins should be clearly marked, to enable easy identification of what waste should be placed inside each bin. In addition, further signs should be placed on the walls behind the bins, to provide further clarification. Signage and symbols should follow those designed by Waste and Resources Action Programme (WRAP) to conform to best practice.

The Eurobins should conform to the British Standard BS EN 840:1997³ and should be constructed from metal, to reduce fire risks associated with waste storage.

4.2. Bin Store Design

The bin store should be large enough to accommodate and allow for the safe use of all the bins.

Although the waste will be stored within bags in the bins, there is still a chance for leakage to occur and, as such, there should be both a water supply to clean the bins regularly and appropriate drainage within the bin stores.

4.3. Access

In accordance with the Gravesham Borough Council guidance, the immediate area outside the bin store should be level with the road, should not include an incline and the installation of a drop kerb where necessary is mandatory. Car parking spaces should not be allocated immediately in front of the access to the bin store. The maximum distance bins will be moved by collection crews should be no more than 15 metres.

³ BSI Group (1997). British Standard BS EN 840 Mobile Waste and Containers.

5. Summary

This document sets out the estimated volumes and types of waste and the bins needed to store the waste for the Cascades Leisure Centre.

Using guidance from British Standard 5906:2005, the Leisure Centre is estimated to generate 26,404 litres of waste per week.

This overall waste figure is broken down into residual waste (40%), recyclable waste (55%) and food waste (5%).

Calculations show the Leisure Centre will require 26 x 1,100 litre Eurobins for residual waste and recycling and 6 x 240 litre wheelie bins for food waste. Therefore an area of 39.84 m² is required to store these bins.

Residual, recyclable and food waste will be collected weekly from the Leisure Centre bin stores by Gravesham Borough Council.

Bins should be clearly marked to help segregation of waste and recycling and the bin store should have a supply of water and drainage to enable bins to be cleaned.

Appendix A. Bin Store Location

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Atkins
The Hub
500 Park Avenue
Aztec West
Bristol
BS32 4RZ

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