

Liverpool Road Hotel

Waste Management Review

P3258 v1

Waste Forecasts

1. This Technical Note presents a review of the waste management strategy for the Liverpool Road Hotel. This development provides 39 bedrooms under permission 117897/FO/2017 to refurbish and re-use No. 123-125 Liverpool Road, Manchester as a Hotel with associated bar and restaurant, servicing and ancillary works forecast.
2. In this review we consider three alternative waste forecasts namely that based on Manchester City Council guidance, which is a forecast for bin storage based on the number of restaurant covers, the British Standard BS5906:2005 which forecasts a weekly volume per bedroom by the type of quality of hotel and finally we compare against actual data from a Boutique hotel in Manchester.

Manchester City Council Bin Storage Forecast

3. In their guidance note GD04, MCC makes a forecast for the Bin Storage requirement of the number provides guidance for bin storage requirements and this is included in the TGA Waste Management Strategy as described in Design & Access Statement and is summarised below.

MCC Guidance suggests 1500 L per 20 covers = 4800L for 64 covers.

Space provided for 4 no.1100L bins plus 2 No.240L bins at ground floor level

4. Based on the above there is a bin storage requirement for 4 x Eurobins and 2 x 240litre bins.

BS5906:2005 Weekly Waste Forecast

5. The guidance from BS5906:2005 which includes a forecast based on the number of beds and the quality of the establishment as below.

Table 1 — Typical weekly waste arisings and subsequent storage requirements

Building	Equation for weekly waste arisings litres	Typical example of the size of concern	Weekly waste arisings litres	80 l bin/bag/ box equivalent	120 l bin equivalent	240 l bin equivalent	660 l bin equivalent	720 l bin equivalent	1 100 l bin equivalent	7.6 m ³ compactor equivalent (ratio 3:1)
4/5 star hotel	volume per bedroom [350 l] × number of bedrooms	number of bedrooms = 370	129 500	1618.8	1079.2	539.6	196.2	179.9	117.7	5.76
2/3 star hotel	volume per bedroom [250 l] × number of bedrooms	number of bedrooms = 100	25 000	312.5	208.3	104.2	37.9	34.7	22.7	1.11
1 star hotel/B&B	volume per bedroom [150 l] × number of bedrooms	number of bedrooms = 5	750	9.38	6.25	3.13	1.14	1.04	0.68	0.03

6. It can be seen that there is an increasing volume of waste generated depending on the quality of hotel. As a 'High Quality Boutique Hotel' we assume that we are in the range of a 4/5 star hotel. This forecast includes for a restaurant.
7. Applying this generation rate of 350litres of waste per bedroom per week we forecast the following waste generation volumes.

$$\text{Weekly Waste} = 350 \text{ litres} \times 39 \text{ Bedrooms} = 13,650 \text{ litres of waste per week}$$

8. If we then apply this volume to typical waste streams as described by WRAP for the hotel sector we get the weekly waste forecast as given in the Table below.

Liverpool Road Hotel Waste Forecast							PART OF SLR	
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Hotel								
Assumed 4/5 star Hotel								
Weekly Waste Forecast								
BS5906:2005 350 litres per Bedroom per week								
Bedrooms 39 bedrooms 13650 litres of waste per week								
Recycling Streams		General Refuse	Organic	Paper/ Card	Plastic/ Metal	Glass	Total	
		40%	10%	25%	20%	5%	100%	
Litres Per Week		5460	1365	3413	2730	683	13650	
EuroBin lifts per Week		5	6	3	2	3	11	
240litre bin lifts per Week							9	
EuroBin lifts per Day		1	2	1	1	1	3	
240litre bin lifts per Day							3	

9. It can be seen that it is forecast to generate c. 11 Eurobin lifts per week and around 9 x 240litre bin lifts a week. The nature of operation will require a daily collection regime. Based on that there is a **Bin Storage requirement of 3 x Eurobins and 3 x 240 Litre bins.**

Manchester Boutique Hotel

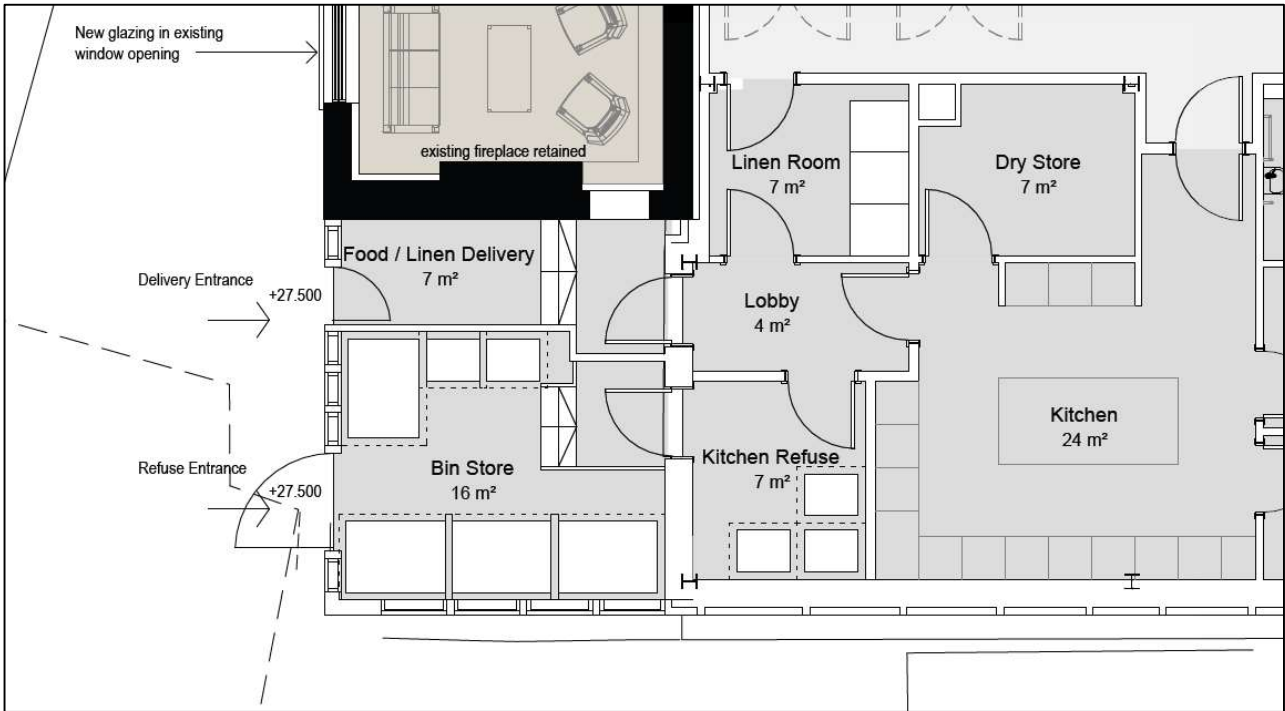
10. Vectos has advised on a Boutique Hotel with 35 keys, restaurant, spa and event space. The bin storage and waste collection regime is given below.

Waste Type	Container Size	No of Containers	Visits per week
General Waste	1100	2	5
Glass	240	3	2
Food	240	2	3
Cardboard	330	1	2

11. It can be seen that this Hotel has 2 x Eurobins for general waste and 6 x smaller bins. General waste is collected regularly while the other waste streams are collected 2 or 3 times a week.

Liverpool Road Hotel

12. Liverpool Road Hotel has a small Kitchen Bin Store of 7sqm which can accommodate c.3 x 240litre bins and a main Bin Store of 16sqm where 4 x 1100litre Eurobins and 2 x 240litre bins can be stored.



Conclusion

13. Based on the analysis above, we recommend the following bin store provision and the suggested number of collections per week:

Liverpool Road Hotel

Waste Type	Container Size	No. of Containers	Visits per week
General Waste	1100	2	3
Glass	240	3	2
Plastic/Metal	1100	1	2
Food	240	2	3
Paper/Cardboard	1100	1	2

