ARUP

Camden Lock Market

West Yard, East Vaults & Dead Dog Basin

Servicing Management Plan
August 2022

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1. Introduction

1.1 Background

This delivery and servicing management plan (DSMP) has been prepared by Arup on behalf of Camden Lock Market Limited ('the Applicant') in support of an application for full planning permission and listed building consent at the redevelopment at Camden Lock Market ('the Site') within the London Borough of Camden ('LBC').

This DSMP includes the Waste Management Plan (WMP) and outlines the proposed management of deliveries and waste management at the development.

The description of development is as follows:

"Introduction of new exhibition space, flexible events and market uses through a change of use of the existing East Vaults, installation of new retail shopfronts within West Yard; creation of a new jetty within Dead Dog Basin and erection of a temporary observation wheel together with ancillary works and alterations to existing structures, surfaces and other public realm improvements and associated works."

The location of the site is shown in Figure 1.

Figure 1 Site location

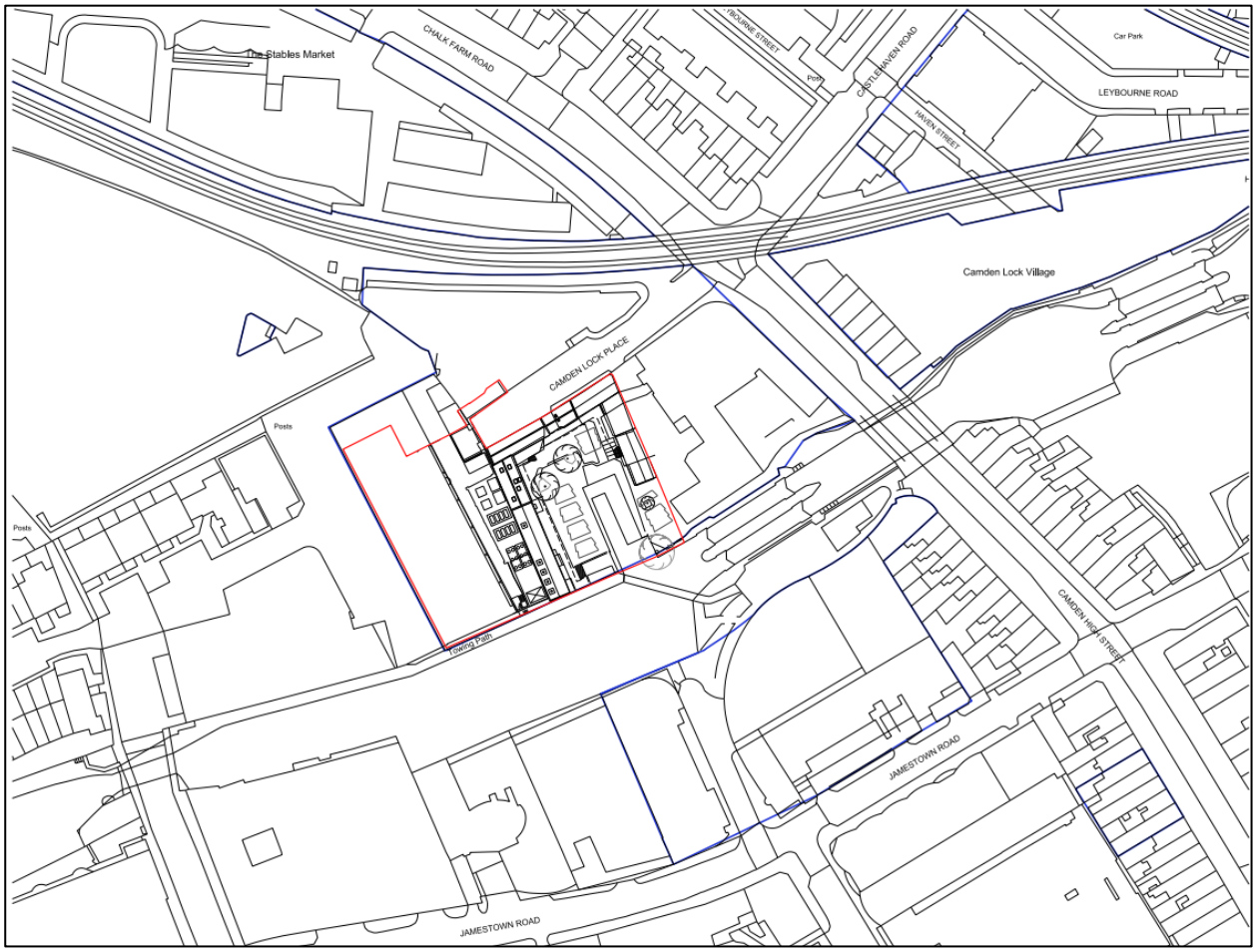
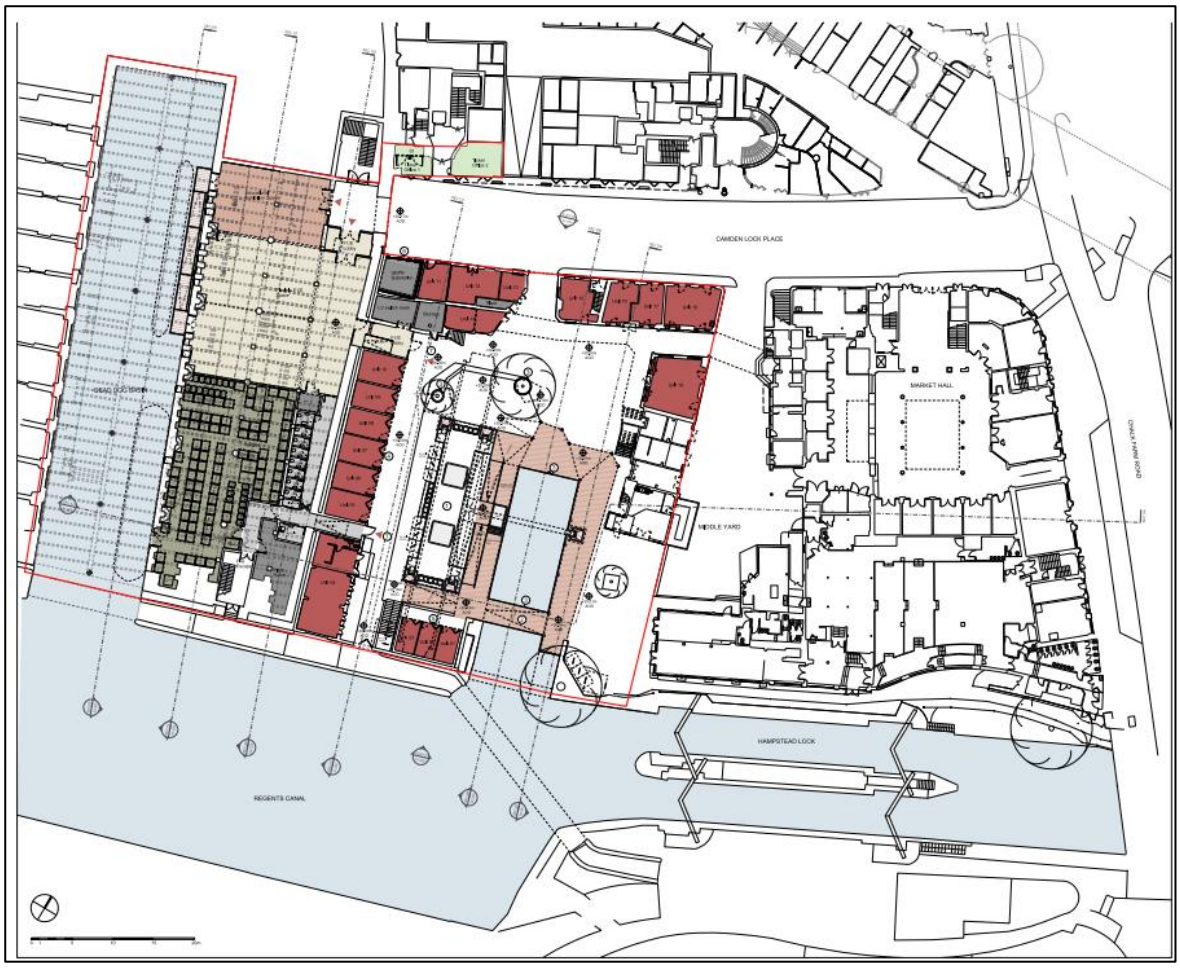


Figure 2 Proposed site plan



1.2 Area schedule

shows the area schedule for the proposed development.

Table 1 Area schedule

Camden Lock Market: Area Schedule			
Land Use	**Existing GIA (m^2)**	**Proposed GIA (m^2)**	**Difference in GIA (m^2)**
Market/shops (inc ticket office)	2,160	1,231	- 929 sqm
F1 Educational Exhibition Space	-	116	+ 116 sqm
Flexible F1/E	-	377	+ 377 sqm
Support space (plant, circulation, refuse, WCs)	-	489	+ 489 sqm
Total	2,160	2,214	+ 54 sqm

1.3 Reference publications

The following planning policy and best practice guidance documents have been considered when developing this DSMP:

National policy documents:

- National Planning Policy Framework, 2021;
- Designing for Deliveries, Freight Transport Association, 2016;
- The Waste (England and Wales) Regulations, 2011;
- DEFRA Government Review of Waste Policy in England, 2011; and
- BS5906 Waste Management in Buildings – Code of Practice, 2005.

Regional policy documents:

- The London Plan, 2021;
- The Freight and Servicing Action Plan, 2019;
- The Mayor's Transport Strategy (MTS), 2018;
- Fleet Operator Recognition Scheme (FORS); and
- Transport for London (TfL) guidance for DSMPs.

Key local policy:

- Camden Local Plan, 2017;
- Camden Planning Guidance: Design, March 2019;
- Camden Planning Guidance: Transport, January 2021; and
- Camden's Environment Service technical guidance for recycling and waste, 2018.

1.4 DSMP objectives

This DSMP sets out to meet the following objectives:

- To identify the expected frequency and duration of delivery and servicing trips associated with the proposed development and the size of the vehicles likely to be used;
- To demonstrate that goods and services can be delivered, and waste removed, in a safe and efficient manner with avoidance of vehicles arriving at the same time;
- To ensure delivery activities do not hinder the flow of traffic on the public highway or obstruct pedestrian routes;
- To minimise vehicles waiting or parking at loading areas so that there is a continuous availability for approaching vehicles;
- To provide design guidance for accommodating service and delivery vehicles with suitable offloading areas; and
- To provide design guidance for waste storage and refuse collection vehicles.

On-going monitoring and review of the DSMP will be required to ensure that the listed objectives of this DSMP are achieved. If necessary, the DSMP will be reviewed and adapted to reflect continuous improvement of the delivery and servicing process.

1.5 Report structure

This report is divided into the following sections:

- Section Two – sets out initiatives to reduce delivery vehicles and emissions through smart procurement and vehicle reduction measures;
- Section Three – sets out the type, number and nature of daily delivery vehicles and the delivery and servicing strategy for the movement of goods within the proposed development;
- Section Four – sets out the waste management strategy; and
- Section Five – sets out a process for conducting an annual review of the DSMP.

2. Delivery control measures

2.1 Overview

All commercial tenants within the development will be required to implement the following measures to reduce vehicle trips and the impact of deliveries on the local environment:

- Agree to a code of conduct for deliveries including guidelines for quiet deliveries;
- Use the communal waste collection service; and
- Provide information to their suppliers i.e., a delivery point assessment.

Additional measures that could be considered by the Facilities Management (FM) team and individual commercial tenants in order to reduce the number of daily deliveries include:

- Deploy stock optimisation techniques, such as the bunching of orders so that they arrive at the same time every week;
- Provide a list of preferred suppliers and ensure that tenants only order through them to allow collective procurement; and
- Promote the use of sustainable freight and delivery methods with suppliers.

Due to the scale and complexity of the site, virtual and physical consolidation have not been taken forward for consideration at this development.

2.2 Proposed measures

2.2.1 Time and vehicle size restrictions

To balance the operational needs of the development with the aspiration to maintain a high quality environment, it is proposed that there will be time limits on when different types of vehicles can access the different parts of the site. This is detailed in Chapter 3.

2.2.2 Code of Conduct

Tenants and their suppliers will be expected to agree to the market estate rules when operating within the development. This may be a requirement included in the leases. A section on deliveries will require tenants to agree to the following:

- Ensure suppliers switch off engines, refrigeration units and radios when making deliveries;
- Communicate the delivery locations and access points to the supplier prior to the delivery arriving;
- Ensure all equipment used to move deliveries is maintained and in good working order.

In turn the FM team should ensure that in the areas they are responsible for:

- There are no obstructions to delivery routes and within manoeuvring spaces; and
- Floor surfaces are maintained to ensure easy use of manual handling aids such as trolleys.

2.2.3 Waste collection consolidation

To consolidate waste collections into as few vehicles as possible, commercial waste collections will be managed communally, with waste collected in one large waste store and collections arranged by the on-site FM team so that the waste collection of each waste stream is undertaken by one contractor which reduces the risk of multiple waste collection vehicles arriving at site each day. Some waste streams will also be transported using a barge along the canal, further reducing road congestion in the area.

2.2.4 Delivery Point Assessment (DPA)

To assist deliveries to the development, suppliers and their logistics providers will be given a DPA. This document provides drivers with clear instructions on where and how to access the development to avoid causing disruption to other road users and pedestrians and how to ensure the development is a considerate neighbour. The content of these guidance notes will include the following:

- Provide the contact details for the FM team;
- Outline of the correct route to the delivery premises;
- Details of access time restrictions;
- Provision of a detailed parking map of the area, including restrictions;
- Risk rating for manoeuvring;
- Risk rating for loading;
- Advice to the driver about special restrictions (e.g. the need to turn off refrigeration units);
- Health and safety risks to their employees and third parties; and
- Penalty system for non-compliance such as temporary or permanent removal of access to the development.

2.3 Additional potential measures

2.3.1 Stock optimisation

Tenants would be encouraged to order frequently used items in bulk from suppliers who can provide a variety of items they require to reduce the number of individual orders arriving in separate vehicles each week. Tenants would be encouraged to order goods and materials to fully utilise their storage capability.

2.3.2 Preferred supplier

Tenants within the development would have access to a preferred supplier scheme supervised by the FM team. Tenants could be encouraged to engage in collective procurement for consumables. Tenants will agree to purchase goods and services from a small, carefully selected choice of suppliers. Each tenant will have an account with the supplier, but their orders will be combined so that deliveries will arrive together, on a single vehicle.

The development would benefit from reducing the number of supplier vehicles on the street. Tenants benefit from volume discounts and reduced delivery costs. It has been shown that collective procurement by individual groups or businesses within a building, such as Transport for London's (TfL) Palestra operating centre, reduced stationery deliveries from twice daily to only three deliveries a week.

2.3.3 Alternative fuelled vehicles

Logistics providers and courier companies are increasingly using electric vehicles and cycles for making last mile deliveries. For example, Clipper Logistics, UPS, Gnewt and Pedal Me provide electric powered goods vehicles, courier vans and electric powered cycles.

In terms of measures which could be implemented by management to encourage the use of alternatively fuelled vehicles, the following would be considered as part of the procurement strategy for any estate wide deliveries, and could be promoted to tenants and their suppliers:

- Choosing suppliers that operate a supply chain including alternatively fuelled delivery vehicles;
- Choosing a courier company for outgoing mail that uses alternatively fuelled vehicles;
- Using the procurement system within the development to encourage purchasing managers to buy from suppliers actively using alternatively fuelled vehicles in their supply chain; and
- Using the vehicle management system to offer optimum delivery (i.e., early morning) slots to operators with alternatively fuelled vehicles.

2.4 Measures considered and discounted

2.4.1 Consolidation

Physical consolidation involves the use of an off-site storage location whereby multiple suppliers can deposit goods prior to them being moved to their final destination. They are stored temporarily until they are required onsite. The different goods can then be delivered to the tenants at the same time and in the same vehicle.

Due to the complexity of the site and mix of uses on site consolidation would not be viable at the development.

3. Deliveries & servicing

3.1 Delivery & servicing vehicles

Most delivery and servicing trips to the market are currently made by Light Goods Vehicles (small vans and transit vans), with the remainder of the deliveries by Medium Goods Vehicles and Heavy Goods Vehicles. Some deliveries and collections will be made by cycle and motorcycle couriers.

The turnaround time by vehicle type is shown in Table 2.

Table 2 Servicing and delivery vehicle turnaround times

Vehicle type	Vehicle	Characteristics	Turnaround time (mins)	Bay required
Cycle couriers		1T, vehicle length 2m	15	N/A
Motorcycle couriers		1T, vehicle length 1.5m	15	
A1 Cars		1.5T, vehicle length 5m	15	6m
A2 &B Small Transit Van		2T, vehicle length 5m	15	
C Transit Van / Light Goods Vehicle (LGV)		3.5 T, vehicle length 6m	15	
D / Medium Goods Vehicle (MGV)		7.5 T – 17T, vehicle length 8m	20	8m
E1 / Heavy Goods Vehicle (HGV)		17 T -25 T, vehicle length 10-12m	30	10 / 12m
Refuse collection vehicle		26 T, vehicle length 10m	15-20	N/A

3.2 Vehicle generation

The estimated daily delivery and servicing trips to the site were calculated using an Arup in-house vehicle generation tool developed to utilise Arup research and other survey information from similar developments in the United Kingdom. The generation tool applies a delivery and servicing vehicle trip rate for each of the proposed building uses to the relevant Gross Internal Area (GIA) for that building use. The trip rates, which are expressed as vehicles per 100m² per day, have been derived from survey data from the Canal Market and other office, retail, residential and other facilities around London, as well as relevant design guidelines and local authority regulations. The surveys recorded vehicle arrival and departure times, vehicle type and size of goods vehicle use to make the delivery.

In order to make the calculations we have used the following assumptions:

- Trip rate for retail market stalls and ticket office is 0.77 vehicles/100m^2 GIA/day
- Trip rate for the exhibition space and flexible space is 0.20 vehicles/100m^2 GIA/day
- Plant, storage, refuse, WC's and circulation do not generate trips

The market trip rate of 0.77 vehicles per 100m² per day has been applied to calculate servicing trips to the market and is above the London and our survey average. This should provide a level of resilience in forecasting future delivery vehicle numbers and loading bay requirements. The anticipated number of delivery and servicing trips for the site (if it is assessed as a new development) is shown in Table 4.

Table 3 Camden Lock Market estimated servicing trips

Land Use	GIA (m^2)	Trip Rate per 100 m^2 GIA	Trips	Peak Hour (0700-0800)
Market/shops	1,232	0.77	10	**2**
F1 Educational Exhibition Space	116	0.20	1	
Flexible F1/E	377	0.20	1	
Support space (plant, circulation, refuse, WCs)	489	0.00	0	
Total	**2,214**	**-**	**12**	

As is shown in Figure 2, this development is an adjustment to the existing use of the space, with the change of use from market stalls to exhibition space, and the inclusion of new attractions such as the observation wheel. It is therefore anticipated that the delivery and servicing trips for the redeveloped market will be closely comparable to the delivery and servicing trips for the existing market and will not vastly differ from the current delivery operations.

Delivery vehicles will use Camden Lock Place to make deliveries until 9:30am each day. Between 9:30am and 6pm all remaining deliveries take place using two on-street loading bays located south of the development on Camden High Street and north of the development on Chalk Farm Road. During the day, delivery vehicles will use the on-street loading bays located on Camden High Street. This aligns with the current strategy for delivery and servicing vehicles.

Survey data from Camden Lock Place indicates that between 5am and 9.30am there are 12 delivery vehicle arrivals, which is approximately 3 per hour.

The adjustment in the use of space is assumed to generate no additional deliveries to the current. These deliveries can be accommodated in the three existing loading areas.

Figure 3 Loading locations for Camden Lock Market

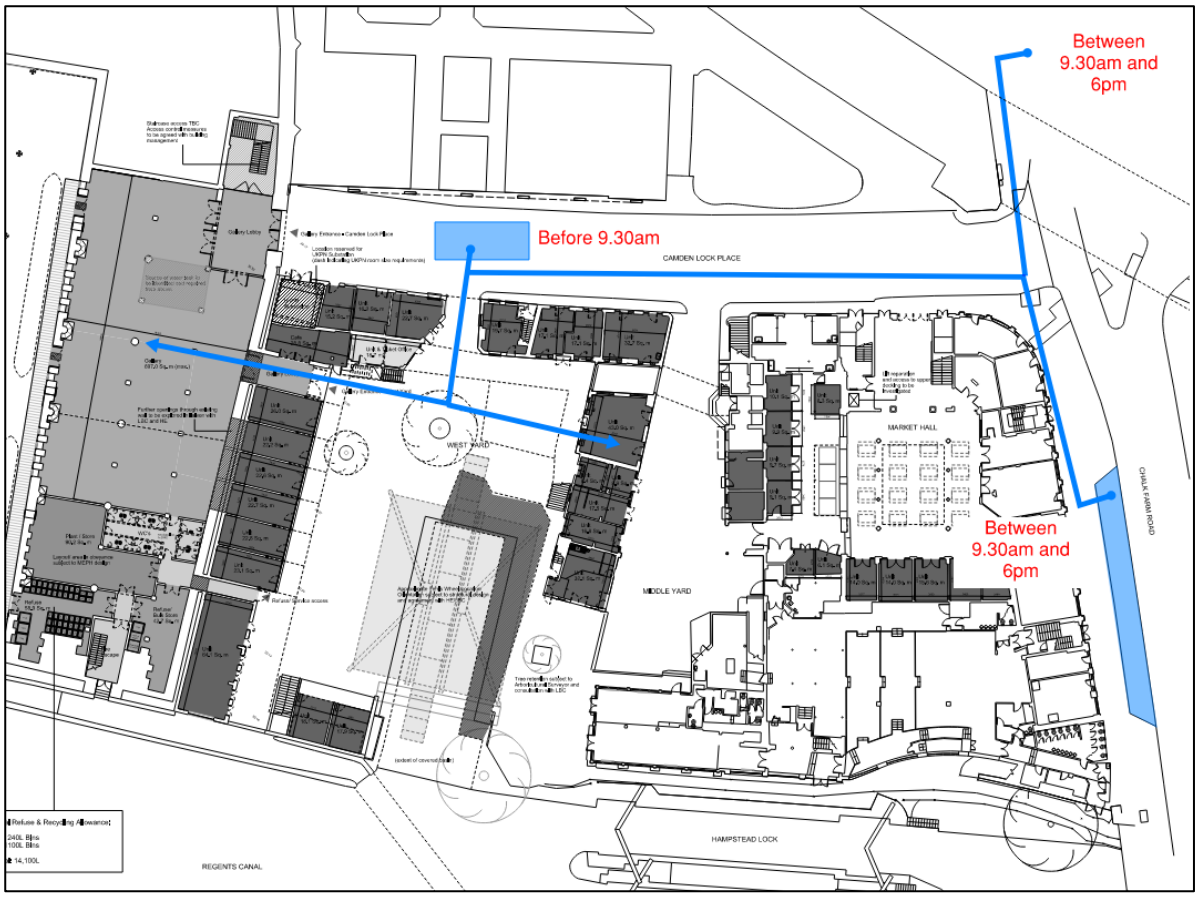


Figure 4 Camden Lock Place loading area (Before 9.30am)

Figure 5 Camden High Street loading location (9.30am-6pm)

Figure 6 Chalk Farm Road loading location (9.30am-6pm)

4. Waste management plan

4.1 Introduction

The waste management plan for Hawley Wharf has been prepared by reference to the following documents:

- BS5906:2005 Waste Management in Buildings – Code of Practice;
- Camden Planning Guidance, 2015 CPG1, pp 93-100; and
- Commercial recycling and rubbish, London Borough of Camden (LBC) website.

Arup have also consulted with the current waste operator, iRecycle, to obtain information on existing waste generation, storage, and collection procedures.

4.2 Existing waste operations

At the market currently, waste is all stored in a centralised waste store. Retailers and tenants bag and move their own waste into the store throughout the day and evening. Waste is stored in the following streams and containers at the store:

- General waste and mixed dry recycling (MDR) is mixed together and bagged before being placed directly onto a waste barge moored in Dead Dog Basin throughout the day and evening.
- When full, this barge sails to the sorting facility further out of London. This is usually twice a week.
- Card waste is baled into 450kg bales and this is collected once to twice a month by road. The current collection contractor provides the best value for collection when 18-20 bales can be collected at once, hence the collection frequency is currently set by this quantity being ready for collection.
- Food waste is collected in 10 x 240L bins and collected by road three times per week.
- Glass waste is collected in 20 x 240L bins and is collected by road twice a week.

The current waste operation generates the following waste quantities:

Table 4 Existing waste generation

Waste type	Current collection frequency	Current Storage (L)	Current storage (m^3)	Bins/bales on current schedule
General + DMR	Barge - twice weekly	62,854	63	-
Card	450kg bales – 1-2 times per month	-	1.67	14
Food	Road - three times a week	6,480	6.48	27
Glass	Road - twice a week	4,800	4.80	20

4.3 Proposed waste generation and storage

The proposed changes to the market through the redevelopment is likely to create an increase in the amount of waste generated. Following discussions with the iRecycle team it is estimated that the waste quantities could increase by up to 30%. There is also an aspiration to compact the waste by using an in-bin compactor for the general and MDR waste, a glass crusher for glass waste and a dryer for the food waste.

The use of the barge for waste movement is an important part of Camden Market's sustainability commitments. Road collection can also be difficult to manage due to space constraints and congestion so the barge reduces this pressure.

The proposed waste streams, amounts, storage and processing methods and collection frequencies are shown in Table 5.

Table 5 Proposed waste generation and storage requirements

Proposed waste generation and storage							
Waste type	**Proposed collection frequency**	**Waste container**	**Waste storage needed with uplift of 30% (m^3)**	**Proposed compaction ratio**	**Waste storage needed with uplift of 30% and compaction (m^3)**	**No. of containers required**	**Equipment required**
General + DMR	Barge - daily (two days' storage)	1,100 litre bin	163.4	2	81.71	74	Compactor – 3m²
Card	Road – 2 times per month	450 kg bale	1.63	1	1.63	10	Baler – 2m²
Food	Road - daily (two days' storage)	240 litre bin	4.22	4	2.11	9	Dryer x 2 – 6m²
Glass	Road – twice a week	240 litre bin	6.24	2	3.12	13	Crusher – 4m²
Total	**-**	**-**	**175.49**	**-**	**88.57**	**106**	**-**

Waste generated will be stored in the following containers:

- 74 x 1,100L bins for general and MDR waste
- 10 x 450kg bales for card waste
- 9 x 240L bins for food waste
- 13 x 240L bins for glass waste
- Bottle Crusher: 3000mm x W: 1200mm
- Food Dryers: 1900mm x W: 1400mm x 2
- Cardboard Baler: 1200mm x W: 1100mm
- GW Compactor: L: 1232mm x W: 1720mm
- 4 x 1,100L bins for pre-compacted general and card waste
- 2 x 240L bins for pre-compacted glass and food waste

This will require a waste store of approximately **275m².**

The sizing and location of the waste store is shown in Figure 7.

Figure 7: Waste store sizing and location

4.4 Waste procedure

Throughout the day, waste will be brought to the store by tenants and occupiers for processing by the iRecycle team. Waste will be held in bins within the store during the day. The barge will arrive in the evening after the leisure boat has ceased operating. The barge will be loaded overnight with the bins and will sail early in the morning, leaving the Basin clear for the leisure boat for its hours of operation.

The tenants will be responsible for the segregation and transfer of all waste from across the site to the main waste store.

To ensure tenants recycle as much waste as possible, and to avoid the possible contamination of recyclate, tenants will be provided with clearly identified containers for recycling and communication on the correct way to recycle in LBC.

Waste streams such as florescent tubes and batteries will be required to be collected by a licensed specialist contractor as they are designated as hazardous waste. The FM team will be required to register the site for a Hazardous Waste Licence to permit this waste to be collected safely and reprocessed. Typical waste streams collected by the FM team are listed in Table 6.

Table 6 Typical waste streams at CLM

Non Recoverable Waste	Dry Recoverable Waste
Food Waste	Plastic Bottle and Drink Cartons
Contaminated Food Packaging	Dry Cardboard
Fruit Cores	Dry Paper
Confectionary Packaging	Plastic Cups
Tea Bags	Aluminium and Steel Drinks Cans
Sandwich Wrappers/containers	Glass
Napkins	
One- Use Coffee Cups	

The retail units, Observation Wheel ticket office and leisure areas will each have interim waste storage areas within the premises for the temporary storage of waste generated during each working day. Waste should be segregated into the different streams by staff. Waste from each tenanted area will be taken by tenants to the main waste store throughout the day.

Waste from any refuse bins located around the market will be collected by the FM team and transferred to the waste store.

4.5 Waste storage requirements

The requirements for waste storage and handling outlined in the reference documents above are as follows:

- Any route where wheeled bins are to be pushed should have a gradient less than 1:12, and include no steps or kerbs;
- Waste contractors should not be required to carry bags or move bins to a refuse collection vehicle more than 20m (round trip);
- Waste rooms should be located away from the main entrance to the building;
- There should be no steps and projections at the entrance of the waste room;
- The walls and roofs of the waste room should be formed of non-combustible and impervious material and have a fire resistance; and
- Waste rooms should have proper ventilation and wash down facilities (water pipe and drainage).

4.5.1 Waste mitigation

Occupiers of the development will be encouraged to reduce, re-use and recycle waste materials where possible to reduce waste to incineration.

The FM Team and any other on-site staff handing and segregating waste will need full training on the correct residual and recycling compositions using up to date LBC guidance. The iRecycle team are committed to improving recycling rates and having the iRecycle team in the waste store throughout the day and processing the waste will reduce the risk of contamination by providing oversight and sorting. The general and MDR waste on the barge is separated at the waste plant where it is taken each morning.

4.6 Litter management

4.6.1 General public waste

Waste will be collected from any general public bins provided within the site by the FM team. Public areas such as seating, stairways and pathways will be monitored throughout the day and cleaned by the FM team.

4.6.2 Litter picking

Litter picking will be conducted by the FM team throughout the day to allow for both a safe and clean environment.

4.6.3 External/surrounding areas

The cleaning of external areas will follow the programme set out in Table 8.

Table 7 Cleaning schedule

Non Recoverable Waste	Dry Recoverable Waste
Clear debris, litter from entrances and public areas	Daily
Empty waste bins	Daily
Clear leaves from all entrances and fire exits	Weekly
Clean and wash down external signs	Weekly

4.7 Cleaning and Maintenance

The waste contractor will be responsible for the management and cleaning of the waste containers, waste processing equipment, the waste store itself and the waste barge.

Waste stores will be washed down and refuse bins cleaned by the waste contractor a minimum of once per quarter.

5. Delivery & servicing management plan review

This DSMP is intended to be an evolving document. The following sub-sections set out how the document will be reviewed and maintained.

5.1 Facilities management (FM) team

In terms of the day-to-day management of incoming goods and consignments, it is proposed that the site FM team be responsible for the following:

- Communication and liaison with each tenant;
- Monitoring misuse, unsafe or illegal use of the loading areas by the suppliers and taking action if necessary; and
- Reducing or consolidating the number of suppliers by identifying opportunities to share the same supplier base among the different tenants of the proposed development.

5.2 Delivery monitoring

The FM team will be responsible for keeping a record of servicing activity, monitoring the effectiveness of the scheduling strategy and making amendments to the plan. Key data to be captured are as follows:

- Vehicle types and type and volume of carried goods;
- Arrival and departure times; and
- Company and driver contact details.

5.3 Review process

The on-site FM team should use information and feedback from tenants, suppliers and residents to conduct an annual review of this DSMP. This review will assess the efficiency of the plan to meet the objectives of minimising the environmental impact on the surrounding area and providing servicing arrangements for the building which meet road management and safety requirements.

The FM team (on behalf of the building owner) should conduct the first review within 12 months after occupation and reviews will be conducted as necessary thereafter on an annual basis. Where necessary, changes will be made to reflect the findings of any review.