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Operational Waste Management Plan

**Spencers Wood Primary School, New School, Land at Church Lane, Hyde End
Lane and Hyde End Road, Three Mile Cross**

Report Title: Operational Waste Management for Spencers Wood Primary School, New School,
Land at Church Lane, Hyde End Lane and Hyde End Road, Three Mile Cross

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Quality Standards Control

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it has been signed by the originators and approved by a director.

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1. Introduction

The purpose of this Operational Waste Management Plan (OWMP) is to put in place the management tools required to allow residents of the proposed development to make more informed decisions about their waste choices, and therefore they are able to minimise the adverse impacts of their actions on the environment. To achieve this, a strategy will be developed in order to eliminate barriers that prevent residents from efficiently managing their waste and impact on the environment. The plan includes incentives to promote employees to reduce, reuse and recycle their waste.

For the OWMP to be successful there must be site-specific documents that are targeted to the residents of the development they represent. As this document was prepared prior to the building's occupation, it is intended to be a form a framework strategy for the site. The report should clearly set out the measures proposed to be taken to ensure waste reduction and recycling provision within the new development.

This Plan provides a review of the requirements applicable to the proposed development under local planning policy at all levels. Consideration has also been given to national and local standards and requirements included in guidance documents (i.e. British Standard 5906:2005 Waste Management in Buildings, Code of Practice (BS 5906:2005)) so as to comply with relevant objectives and targets.

The key aims of this OWMP are to:

- Provide estimations on the anticipated waste generation within the proposed development;
- Provide a strategy for the management of the anticipated waste generation within the proposed development, from the point where waste is generated to the point where it is collected for off-site treatment;
- Ensure that residents can easily segregate recyclables and are encouraged to do so;
- Allow waste to be disposed of easily, and be stored and collected in an efficient and discreet manner;
- Ensure that the proposed development has adequate facilities and space to adapt to any future waste management trends and practices;
- To contribute towards achieving Wokingham Borough Council's current and long-term targets for waste minimisation, re-use and recycling; ·
- To ensure compliance with guidance and standards for the handling and management of operational waste; ·
- To promote high levels of recycling by providing residents and staff with convenient, clean and efficient waste systems that enhances the operation of the buildings

The OWMP provides key information relating to the development proposal and provides detailed and targeted mitigation measures for the development.

Following the occupation of the development, it will be the resident's responsibility to implement the OWMP.

1.1. Benefits Of an Operational Waste Management Plan

Good practise across the UK is based upon the implementation of a waste hierarchy with prevention being the best case and disposal the worst case outlined below in Figure 1.1 (from the London Environment Strategy 2018)

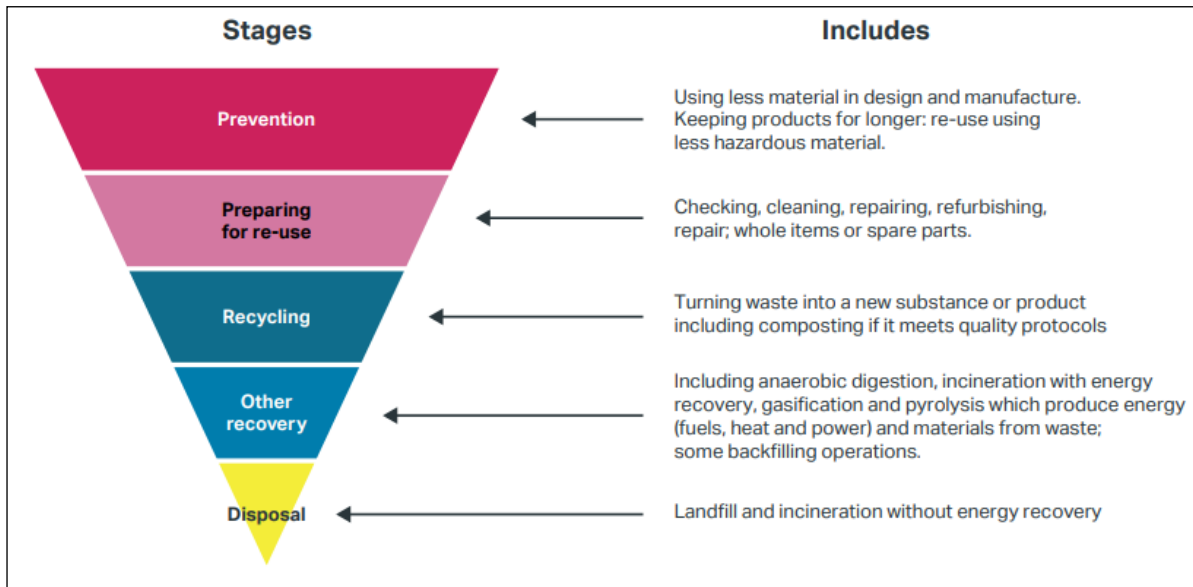


Figure 1.1: Waste Hierarchy

Planning for future operational waste management ensures that buildings will be able to operate efficiently and sustainably, while minimising the impacts on the design requirements and building performance. Waste management operations need to be safe, discreet and efficient in order to minimise the impacts on a building's users, while also ensuring waste can be collected, stored, re-used, recycled and disposed of quickly and efficiently. A successful plan will follow the basic principles of the waste hierarchy, illustrated in Figure 1.1.

An Operational Waste Management Plan will result in a number of benefits for the residents, visitors and employees.

- **Economic** – increasing the amount of recycling can cut disposal costs and allow for cost savings in the long term;
- **Data Collection and Reporting** – By tracking waste management activities via one platform and using standardised recording methods will make it easier to share information with residents;
- **Understanding** – using the plan, the amount and types of waste produced by the development will be known. This will allow people to explore methods of reducing hauling costs and negotiate for waste and recycling services that suit the needs of the development;
- **Prevention, Reuse and Recycling** – Waste prevention alongside reuse and recycling offer a significant opportunity for preventing greenhouse gas emissions. Also, by reducing the amount of waste and increasing the amount of waste reused and recycled with help to conserve raw materials.

2. Scheme Overview

2.1 Site Description

The site is located between Ryeish Lane, Hyde End Lane and Fullbrook Avenue in a residential area. To the north are existing residential properties and an existing secondary school. To the west and south are existing residential properties around Fullbrook Avenue and to the east is a new residential development currently under construction. The location of the proposed development site is provided in Figure 2.1 and the proposed site layout is provided in



Figure 2.1: Proposed Site Layout Plan

2.2 Proposed Development

This report has been prepared to support the planning application for the proposed Spencers Wood Primary School, Ryeish Lane, Spencers Wood. The proposed scheme involves a new build primary school incorporating 7 standard classrooms for 210 mainstream intake, 1 classroom to be used a specialist teaching space at the school's discretion, a nursery for circa 30 children, a hall (to minimum DfE standard for 210 pupils), toilets and 1 x hygiene room, limited reception and office space, a staff room / PPE room, kitchen (may be modified to be a servery, rather than a production kitchen), 2 small group rooms and a resource base for 14 ambulant SEND children (ASD / SEMH primary need).

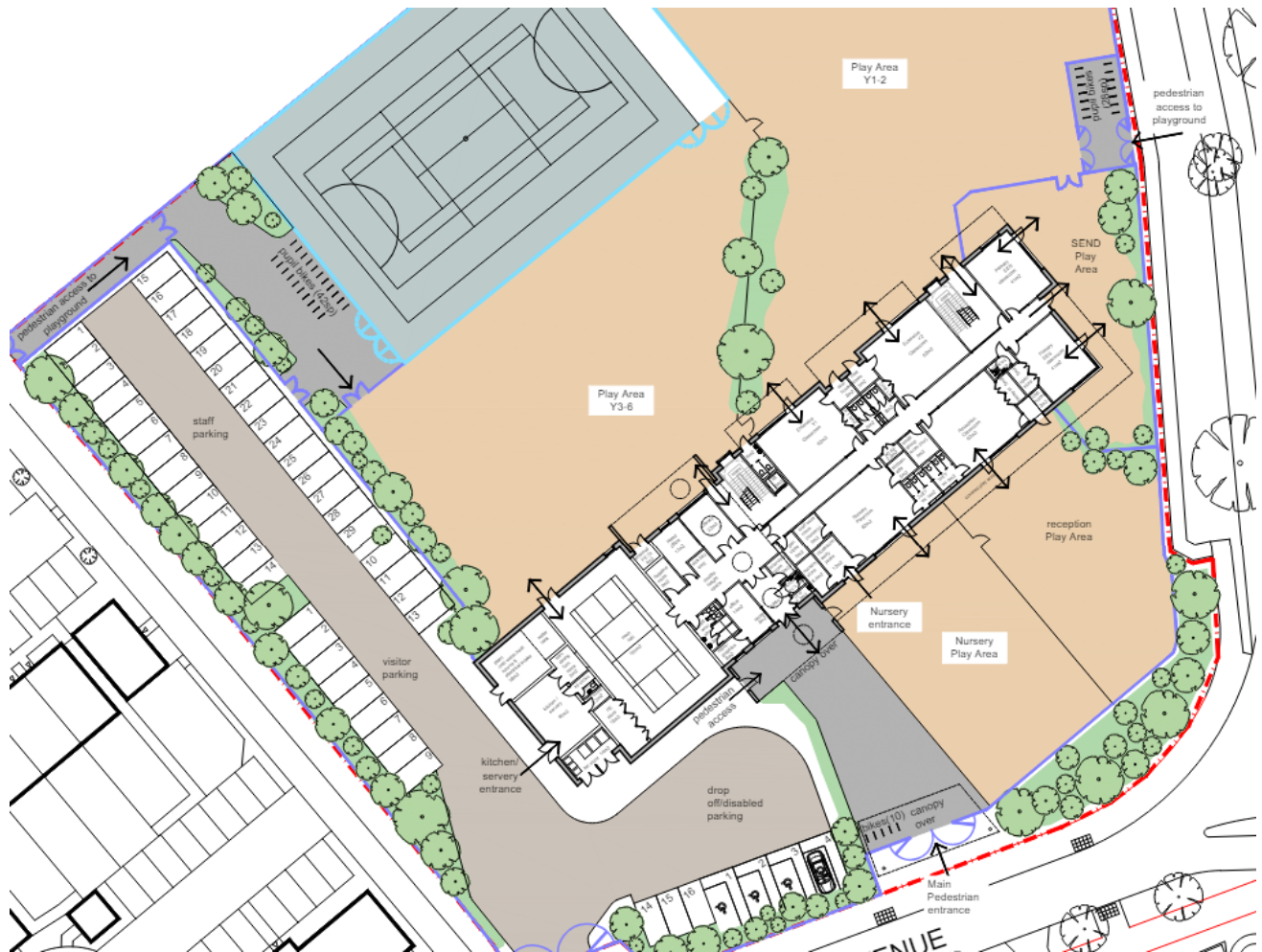


Figure 2.2: Proposed Site Layout Plan

3. Policy Review

In order to comply with local guidance and provide sufficient waste provisions, Wokingham Borough Council have provided a set of general principles. The following are the key policies in relation to this site.

3.1 Wokingham Borough Managing Development Delivery Document (Local Plan) – Adopted 21 February 2014

Policy CC04: Sustainable Design and Construction

All development, including conversions, alterations and extensions shall incorporate suitable waste management facilities, including on-site recycling.

Suitable waste management including on-site recycling:

- Adequate internal and outside storage and sufficient space for the segregation of waste should be incorporated into all developments, including conversions, alterations and extensions to buildings. Storage should be secure and discreet to maintain or enhance the character of the area. Facilities shall be consistent with the British Standards Institute 'Waste Management in Buildings - Code of practice (BS 5906:2005).
- Where on-site recycling is not possible, alternatives such as communal collection facilities (e.g. bottle banks) off site will need to be considered. These facilities and other waste storage areas should be positioned appropriately to provide easy and safe access for both waste producers and collectors (including the provision of signing where possible) in line with the Council's highways standards.

Policy Background for Policy CC04: Sustainable Design and Construction and Policy CC05: Renewable energy and decentralised energy networks.

Waste Management in Buildings - Code of practice (BS 5906:2005), British Standards Institute (2005).

3.2 Central and Eastern Berkshire Joint Minerals & Waste Plan

Sustainable Waste Development Strategy

Bracknell Forest Council, Reading Borough Council and Wokingham Borough Council formed a municipal waste management partnership called Re3 in 1999. Re3 produced a Joint Municipal Waste Management Strategy for the period 2008 to 2013. This was updated in 2016/1795 and includes a target to achieve 50% reuse and recycling by 2020. In support of this target, Wokingham Borough Council introduced food waste collection in April 2019. Work is ongoing regarding an overarching update. This Plan will support any subsequent update.

More recently, the Government's Resources and Waste Strategy⁹⁶ sets a blueprint for eliminating avoidable plastic waste, doubling resource productivity and eliminating avoidable waste by 2050. As well as a move towards a circular economy, the Strategy sets out challenging targets including: • 50% recycling rate for household waste (2020); • 65% recycling rate for municipal solid waste (2035); • Municipal waste to landfill 10% or less (2035)

4. Waste Management and Storage Strategy

4.1 Waste Management Strategy

Internal management arrangements are proposed so that waste is controlled internally prior to collection. All waste collection will be via a council run service and will collect waste for the school. Aiding this all-waste provisions will be designed to incorporate waste separation bins, suitable for recycling and reducing the quantity of waste produced.

Clear communication with the end user will be key to facilitate recycling during operation. This will be in the form of simple-to-use non-technical building user manuals, as well dedicated facilities management personnel undertaking training.

The facilities management staff will be instructed to remove the waste from the individual waste bins and deposit it in the central waste store provided.

Any access to the waste storage room is only for selected staff and facilities management team. The storage area will be easily identifiable through the use of clear and appropriate signage along with information poster in the store outlining the importance of recycling, for example in the form of leaflets or posters.

In order to encourage and promote awareness of recycling in new developments, high-profile signage will be provided in the waste store to discourage the deposit of recyclables in refuse containers and to encourage the correct use of the recycling service provided. It is also good practice for any information packs provided to staff to include full information on the recycling facilities provided. Suitable leaflets and advice on signage are available from the facilities management staff.

Storage areas are located and designed to fit in with the school layout and waste collection access alongside reducing the visual impact of the bins and the enclosure by making it internal. The internal location of the bin storage area is contained within a suitable enclosure to prevent nuisance from the spread of waste, odour or noise. The enclosures are therefore suitably designed to prevent entry by vermin and are fitted with steel louvres for maximum air flow and ventilation. Furthermore, it is equally designed to be accessible for disabled people, in line with the general requirements of BS 8300:2018.

Figures 4.1 Ground Floor layout confirms that sufficient space will be provided within the store to allow access to containers. The entrance doors will have a minimum height of 1.8m to allow ease of access for both residents and operatives, and a minimum of 2.5m from floor to ceiling to ensure the lids on all containers can be opened fully. To ensure that maximum permitted distances for carrying waste are not exceeded by the resident, the bin storage areas to is located in an easily accessible location.



Figure 4.1: Waste Storage within the proposed development

5. Storage Facilities for Waste Prior To Collection

5.1 School Internal Waste Provision

Internal storage bins will allow for occupants to split their waste into general waste, food waste and recycling where applicable. This will allow temporary storage before it can be transferred into the bin store containers. The internal furniture and fittings layouts have not yet been developed at this stage, with rather a room layout provided in the floor plans. However, it is assumed that internal waste containers will be located in all the occupied rooms and specialist sized containers for the kitchen. The storage will be split into general waste, food waste and mixed recycling waste.

5.2 Proposed Waste Store

Due to the BS 5906:2005 method not having a school option for calculating the waste storage, the provision calculation has been based on the widely used statistic that primary schools generate around 45kg of waste per pupil, per academic year (39 weeks). Thus, using the BS 5906:2005 method's bin sizing, an overall number of bins can be established, and the store is dedicated to the expected waste totals for all the waste sources.

In accordance with the calculated weekly totals, the volumes of refuse and recycling containment are required using the British Waste Management in Buildings standard BS 5906:2005 method where possible.

In order to achieve this volume requirement, the following table 5.2 demonstrates the confirmed bin sizing.

© BSI 30 December 2005

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)
Domestic	number of dwellings × (volume arising per bedroom [70 l] × average number of bedrooms) + 30 ^a	number of dwellings = 1, average number of bedrooms = 3	240	3.0	2.0	1.0	0.36	0.33	0.22	0.01
Office	volume arising per employee [50 l] × number of employees	number of employees = 40	2 000	25.0	16.67	8.33	3.03	2.78	1.82	0.09
Shopping centre	volume arising per m ² of sales area [10 l] × square meterage	sales area = 25 000 m ²	250 000	3125.0	2083.3	1041.7	378.8	247.22	227.3	11.11
Fast food outlet	volume per sale [5 l] × number of sales	number of sales = 45 000	225 000	2812.5	1875.0	937.5	340.9	312.5	204.6	10.0
Department store	volume per m ² of sales area [10 l] × sales area	sales area = 3 700 m ²	37 000	462.5	308.3	154.2	56.1	51.4	33.6	1.64
Restaurant	volume per number of covers [75 l]	number of covers (i.e. dining space) = 8	600	7.5	5.0	2.5	0.91	0.83	0.55	0.03
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
Supermarket (small)	volume per m ² of sales area [100 l] × sales area	sales area = 800 m ²	8 000	100.0	66.7	33.3	12.1	11.1	7.3	0.36
Supermarket (large)	volume per m ² of sales area [150 l] × sales area	sales area = 2 000 m ²	30 000	375.0	250.0	125.0	45.4	41.7	27.3	1.33
Industrial unit	volume per m ² of floor area [5 l] × floor area	floor area = 2 000 m ²	10 000	125.0	83.3	41.7	15.1	13.9	9.1	0.44
Entertainment complex/leisure centre	volume per m ² of floor area [100 l] × floor area	floor area = 3 500 m ²	17 500	218.8	145.8	72.9	26.5	24.3	15.9	0.78

^a Based on average household occupancy.

Table 5.1: British Waste Management in Buildings standard BS 5906:2005

All site waste collection will be undertaken by a council service weekly for general and recycled waste. Therefore, the below calculated bin requirements

Building Area	Recyclables	General Waste	Food Waste
School	2 x 1100L Eurobins	1 x 1100L Eurobins	3 x 240L Eurobins

Table 5.2: Proposed Recycling and Waste Bin Size Requirements

The total numbers of general waste to recycled waste bins have been calculated based on the Government's Resources and Waste Strategy 2018 target for 65% of waste to be reused/recycled by 2030.

It will be the responsibility of the site facilities staff to deposit internal waste bins in the bin store. All bins, both wheeled and bulk, will be in the correct colours and have standard council logos (bulk bins will also have the predetermined graphics printed on them) and comply with European Standard EN840.

In accordance with recommended guidance, a gap of approx. 15cm is provided between the bins to allow for bin movement. Bin Wash facilities will be provided within the bin store.

5.3 Organic and Compost Waste

With the expected food waste to be generated by the kitchen, two organic waste (food-recycling) bins will be provided to the school. This will be x3 brown 240l plastic wheeled bins.

5.4 Storage Of Bulky Articles

Additional storage space is provided in the bin store for bulky goods, such as refrigerators/freezers, furniture, cookers and electrical equipment, much of which could be recycled.

Bulky waste will be collected on an ad hoc basis, as and when required. It will be the role of the facilities manager to book special collections for any bulky waste collections. Bulky waste will be stored in the bin store.

5.5 Waste Storage Design

The following recommended measures have been incorporated into the architectural design as per Figures 4.1 Ground Floor layout:

- Storage areas shall be clearly designated by a suitable door or wall sign and with floor markings.
- The storage areas will be large enough to allow access to all containers by the school without needing to rearrange other bins within the space. There will be enough space to let staff access the long edge of each bin. Storage will be designed to be accessible for disabled people, as specified in BS 8300:2009.
- For the Eurobins or similar wheeled bins, the path between the storage area and vehicle access area shall:
 - o Be free of steps or kerbs (a dropped kerb may be required)
 - o Have a solid foundation
 - o Be rendered with a smooth continuous finish (i.e. No cobbled surfaces)
 - o Be flat, or slope down with a maximum gradient of 1:12
 - o Have a minimum width of two metres.
- The floor and walls of bin stores will be constructed and finished in materials that are impervious and easy to clean. Where appropriate, a trapped gully and water supply shall be provided to make cleaning easier.
- Adequate mechanical ventilation will be provided.
- To avoid anti-social behaviour and fly tipping, waste store will be internally with adequate lighting
- The waste storage is internally contained within an enclosure to prevent nuisance from the spread of waste, odour or noise. See figure 4.2.

- There is a suitable buffer around the bins to prevent contact between the bins and the inside faces of the walls. The external faces of the enclosure walls are constructed in material that is in keeping with the visual style of the surroundings.
- The enclosures shall be suitably designed to prevent entry by vermin.
- The lighting will be sealed bulkhead fittings. And lighting will have a proximity detection system or on a time delay button to prevent lights being left on. Lighting shall be easy to maintain by local site staff without the need for specialist parts.
- All doors will be >2m wide to allow for safe manoeuvring of bins and the internal height for a bin storage area and any access doorways is >2m as required.

It is the responsibility of the site managers to arrange for bins to be cleaned.

Site managers will be responsible for the security of the bins, and the storage arrangements should therefore be designed to minimise the risk of theft, arson or other vandalism as per Figure 4.2

5.6 Other Waste Items

There is likely to be a small component of the overall waste arising from the proposed development that will comprise other waste streams, such as paints and or waste from building maintenance. This type of waste is termed “unique” as it is unlikely to be produced on a regular basis and therefore its management will be on special arrangement with a registered waste handler for the specific waste that is produced. All waste management will be required to comply with The Waste (England and Wales) Regulations 2014 and provisions for the safe separation and storage of these waste streams.

5.7 Future Waste Arisings

The storage area and management systems are designed to meet current waste and recycling targets as a minimum and are sufficiently flexible to meet more ambitious future targets.

It is considered that widespread initiatives to reduce waste and improve materials reuse and recycling are likely to reduce long-term production of waste from the proposed development. Therefore, it is likely that the current waste production and storage requirements will represent a reasonable worst-case scenario and should therefore form the basis for long-term waste management provisions.

A potential future initiative is a greater degree of separation in the recycling. Splitting the types of recycling on site such as paper, card, glass and metal containers, plastic bottles, pots tubs and trays and food/drink cartons.

6. Waste Collection and Logistics

The council run service will undertake a weekly waste collection for recycling, general waste and food waste. The collection times will be agreed with the council as due to school opening times the building may have a different scheduled collection day and time, which will be confirmed prior to occupation.

All refuse collections will be from outside the bin store. The facilities management team will open the store and manoeuvre the bins to the designated zone at the appropriate time prior. The bins are located so the waste collection vehicles are provided manoeuvring area upon collection.

The collection vehicle will stop on the drop off area adjacent to the building and collect directly from the collection point (Fig. 6.1). In order to minimize disruption to the school, the bins will be taken out by the facilities management shortly prior to the typical time of arrival for the waste collection, which will be agreed. This will be at a time which would not overlap with key school children drop off/collection hours.

The collection space for the vehicle to stop is considered a safe stopping location which causes minimal obstruction. The number of refuse vehicles traveling up Hyde End Road and Fullbrook Ave will not increase from the existing situation and the existing waste collection route remain unchanged. The drop off area is sufficiently sized for the waste vehicle to do a simple 3-point turn to exit. there will be a drop curb outside the bin store to allow for the bins to be easily wheeled to the waste collection vehicle.

By being an internal store, the waste storage is designed to minimise the risk of theft, arson or other vandalism. It is the responsibility of the facilities managers to arrange for bins to be cleaned. Sufficient provisions are made to ensure that all health and safety requirements are met for on-site staff to move the bins. The waste will be left in the designated waste collection space externally with a solid, smooth and continuous finish. As per Figure 6.1, The pathway is free of any ironworks, drainage gullies or other features which would obstruct or impede the movement of the bins.

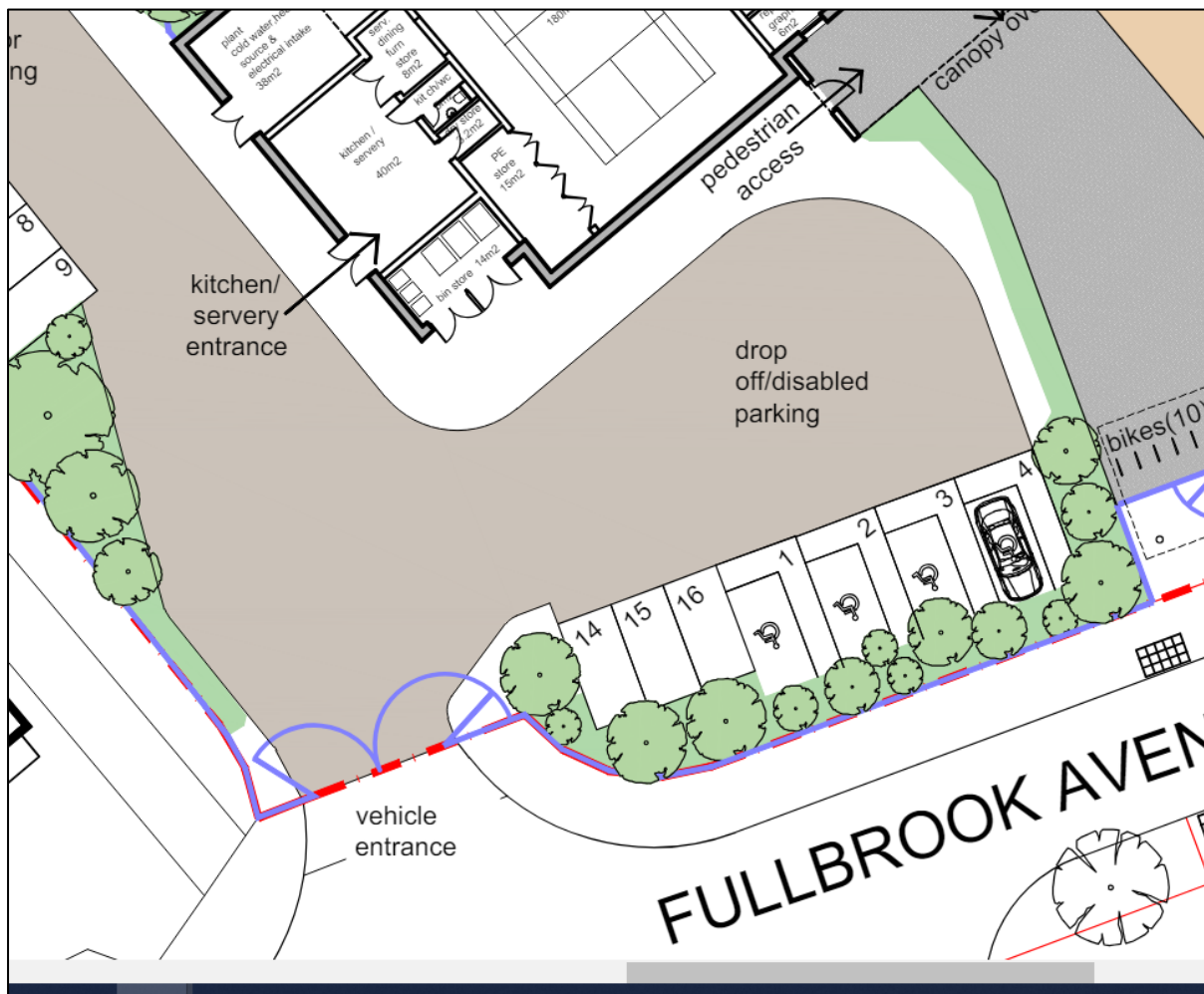


Figure 6.1: Waste Collection Space

This would comply with the requirement for the furthest point within the storage/collection area to the loading position at the back of the vehicle to be a maximum 10m.

The waste store is in a sufficient location for easy access by the waste management team and in order to there will be a drop curb outside the bin store to allow for the bins to be easily wheeled to the waste collection vehicle.

7. Waste Plan Coordinator

The facilities manager will be appointed as the Waste Plan Coordinator (WPC) who will take overall responsibility for the development of a waste plan.

The appointment of a WPC is a key measure and is considered essential for the management and successful implementation of measures associated with the Waste Plan. The key roles of the WPC are as follows:

- Promote the initiatives of the Waste Plan;
- Promote waste reduction through reduce, reuse and recycle strategies;
- Implement and manage the monitoring strategy.

It is expected that the time devoted to developing the OWMP will vary over a certain year but will be at its peak during monitoring periods

8. Summary

The proposed development will be sustainable with high standards of environmental performance.

As such, due consideration has been given to waste generated by the development during its operational stage, and has established the following aims:

- To contribute towards achieving current and long-term government and local targets for waste minimisation, re-use and recycling;
- To allow that all legal requirements for handling and management of waste during operation of the development are complied with; and
- To provide staff with convenient, clean and efficient waste management systems that enhance the operation of the buildings and promote high levels of recycling.

8.1 Plans for Implementation

The Waste Plan Coordinator will review opportunities for encouraging staff to minimise waste generation and maximise recycling. Clear communication with the end user will be key to facilitate recycling during operation.

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