Integrated Health Projects

THE CHRISTIE ADVANCED SCANNING AND IMAGING CENTRE DEVELOPMENT

Operational Waste Management Strategy



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NATIONAL & LOCAL WASTE POLICY & GUIDANCE

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1. This Waste Management Strategy has been prepared by WSP for Integrated Health Projects acting on behalf of the Christie NHS Foundation Trust ('the Applicant'), in support of an application for full planning permission for the Christie Advanced Scanning and Imaging Centre Development (CASICD) (hereafter referred to as 'the Proposed Development'), within the administrative boundary of Manchester City Council (MCC).

1.1.2. This Waste Management Strategy considers the potential impacts that may arise from waste generated during the operational phase of the Proposed Development, with the overall aim of developing a strategy for legislative compliance and good practice in the separation, storage and collection of waste arising.

1.2 DEVELOPMENT DESCRIPTION

1.2.1. The Proposed Development will be home to a new Computed Tomography (CT) & Radiology Department at Ground floor with links back to both the existing hospital and the new Paterson Building. The upper floors will provide ward accommodation.

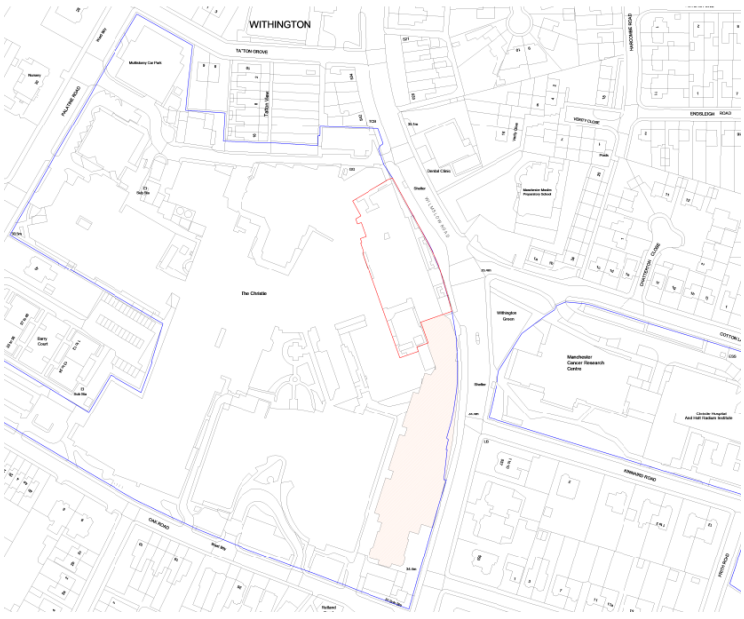
1.3 THE SITE

1.3.1. The Christie hospital is approximately 4 miles to the south of the centre of Manchester. The site is close to the M60 motorway and allows for connectivity to their satellite sites within Oldham, Macclesfield and Salford.

1.3.2. The site sits within a predominantly residential area bordering onto the neighbourhoods of Didsbury to the south and Withington to the north. As such it benefits from good transportation links from both public transport and private cars.

1.3.3. The location of the Site is shown in **Figure 1-1**.

Figure 1-1: Location of the Site



1.4 REPORT STRUCTURE

This report is set out in the following format:

- **Section 1**: Introduction
- **Section 2**: Waste Legislation, Policy and Guidance
- **Section 3**: Management of General Waste – provides an estimate of waste arising and outlines the plan which will be adopted to manage refuse and recycling waste generated once the proposed development is operational.
- **Section 4**: Management of Healthcare Waste – provides an estimate of waste arising and outlines the plan which will be adopted to manage healthcare wastes generated once the proposed development is operational.
- **Section 5:** Summary & Conclusions.
- **Appendix A:** National and Local Waste Policy and Guidance

2 WASTE LEGISLATION, POLICY AND GUIDANCE

2.1 INTRODUCTION

2.1.1. The development and implementation of European Union (EU) waste policy and legislation is delivered by EU Directives e.g. Landfill Directive, Waste Electrical and Electronic Equipment Directive etc. Member States must implement the policy drivers and requirements of these Directives through national legislation.

2.1.2. The revised Waste Framework Directive (rWFD) is a unique EU Directive because it clarifies the definition of 'waste' and of other concepts such as 'recycling' and 'recovery'. It implements a revised Waste Hierarchy, expands the 'polluter pays' principle by emphasising producer responsibility and applies more stringent waste reduction and waste management targets for Member States. It also requires Member States to take measures to promote high quality recycling and to set up separate collections of paper, plastic, metal and glass.

2.1.3. The UK formally left the EU on 31 January 2020 and the subsequent transition period ended on 31 December 2020. During that time, the UK was treated for most purposes as if it was still an EU Member State, and most EU law (including as amended or supplemented) continued to apply to the UK. As of 1 January 2021, legislation will remain in force as part of UK law and be repealed or amended at the will of Parliament or the devolved parliaments/assembly.

2.1.4. This section focusses on the details of the national legislation that is relevant to the Proposed Development, much of which is influenced by the rWFD, National and local waste policy and guidance reviewed during the preparation of this Waste Management Strategy are listed below.

2.2 NATIONAL LEGISLATION

2.2.1. A list of relevant items of national waste legislation is outlined below in reverse chronological order:

- **Environment Act 2021** – The Act contains several provisions in relation to waste which will affect both collection and disposal authorities. It establishes the Office for Environmental Protection, tighter regulations for shipments of hazardous wastes, introduces the deposit return scheme for drinks containers, charges for single use plastics, greater consistency for recycling collections in England and Extended Producer Responsibility for packaging.
- **Waste Management, The Duty of Care Code of Practice (2018 update)** – This code of practice replaces the 1996 and 2016 Codes and is pursuant to Section 34(9) of the Environmental Protection Act 1990. It sets out practical guidance on how to meet duty of care requirements and its rules will be taken into account where relevant in any case based on breach of the duty of care.
- **The Waste (England and Wales) Regulations 2011 (as amended)** – As of 1 January 2015, waste collection authorities must collect waste paper, metal, plastic and glass separately. It also imposes a duty on waste collection authorities, from the date, when making arrangements for the collection of such waste, to ensure that those arrangements are by way of separate collection.
- **Environmental Protection Act 1990** – Part II of the Act was originally implemented by the Duty of Care Regulations 1991. The Duty of Care is a legal requirement for those dealing with certain kinds of waste to take all reasonable steps to keep it safe and is set out in Section 34 of the Act. The Waste (England and Wales) Regulations 2011 repealed the Environmental Protection (Duty

of Care) Regulations 1991 and apply the Duty of Care requirements by the Environmental Protection Act 1990.

2.3 NATIONAL & LOCAL WASTE POLICY & GUIDANCE

2.3.1. The relevant national and local waste policy that was reviewed during the preparation of the Waste Management Strategy is outlined below and further detail provided in Appendix A:

- Ministry of Housing, Communities and Local Government (MHCLG), now the Department for Levelling Up, Housing and Communities, *National Planning Policy Framework* (updated July 2021);
- MHCLG, *National Planning Policy for Waste* (2014);
- Department for Environment, Food and Rural Affairs (Defra), *Our Waste, Our Resources: A Strategy for England* (2018);
- Defra, *Waste Management Plan for England* (2021);
- Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance (SPD (2007));
- Manchester City Council, *Core Strategy Development Plan Document* (Adopted 2012); and
- Manchester City Council, *Waste Storage and Collection Guidance for New Developments v7* (2023).

3 MANAGEMENT OF GENERAL WASTES – NON-HEALTHCARE WASTES

3.1 INTRODUCTION

3.1.1. This section details the strategy which will be adopted to manage the general wastes, including refuse (non-recyclable waste) and recycling, arising from the proposed development once operational. Healthcare waste is covered in **Section 4**.

3.2 WASTE MINIMISATION

3.2.1. Identifying where wastes are produced is a first priority for waste minimisation and involves a systematic waste mapping exercise. Investigating and questioning why each waste stream is produced is the next priority with consideration of any alternative options e.g. reusable instead of disposable items. The focus for waste mapping typically covers all waste arising from healthcare activities, waste generated by staff, patients and the visiting public.

3.2.2. Good procurement and resource efficiency practices will ensure contractors work with the Trust in targeting waste elimination and minimisation.

3.2.3. This strategy focusses on managing waste once it has been produced and refers to the waste hierarchy to promote the efficient recovery, recycling or as the least preferred option, disposal of general waste.

3.3 WASTE GENERATION MODEL

3.3.1. The quantity of general wastes arising from the Proposed Development has been estimated using Manchester City Council's guidance, *Waste Storage and Collection Guidance for New Developments v7 (2023)* ('the Guidance').

3.3.2. The Guidance does not specify waste generation metrics for healthcare facilities or Hospitals. For the purpose of this operational waste strategy, the metric for office premises is used to estimate refuse and mixed recycling waste quantities arising from the Proposed Development once operational.

3.3.3. The Guidance metric used for commercial office premises is provided in **Table 3-1**.

Table 3-1 – MCC Waste Generation Metric for Commercial Offices

Use Class	Waste (litres) / 1,000 sqm Gross Internal Floor Area (GIA) sqm *
Office	2,600

* *50% of this capacity should be retained for recycling*

3.3.4. Using the MCC metric provided **Table 3-1,** a total development GIFA of 9,243 m^2 (over 3 Floors), allowing for 50% recycling and 10% of this as cardboard packaging, and assuming a 10% extra over allowance for food waste, estimated waste generation quantities for general waste is summarised in **Table 3-2**.

Table 3-2 - Estimate Waste Generation

Waste	Weekly Total (litres)	Daily Total (litres)
Refuse	12,016	1,717
Dry Mixed Recycling (DMR)	10,814	1,545
Food Waste *	2,403	343
Cardboard Packaging **	1,202	172
Total	**26,435**	**3,776**

* *Food waste estimate is based on an extra over allowance of 10% of the total estimated waste volume.*

** *Cardboard is estimated to be 10% of DMR total based on Recycling Action Yorkshire's report Delivering a pilot waste management system for the Barnsley Hospital NHS Foundation Trust (2007). This quantity has been subtracted from the total DMR.*

3.4 PROPOSED WASTE MANAGEMENT STRATEGY

3.4.1. The proposed waste strategy for general wastes generated at the Proposed Development is broken down into the following stages:

- Source Segregation;
- Interim Storage, and
- Waste Collection.

Stage 1 – Source Segregation

3.4.2. General waste will be segregated at point of arising into refuse, dry mixed recycling (DMR), cardboard packaging and food waste (where appropriate).

3.4.3. Sufficient numbers of bags in purpose-built bins will be provided within each clinical, operational support and public area for segregated refuse and DMR. A typical example of a bin is shown in **Figure 3.1**.

Figure 3-1 - Typical refuse bin.



3.4.4. Refuse and DMR bags will be exchanged as and when required by Facilities Management (FM) and used bags taken to the waste disposal hold on each floor where a 770 litre bin for each will be provided to ensure segregation is maintained during interim storage.

3.4.5. The location of the waste disposal hold on the ground floor is provided in **Figure 3-2**.

Figure 3-2 - Ground Floor Disposal Hold



3.4.6. Disposal holds of similar size and location will be provided on the first and second floors.

3.4.7. Cardboard packaging will be segregated at source by staff and collected by Facilities Management (FM) and taken to the waste disposal hold on each floor where a 770 litre bin will be provided for interim storage exclusively for cardboard waste.

3.4.8. Food waste bins with internal liner bags will be provided at selected locations including the staff rest area.

3.4.9. Segregated food waste will be collected from each location and taken to the temporary storage area at the rear of the kitchen where 240 litre bins will be provided.

3.4.10. Refuse, DMR and food waste will be bagged at all times during transport through the hospital with warnings and highlights of the content clearly displayed.

3.4.11. All forms of waste being transported within the hospital will be kept to designated services corridors and routes and operational procedures developed and implemented to avoid contamination between clean equipment and supplies and general and clinical waste.

Stage 2 – Interim Storage

3.4.12. The disposal hold on each floor will provide sufficient storage capacity to accommodate Refuse, DMR and Cardboard Packaging.

3.4.13. The number of the bins provided in the disposal hold on each floor for refuse, DMR and cardboard is detailed in **Table 3-3** below.

Table 3-3 –Disposal Hold Bins for General Waste

Waste	Total Daily Waste (litres)	Daily Waste Per Floor (litres)	No. 770 litre Bins Per Hold
Refuse	1,717	572	1
Dry Mixed Recycling (DMR)	1,545	515	1
Cardboard Packaging	172	57	1
Total	**3,434**	**1,144**	**3**

3.4.14. Bins in the disposal hold will be emptied daily.

3.4.15. The Hospital currently provides 3 No. 240 litre bins for food waste in the temporary storage area at the rear of the kitchen. These bins are emptied by the appointed contractor on alternate days.

3.4.16. The number of the bins required to accommodate current and additional food waste from the Proposed Development is detailed in **Table 3-4** below.

Table 3-4 - Estimate Food Waste Generation

Source of Food Waste	Weekly Total (litres)	Daily Total (litres)	Storage Requirement (2 Day Contingency)	No. Bins Daily Collection (2 Days Storage)
Established Hospital	2,160	309	618	3
Proposed Development	2,403	343	686	3
Total	**4,563**	**652**	**1,304**	**6**

3.4.17. The estimated potential quantities of food waste arising from the proposed development will require an additional 3 No. 240 litre bins and daily collections.

3.4.18. Cardboard packaging is currently collected from wards and departments across the Hospital and taken to the cardboard baler in the external waste compound. Bales are collected weekly by the appointed waste contactor.

3.4.19. Cardboard packaging from the Proposed Development will be stored in a designated 770 litre bin in each disposal hold pending transfer to the cardboard baler area in the external waste compound.

3.4.20. The dimensions of the bins provided in the disposal hold and temporary storage area at the rear of the kitchen are shown in **Table 3-5** below.

Table 3-5 – Bin Dimensions

Bin Type	Width (mm)	Depth (mm)	Height (mm)
770 litre Eurobin *	1,250	785	1,350
240 litre Wheeled Bin **	580	740	1,100

* *Egbert H. Taylor & Co. Ltd https://egberttaylor.com/product/continental-770l/#body*
** *MCC guidance, Waste Storage and Collection Guidance for New Developments (2017)*

3.4.21. Confidential waste containers will also be provided and serviced on a like for like exchange basis with the appointed contractor directly from the areas that they are deployed.

3.4.22. All waste storage areas will have clear signage to prevent cross contamination of refuse, recycling and food waste with healthcare waste.

Stage 3 – Waste Collection

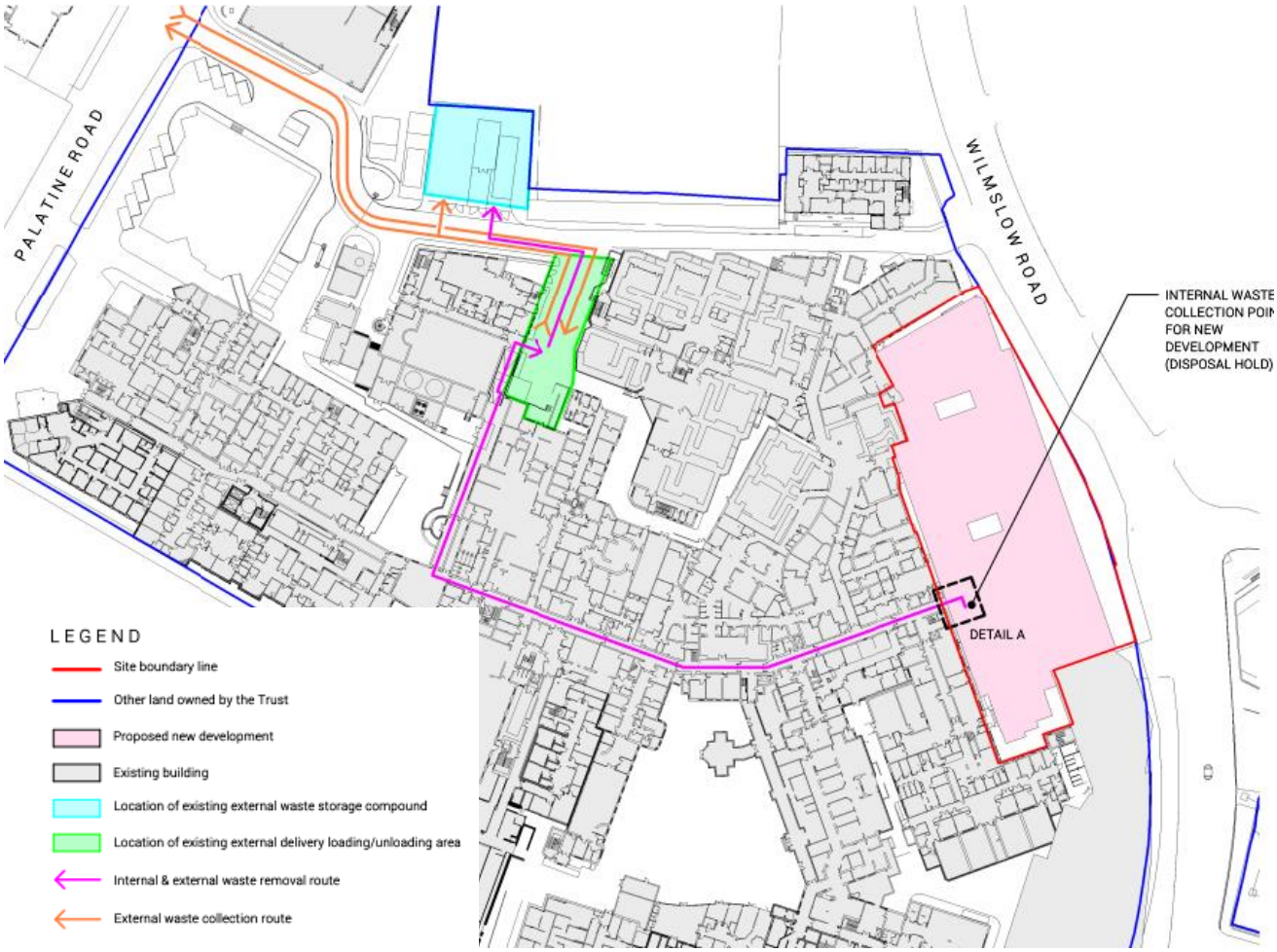
3.4.23. General wastes generated within the Proposed Development will be collected for off-site treatment by a commercial waste management contractor appointed by the on-site FM team.

3.4.24. The commercial waste collection contract(s) will be in place pre-occupation of the Proposed Development.

3.4.25. The Hospital's established external waste compound will be used to manage waste arising from the Proposed Development.

3.4.26. The location of the external general waste compound and route taken in transferring refuse, DMR and cardboard bins from the ground floor disposal hold is shown in **Figure 3-3**.

Figure 3-3 - Location of External General Waste Compound and Transfer Route



3.4.27. The external waste compound will be clearly signposted to prevent cross contamination of refuse, recycling and food waste.

3.4.28. The management of the external waste compound is the responsibility of the on-site Facilities Management (FM) team who will:

- Ensure that the compound is maintained in a clean and tidy condition;
- Ensure the safe and efficient working of the compaction equipment provided to treat refuse and cardboard;
- Ensure the configuration of the bins within the compound is correct and does not hinder the ability to efficiently store and present waste pending collection;
- Clean the waste compound and bins as required; and
- Be on hand to resolve any issues associated with the waste compound which may arise during the operation of the Proposed Development.

Refuse

3.4.29. Refuse is currently collected in bags from designated collection points across the Hospital and taken to the external waste compound for compaction in one of 2 No. 30m^3 compactors.

3.4.30. Refuse from the Proposed Development will be transferred in 770 litre bins from the ground floor disposal hold of the Proposed Development to the waste compactor area in the external waste compound.

3.4.31. **Table 3.6** estimates the impact of additional refuse arising from the proposed development on compactor demand from established Hospital activities.

Table 3-6 - Refuse Waste Management

Source of Refuse	Weekly Uncompacted Total (litres)	Weekly Compacted Total (litres)
Established Hospital	128,625 *	42,875 **
Proposed Development	12,016 ***	4,005

* Assumes 3:1 compaction ratio
** 2 No. 24.5 Cu m compactors collected every 8-10 days (8 days used for this table).
*** See Table 3-2

3.4.32. The estimated refuse quantity arising from the proposed development represents an additional 9% treatment / collection demand on the 2 No. site waste compactors. Increasing the collection frequency from every 8-10 days to a weekly collection would accommodate this additional waste.

3.4.33. On scheduled refuse collection days the appointed waste management contractor will exchange the full refuse compactor unit for an empty container ready to receive waste. This is an established collection procedure currently used to collect compacted refuse produced by the Hospital.

DMR

3.4.34. DMR is currently collected in bags at designated collection points across the Hospital and when near full, transferred to 13 No. 1100ltr external bins. These are taken to the external waste compound and collected weekly by the appointed waste contractor in a refuse collection vehicle.

3.4.35. DMR from the Proposed Development will be transferred in 770 litre bins from each disposal hold and taken to the external waste compound pending collection.

3.4.36. The quantity and collection frequency of DMR from the established Hospital activities and potential impact of DMR from the Proposed Development is provided in **Table 3-7**.

Table 3-7 – DMR Waste Management

Source of DMR	Weekly Total (litres)	Daily Total (litres)	No. 1,100 litre bins required Weekly Collection	No. 1,100 litre bins required twice Weekly Collection
Established Hospital	14,300	2,043	13	7
Proposed Development	10,814 *	1,545	10	5
Total	**25,114**	**3,588**	**23**	**12**

* See Table 3-2

3.4.37. If the provision of additional 1,100 litre DMR bins are to be avoided, DMR arising from the proposed development will require an additional weekly collection i.e. total DMR collected twice weekly.

3.4.38. On scheduled DMR collection days, the appointed commercial waste contractor will park their refuse collection vehicle (RCV) in the allocated space provided adjacent to the external waste compound. The contractor will empty the bins into the RCV and return empty bins to the compound. This is an established collection procedure currently used to collect DMR produced by the Hospital.

Cardboard Packaging

3.4.39. Cardboard packaging is currently collected from wards and departments across the Hospital and taken to the cardboard baler in the external waste compound. Bales are collected weekly by the appointed waste contactor.

3.4.40. Cardboard packaging from the Proposed Development will be transferred in 770 litre bins from the disposal holds to the cardboard baler area in the external waste compound.

3.4.41. **Table 3.8** estimates the impact of additional cardboard packaging arising from the proposed development on baler demand from established Hospital activities.

Table 3-8 - Cardboard Baling

Source of Cardboard Packaging	Weekly Uncompacted Total (litres)	Weekly Compacted Total (litres) *	Number of Bales
Proposed Development	1,202	400	<1

* *Assumes 3:1 compaction ratio*

3.4.42. The estimated cardboard quantity arising from the proposed development represents less than one bale per week and should not necessitate an increase in collection frequency from a weekly collection to accommodate this additional waste. This is an established collection procedure currently used to collect cardboard bales produced by the Hospital.

Food Waste

3.4.43. The estimate quantities of food waste arising from the proposed development specified in **Table 3-2** will require an additional 3 No. 240 litre bins and a scheduled daily collection (Monday-Saturday).

3.4.44. Food waste will be collected directly from the temporary storage area at the rear of the kitchen. This is an established collection procedure currently used to collect food waste produced by the Hospital.

4 MANAGEMENT OF HEALTHCARE WASTE

4.1 INTRODUCTION

4.1.1. This chapter outlines the strategy that will be adopted to manage the healthcare waste arisings from the Proposed Development once operational.

4.1 WASTE MINIMISATION

4.1.1. Good procurement and resource efficiency practices will ensure contractors work with the Trust in targeting waste elimination and minimisation.

4.1.2. This strategy focusses on managing waste once it has been produced and refers to the waste hierarchy to promote the efficient recovery or as the least preferred option, disposal of healthcare wastes.

4.2 WASTE GENERATION MODEL

4.2.1. Healthcare waste arising at the Proposed Development will be segregated at point of arising into the following key waste types.

- Offensive waste stored in ‘tiger’ stripe bags e.g. PPE, couch roll, dressings or hygiene wastes contaminated with bodily fluids not deemed to present an infection risk; and
- Used sharps such as hypodermic needles stored in a UN approved sharps receptacle;

4.2.2. Other healthcare wastes not typically associated with diagnostics will be segregated in accordance with NHS Healthcare Waste Guidance HTM 07-01. If a patient is suspected or known to present an infection risk, orange (alternative treatment) clinical waste bags will be used and segregated from other healthcare wastes.

4.2.3. The quantity of ground floor healthcare waste arising has been estimated by assuming offensive waste bags and / or sharps receptacles will be required in specific functional areas. These assumptions are summarised in **Table 4-1**.

Table 4-1 – Estimated Weekly Ground Floor Healthcare Waste Generation

	No. Areas	Offensive Waste Bags (1 No. Per Area)	Sharps Receptacles (1 No. Where Required)
Consult /Exam	3	3	0
Patient Prep Rooms	12	12	12
Dirty Utility	2	2	2
Scanner Room	3	3	3
Scanner Room	1	1	1
Interventional CT Scanner	1	1	1
Interventional Equipment Room	1	1	1
Prep Room	1	1	1
Anaesthetic / Recovery	1	1	1
C-Arm Fluoroscopy Room	1	1	1
Multi-Purpose Fluoroscopy	1	1	1
Prep Room	1	1	1
Technical UPS Room	1	1	1
Recovery Bed	4	4	0
Recovery Bedroom	2	2	0
Ultrasound	2	2	2
Drop in / Ultrasound	1	1	1
Totals	**38**	**38**	**29**

4.2.1. Assuming standard 80 litre bags are half filled on a daily basis and 7 litre sharps receptacles are changed monthly, the estimated healthcare waste generation from the Proposed Development is summarised in **Table 4-2**.

Table 4-2 – Estimate Ground Floor Healthcare Waste Generation

Waste material	Litres per week *	Litres per day *	Receptacle / Bin type (litres)
Clinical Waste Sharps	25.4	3.6	7 Litre sharps receptacle
Offensive Waste Bags	10,640	1,520	80 Litre Bag

** Healthcare waste bags and sharps receptacles are closed when maximum 75% full, this estimate assumes closed when 50% full.*

4.2.2. Assuming the first and second floors are utilised as ward floors and produce similar quantities of healthcare waste as the ground floor, **Table 4-3** summarises the potential estimates healthcare waste generation across all three floors of the proposed development.

Table 4-3 – Estimate Total Healthcare Waste Generation

Waste material	Litres per week	Litres per day
Clinical Waste Sharps	76.2	10.9
Offensive Waste Bags	31,920	4,560

4.3 PROPOSED WASTE MANAGEMENT STRATEGY

4.3.1. The proposed strategy for healthcare waste generated at the Proposed Development is broken down into the following stages:

- Source Segregation;
- Interim Storage, and
- Waste Collection.

Stage 1 – Source Segregation

4.3.2. Healthcare waste will be segregated at point of arising into offensive wastes stored in approved ‘tiger stripe’ bags in designated bins and sharps in UN approved clinical waste sharps receptacles.

4.3.3. Offensive waste bags (and clinical waste bags where required) will be held in purpose-built healthcare waste bins within each clinical assessment / preparation / diagnostics area. A typical example is shown in **Figure 4-1**.

Figure 4-1 - Typical healthcare waste bin.



4.3.4. Sharps receptacles will be provided at selected locations. A typical example is shown in **Figure 4-2**.

Figure 4-2 - Typical clinical waste sharps receptacle



4.3.5. Used bags and completed sharps receptacles will be exchanged as and when required by Facilities Management (FM) and taken to the disposal hold on each floor where a 770 litre wheeled bin will be provided for each to ensure complete segregation.

4.3.6. The location of the waste disposal hold on the ground floor is provided in **Figure 3-2**. Disposal holds of similar size and location will be provided on the first and second floors.

4.3.7. All waste storage areas will have clear signage to prevent cross contamination.

4.3.1. Healthcare waste will be contained at all times during transport through the hospital with warnings and highlights of the content clearly displayed.

4.3.2. All healthcare waste being transported within the hospital will be kept to designated services corridors and routes and operational procedures developed and implemented to avoid contamination between clean equipment and supplies and general and clinical waste.

Stage 2 – Interim Storage

4.3.3. Using the estimated healthcare waste generation for each floor summarised in **Table 4-2, Table 4-4** summarises the bin storage requirement for each disposal hold.

Table 4-4 – Disposal Hold Healthcare Waste Bins

Waste material	Litres per day	770 litre UN Approved Bin
Clinical Waste Sharps	3.6	1
Offensive Waste Bags	1,520	1*
* Twice daily collection		

4.3.4. Assuming the first and second floors are utilised as ward floors and produce similar quantities of healthcare waste as the ground floor, the disposal hold on each floor will require 2 No. 770 litre bins for healthcare waste, exchanged twice daily.

Stage 3 – Waste Collection

4.3.5. Healthcare wastes generated within the Proposed Development will be collected for off-site treatment by a commercial waste management contractor appointed by the on-site FM team.

4.3.6. The commercial waste collection contract(s) will be in place pre-occupation of the Proposed Development.

4.3.7. A secure lockable section of the Hospital's established external waste compound will be used to store offensive and clinical wastes prior to scheduled collection.

4.3.8. The location of the external general waste compound and route taken in transferring healthcare waste bins from the ground floor disposal hold is shown in **Figure 3-3**.

4.3.9. The external waste compound will be clearly signposted to ensure cross contamination waste is minimised.

4.3.10. The management of the external healthcare waste compound is the responsibility of the on-site Facilities Management (FM) team who will:

- Ensure that the compound is maintained in a clean and tidy condition;
- Ensure the configuration of the bins within the compound is correct and does not hinder the ability to efficiently store and present waste pending collection;
- Clean the waste compound and bins as required; and
- Be on hand to resolve any issues associated with the waste compound which may arise during the operation of the Proposed Development.

4.3.11. Healthcare waste is currently collected on an exchange bin basis five times per week (33 No. per day), this accommodates 165 No. 770 litre UN approved bins. At time of writing, the Hospital aim to increase collections to six per week under new contract arrangements.

4.3.12. Based on the estimated level of healthcare wastes arising from the Proposed Development detailed in **Table 4-3,** assuming a daily waste collection and applying a 2 days' provision of waste storage as a contingency in case of missed collections, the external waste compound bin storage requirement is summarised in **Table 4-5**.

Table 4-5 - Proposed Bin Storage Requirement

Waste material	Litres per week	Litres per day (with 2 days' contingency)	Bin type (litres)	No. bins required
Clinical Waste Sharps	76.2	21.8	770 Litre	1
Offensive Waste Bags	31,920	9,120	770 Litre	12

4.3.13. The quantity and collection frequency of healthcare wastes from the established Hospital activities and potential impact from the Proposed Development is summarised in **Table 4-6**.

Table 4-6 – Healthcare Waste Bin Summary

Source of Healthcare Waste	No. 770 UN approved Bins
Established Hospital	165
Proposed Development	12
Total	**177**

4.3.14. The healthcare waste produced at the Proposed Development can be accommodated in the additional daily collection planned under the new contractual agreement.

4.3.15. The dimensions of the bins are shown in **Table 4-6** are provided in **Table 4-7** below.

Table 4-7 - Bin Dimensions

Bin Type	Width (mm)	Length (mm)	Height (mm)
770 litre UN approved bin	1,260	765	1,300

4.3.16. The appointed healthcare waste contractor will park their refuse collection vehicle (RCV) in the allocated space provided adjacent to the healthcare waste compound.

4.3.17. The waste contractor will collect used bins from the healthcare waste compound in exchange for cleaned empty bins to be taken to healthcare waste compound ready for immediate use. This is an established collection procedure currently used to collect healthcare waste produced by the Hospital.

5 SUMMARY AND CONCLUSIONS

5.1 SUMMARY

Management of General Waste

5.1.1. Each clinical, operational support and public area will be provided with sufficient waste receptacles/containers to promote the separation of DMR, cardboard packaging and food waste from refuse.

5.1.2. FM will be responsible for collecting refuse, DMR and cardboard packaging across the Proposed Development and transferring to the disposal hold located at each level.

5.1.3. FM will collect stored waste from the disposal holds and transport to the external general waste storage compound pending compaction, baling or collection as appropriate. This is an established transfer / consolidation procedure currently used to manage waste produced across the Hospital.

5.1.4. Food waste will be stored in the temporary storage area at the rear of the kitchen.

5.1.5. On scheduled refuse collection days the appointed waste management contractor will exchange the full refuse compactor unit for an empty container ready to receive waste. This is an established collection procedure currently used to collect compacted refuse produced by the Hospital.

5.1.6. The estimated quantity of refuse arising from the proposed development represents an additional 9% treatment / collection demand on the 2 No. site waste compactors. Increasing the collection frequency from every 8-10 days to a weekly collection would accommodate this additional waste.

5.1.7. On scheduled DMR collection days, the appointed commercial waste contractor will park their refuse collection vehicle (RCV) in the allocated space provided adjacent to the external waste compound. The contractor will empty the bins into the RCV and return empty bins to the compound. This is an established collection procedure currently used to collect DMR produced by the Hospital.

5.1.8. DMR arising from the proposed development will require an additional weekly collection i.e. total hospital DMR collected twice weekly.

5.1.9. Baled cardboard packaging will be collected weekly by the appointed contractor. This is an established collection procedure currently used to collect cardboard bales produced by the wider Hospital.

5.1.10. The estimated cardboard quantity arising from the proposed development represents less than one bale per week and should not necessitate an increase in collection frequency from a weekly collection to accommodate this additional waste.

5.1.11. Food waste will be collected directly from the temporary storage area at the rear of the kitchen. This is an established collection procedure currently used to collect food waste produced by the Hospital.

5.1.12. The estimate quantities of food waste arising from the proposed development will require an additional 3 No. 240 litre bins and a scheduled daily collection (Monday-Saturday).

5.1.13. Confidential waste containers will also be provided and serviced on a like for like exchange basis with the appointed contractor directly from the areas that they are deployed.

5.1.14. Each clinical area will be provided with sufficient waste receptacles/containers to promote the segregation of healthcare wastes, to include hazardous clinical and non-hazardous offensive wastes, as recommended by the Department of Health guidance HTM 07-01.

5.1.15. Used healthcare waste bags and completed sharps receptacles will be exchanged as and when required by Facilities Management (FM) and taken to the disposal hold on each floor where a 770 litre wheeled bin will be provided for each to ensure complete segregation.

5.1.16. FM will collect healthcare waste from the disposal hold on each level and transport to the external clinical waste storage compound.

5.1.17. The waste contractor will collect used bins from the healthcare waste compound in exchange for cleaned empty bins to be taken to healthcare waste compound ready for immediate use. This is an established collection procedure currently used to collect healthcare waste produced by the Hospital.

5.1.18. The healthcare waste produced at the Proposed Development can be accommodated in the additional daily collection planned under the new contractual agreement.

5.2 CONCLUSION

5.2.1. This Strategy has considered the need to lessen the overall impact of waste generation through the provision of dedicated storage for general waste, recycling and healthcare waste from the operation and occupation of the Site.

5.2.2. The quantity of waste arising from the Proposed Development can be managed to align with the Hospital's established waste management arrangements. Minor alterations to storage and collection schedules will be required as specified within this strategy document.

5.2.3. The proposals set out in this Strategy meet the requirements of relevant National and local waste policy and follow applicable guidance including those in the Department of Health's Healthcare Technical Memorandum 07-01 Safe and Sustainable Management of Healthcare Waste.

Appendix A

NATIONAL & LOCAL WASTE POLICY & GUIDANCE

Public

National Waste Policy

National Planning Policy Framework (Updated 2021)[1]

The National Planning Policy Framework, published in 2012 and last updated in July 2021, sets out the government's planning policies for England and how these are expected to be applied.

The following extracts are of relevance to the Proposed Development:

'2. Achieving sustainable development

…

8. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

…

c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'

National Planning Policy for Waste (2014)[2]

The National Planning Policy for Waste replaced Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS 10) and is to be considered alongside other national planning policy for England - such as Our Waste, Our Resources: A Strategy for England.

The Policy includes the following which is of relevance to the Development:

'8. When determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that:

- *new, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development and, in less developed areas, with the local landscape.'*

Our Waste, Our Resources: A Strategy for England (2018)[3]

The strategy sets out how England will preserve the stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time, the

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[1] Ministry of Housing, Communities and Local Government (MHCLG) (2021) *National Planning Policy Framework* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

[2] MHCLG (2014) *National Planning Policy for Waste* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

[3] Department for Environment, Food and Rural Affairs (Defra) (2018) *Our Waste, Our Resources: A Strategy for England* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

country will minimise the damage caused to the natural environment by reducing and managing waste safely and carefully, and by tackling waste crime.

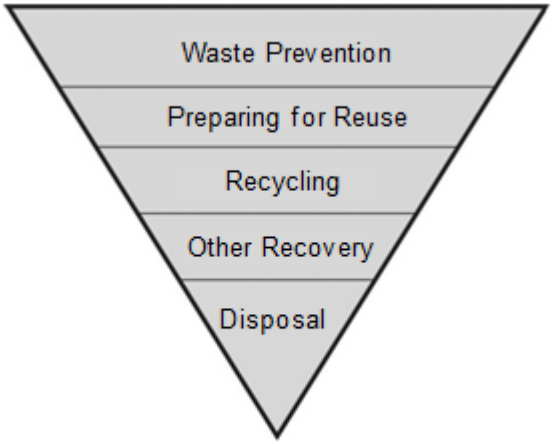
It combines actions the country will take now, with firm commitments for the coming years and gives a clear longer-term policy direction in line with the 25 Year Environment Plan. This is the blueprint for eliminating avoidable plastic waste over the lifetime of the 25 Year Plan, doubling resource productivity, and eliminating avoidable waste of all kinds by 2050.

Waste Hierarchy

The Waste Hierarchy requires avoidance of waste in the first instance followed by reducing the volume that requires disposal after it has been generated.

It gives an order of preference for waste management options to minimise the volume for disposal, as shown in **Figure A1.1**.

Figure A1.1: The Waste Hierarchy



Source: Waste Framework Directive

The main principles of the Waste Hierarchy are:

- Waste should be prevented or reduced at source as far as possible;
- Where waste cannot be prevented, waste materials or products should be reused directly or refurbished and then reused;
- Waste materials should be recycled or reprocessed into a form that allows them to be reclaimed as a secondary raw material;
- Where useful secondary materials cannot be reclaimed, the energy content of the waste should be recovered and used as a substitute for non-renewable energy resources; and
- Only if waste cannot be prevented, reclaimed or recovered, should it be disposed of into the environment, and this should only be undertaken in a controlled manner.

The Waste Hierarchy has been implemented in *England and Wales by the Waste (England and Wales) Regulations 2011*. These regulations require that an establishment or undertaking that imports, produces, collects, transports, recovers or disposes of waste must take reasonable steps to apply the Waste Hierarchy when waste is transferred or disposed of.

Waste Management Plan for England (2021)[4]

The Waste Management Plan for England fulfils the requirements of the Waste (England and Wales) Regulations 2011 for waste management plans to be reviewed every six years.

While the Resources and Waste Strategy sets out a vision and a number of policies to move to a more circular economy, such as waste prevention through policies to support reuse, repair and remanufacture activities, the Waste Management Plan for England focuses on waste arisings and their management. It is a high-level, non-site specific document. It provides an analysis of the current waste management situation in England and evaluates how the Plan will support implementation of the objectives and provisions of the Waste (England and Wales) Regulations 2011.

Local Waste Policy & Guidance

Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance (SPD) (2007)[5]

Manchester City Council produced this document as a means of guiding those involved in the development process in the preparation of design and access statements to accompany all planning applications for major developments. The document sets out the City Council's stance on a wide range of issues, demonstrating, where applicable, their links to the Manchester Unitary Development Plan (UDP).

Chapter 4 on waste management requires that all developments should have a waste management strategy included in the Environmental Standards Statement. This is to ensure that adequately sized bin storage areas, access for collection crews and vehicles, and other aspects of waste management are designed into the development at the earliest stage.

Manchester City Council, Core Strategy Development Plan Document (Adopted 2012)[6]

The Core Strategy was adopted by Manchester City Council in 2012 and is the key document in Manchester's Local Development Framework. It covers a period of 15 years from 2012 to 2027. It describes Manchester today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision.

Policy EN19 states the Council will:

Require all developers, including those of new waste management facilities within the District, to demonstrate the proposal's consistency with the principles of the waste hierarchy (prevention, reduction, re-use, recycling/composting, energy recovery, final disposal).

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[4] Defra (2021) *Waste Management Plan for England*
https://www.gov.uk/government/publications/waste-management-plan-for-england-2021

[5] Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance
https://www.manchester.gov.uk/downloads/download/644/guide_to_development_in_manchester_-_supplementary_planning_document_and_planning_guidance_spd

[6] Manchester City Council, Core Strategy Development Plan Document
https://www.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027

and

Require all developers to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised and recycled on site wherever possible and how the sustainable waste management needs of the end user will be met.

and

Require waste management practices to have full regard to the environmental, social and economic impacts of such development and encourage long-term benefits in improving the environment, the regeneration of areas in need of investment and co-location with other employment uses where appropriate.

Manchester City Council, Waste Storage and Collection Guidance for New Developments v7 (2023)[7]

This guidance contains minimum standards for planners, architects, developers and property managers to assist in planning and designing systems for the storage and collection of refuse, and for recycling facilities in domestic and commercial properties.

[7] Manchester City Council, Waste Storage and Collection Guidance for New Developments https://www.manchester.gov.uk/downloads/download/6048/waste_management_strategy_and_proforma



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