

Wst 03a Operational waste

(non-residential, plus residential institutions)

For residential buildings, see Wst 03b Household waste.

Aim

To recognise and encourage the provision of dedicated facilities for a building's operational-related recyclable waste streams so that this waste is diverted from landfill or incineration.

Overview

Assessment type	Available credits	Applicable assessment criteria
Fully fitted	1	All
Shell and core	1	1- 3 (see ref 1.0)
Shell only	1	1 and 3 (see ref 1.0)
Residential: Fully fitted	0	Not applicable
Residential: Partially fitted	0	Not applicable
EU Taxonomy	-	None

Minimum standards

Rating level	Criteria
Excellent	For excellent the credit for operational waste is achieved

Assessment type specific notes

Reference	Assessment type specific note
1.0	<p>Shell and core / Shell only – End-occupier not known</p> <p>If the end-occupier is not known, but the functions or areas of the assessed building suggest that large amounts of packaging or compostable waste is likely to be generated during the building's operation, e.g. it is a retail or industrial project or contains a large catering facility, then an appropriately sized space and services or infrastructure to accommodate the relevant facilities must be provided. The facilities themselves do not necessarily need to be provided or installed to demonstrate compliance.</p>

Building type specific notes

Reference	Building type specific note
2.0	<p>Small industrial units</p> <p>For an industrial building or development or site consisting of a number of smaller units, each ≤ 200 m² floor area, shared facilities that meet criteria 1 and 3 for the building or site as a whole are sufficient to achieve the credit.</p>
2.1	<p>Shopping centres and retail parks</p> <p>For shopping centres and retail parks there must be adequate space to cater for each tenant and their potential recyclable waste volumes. Tenants that occupy a large proportion of the centre, i.e. 'flagship tenants', must have their own dedicated compliant facilities. For smaller non-flagship tenant units, compliant central or common facilities on site or dedicated spaces for individual units will meet the assessment criteria for this BREEAM issue.</p>
2.2	<p>Residential Institution (long term stay)</p> <p>Where it is not possible to locate the internal segregation facilities within a communal area accessible to residents for safety reasons (e.g. where the residents have mental health problems and free access to these facilities would pose significant risk of self-harm or harm to others) it is acceptable to locate them within a dedicated non-obtrusive position accessible to staff only, but in close proximity to the areas where recyclable waste material is generated.</p>

Assessment criteria

Operational waste – One credit

- 1 Provide a central dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste volumes generated by the assessed building or unit, its occupants and activities. This space must be:
 - 1.a Clearly labelled for long-term durability, to assist with segregation, storage and collection of the recyclable waste streams, in accordance with Swedish waste management (Avfallsverige).
 - 1.b Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors.
 - 1.c Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates.
 - 1.d A tap is provided adjacent to or within the facility for cleaning and hygiene purposes.

- 2 Appropriate space shall be designed and provided for the temporary storage and segregation of waste at the point of generation. This space must be:
 - 2.a A dedicated internal segregation facility within each occupied area where waste will be generated.
 - 2.b Waste management spaces shall be designed and located to minimise internal transport distances and facilitate correct segregation
 - 2.c Temporary (intermediate) waste storage facilities shall be designed and specified to prevent cross-contamination, odour nuisance and hygiene risks prior to transfer to the central waste storage area.

- 2.d The internal waste segregation facilities shall be appropriately sized and designed to accommodate both current requirements and reasonably foreseeable future changes, including changes in legislation, collection systems, waste fractions and occupancy patterns.
- 3 The internal segregation strategy shall be integrated into the building's operational waste management plan.

Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging generated by the building's use and operation. Static waste compactors or balers; situated in a service area or dedicated waste management space.

Checklists and tables

None

Methodology

M1: Determining if the dedicated space complies

M1.1 Determining size of the central dedicated space

See criteria 1 and 3.

The design team demonstrates that the provision of waste management facilities for the assessed building is adequate given the building type, occupier (if known), operational function and likely waste streams and volumes to be generated. The waste management assessment should be done together with an appropriate waste management collector.

Compliance with Criterion 2 is demonstrated where the design team evidences that waste segregation facilities are appropriately distributed throughout the building, enabling segregation at or near the point of generation before transfer to the central waste storage area.

M1.2: Determining size of space for temporary storage

The temporary storage spaces should be located where the waste is generated. Often in kitchens or kitchenettes. But also in rooms for long- and short term residential. The design team, together with an appropriate waste management collector, should analyse the likely waste streams and make recommendations for placing and sizing of storage facilities.

The facilities should include all fractions represented in the central dedicate place in at least one point.

For example an office may have these fractions and locations:

- Paper, cardboard, batteries and electronics by the printer
- Paper located near a group of desks
- Food, plastic, glass, cardboard and metal in the kitchenette

M2: Internal storage areas

Where the central facilities are situated internally, vehicular gate heights and widths and manoeuvring and loading space must be sized to ensure ease of access for vehicles collecting recyclable materials.

M3: Operational waste management plan

The operational waste management plan shall demonstrate how waste will be segregated at or in close proximity to the point of generation within the building. The plan shall also describe the procedures and allocation of responsibilities for transferring waste from temporary segregation areas to the central waste storage area.

Compliance notes

Reference	Terms	Description
CN1	Extensions to existing buildings Criterion 1	Where there are central facilities within the existing building, these can be used to assess compliance. The scope of these facilities must be adequate to cater for the total volume of predicted recyclable waste arising from the new and existing buildings.
CN2	Multiple building assessments and buildings that form part of a wider estate Criterion 1	Where the assessment applies to one or more buildings or units that are part of a wider estate or campus, the design team can choose to demonstrate compliance through the provision of dedicated centralised storage space and waste management facilities with the capacity to accommodate the recyclable waste material generated from all buildings and their activities.
CN3	Limited space or vehicle access for a compactor or baler	For sites that have limited space for static installations, compliance can be assessed on the basis of the provision of adequate space for a smaller portable compactor or baler.
CN4	Automated waste collection systems	These are accepted as a form of compliance as long as a management plan is in place, which can either be public (local authority) or private and requirements for separation are met.
CN5	Swedish waste management	Swedish waste management (Avfall Sverige) have published recommendations for designing appropriate waste storages and recommended fractions and size of bins. These could be used as reference to achieve criteria 1-2. Swedish waste management have also published pictograms suitable to label storage rooms and fractions. For guidance please see Sverige sorterars hemsida.

Reference	Terms	Description
CN6	Labelling and signage where provision of waste bins is out of scope	<p>Where the provision of waste bins is outside the scope of the developer, it is clearly not possible to label the bins. In this situation, the following compliance options are available:</p> <ol style="list-style-type: none"> 1. Provide compliant signage to the storage area and label bin spaces within the storage area according to the relevant waste streams. 2. Where future waste streams are unknown, provide compliant signage to the storage area and a written commitment from the developer to ensure that the bins and/or bin spaces are labelled. <p>It is recognised that the bins may be provided by the tenant, local authority or waste management company after the time of certification.</p>
CN7	Single-tenant and small building scenarios	<p>Where the building comprises a single tenant occupying a single regularly occupied floor, the central waste storage area may be deemed to comply with Criterion 2, provided it is suitably located to enable segregation at or near the point of generation.</p> <p>For small buildings with limited internal circulation, shared internal segregation facilities may be acceptable where they are suitably located and readily accessible to building users.</p>

Evidence

Criteria	Interim design stage	Post construction stage
Operational waste		
1	<p>Design drawings or relevant section of the building specification or contract clauses to confirm the provision of compliant dedicated facilities for the storage and segregation of recyclable waste, in addition to provisions for general waste.</p> <p>Confirmation from end user or design team of predicted waste streams and indicative volumes, including a documented capacity assessment aligned with municipal waste regulations and collection intervals.</p> <p>OR</p> <p>Where not known, calculations used to confirm the minimum space required.</p>	<p>Final construction drawings or equivalent to confirm the location and size of the waste storage areas provided.</p> <p>Assessor site inspection report with photographic evidence to verify the installation of compliant waste storage facilities which are clearly labelled.</p>
2	<p>Design drawings or relevant building specification confirming the provision and location of internal waste segregation facilities and intermediate storage solutions.</p> <p>A documented internal waste segregation strategy confirming:</p> <ul style="list-style-type: none"> • the distribution of segregation facilities within tenant areas, departments or regularly occupied floors; • the waste fractions to be provided • the approach to intermediate storage and internal waste transfer • integration into the building's operational waste management plan. 	<p>Final construction drawings or equivalent confirming the location of internal waste segregation facilities and intermediate storage areas.</p> <p>Assessor site inspection report with photographic evidence confirming installation in accordance with the design.</p> <p>A copy of the implemented internal waste segregation strategy.</p>

Criteria	Interim design stage	Post construction stage
3	Where applicable to the building, design drawings or relevant section of the building specification or contract clauses to confirm the provision of compactors or balers or compliant organic waste storage where relevant.	Final construction drawings or equivalent and assessor site inspection report with photographic evidence to verify the installation of compliant compactors, balers or organic waste storage facilities where required.

Definitions

Accessible space

Accessible space is typically within 20 m of a building entrance. Depending on the size of the building, site restrictions or tenancy arrangements, it may not be possible for the facilities to be within 20 m of a building entrance. In such circumstances, judgment on whether the space is 'accessible' to the building occupants and vehicle collection must be made.

Automated waste collection system

Some companies now offer a fully automated underground system for the collection, sort and transport of waste. It allows for waste separation at the source, for different types of waste and from multiple locations, with enhanced hygienic, occupational health and safety standards. It also reduces the use of waste transport by lorries, reducing nuisance and CO₂ emissions, from fossil fuel consumption.

Flagship or anchor tenant

The largest and primary tenant within a retail development, typically department store type retailers.

Waste compactor or baler

A machine that is designed to compress waste streams in order to improve storage and transport efficiency.

Additional information

Recyclable storage space

The following footprint dimensions can act as a guide when determining size and accessibility criteria for the recyclable storage space:

- 1 Compactor dimensions: about the size of one car parking bay, 4.8 m x 2.4 m
- 2 Skip: the footprint of an 8 and 12 cubic yard skip measures 3.4 m x 1.8 m; therefore allow a minimum of 2.0 m width and 4.0 m length or 8 m² area for the storage and access of such containers
- 3 Wheeled bins:
 - 360 litre = 0.86 m x 0.62 m
 - 660 litre = 1.2 m x 0.7 m

- 1100 litre = 1.28 m x 0.98 m
- 4 Roll-on/roll-off containers: allow a minimum of 6.1 m x 2.4 m
 - 5 Vehicle access: the following are dimensions for lorry types that are typically used to collect waste. Therefore gate heights and widths should not be smaller than these measurements:
 - 5.a Dustcart (medium capacity): length = 7.4 m, height = 4 m, width 3.1 m
 - 5.b Skip lorry: length = 7 m, height = 3.35 m, width 3.1 m

Consideration must also be given to any other types of vehicle requiring access to this area, e.g. lorries for roll-on/roll-off containers.

Segregation of waste near the point of generation

Internal waste segregation facilities located within tenant areas, departments or regularly occupied floors, enabling waste separation prior to transfer to the central waste storage area.