



BEST PRACTICE GUIDE

Maximise Recycling and Reduce Landfill Waste



This **BEST PRACTICE** guide outlines actions to reduce the quantity of recyclables disposed of in the general landfill and clinical risk waste streams. These best practice measures have been observed in a number of healthcare facilities, which have corresponding low levels of recyclables in the landfill/clinical waste streams.

How do you reduce the quantity of general landfill waste generated in your facility?

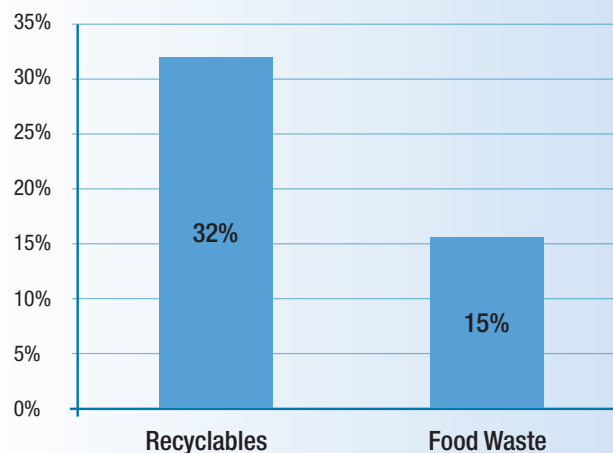
General landfill waste (a.k.a. general waste, mixed waste, or residual waste) is generated in all areas of the hospital. It is usually the type of waste produced in the largest quantity in healthcare facilities. So it is an important type of waste to look at in terms of reducing waste generation and costs.

General landfill waste bags were surveyed or characterised in the majority of Green Healthcare Programme (GHCP) participating acute hospitals. The figure to the right shows that, on average, across all facilities, nearly half (47%) of the landfill waste stream was composed of recyclables and food waste.

Your facility can reduce the quantity of landfill waste generated, by removing or diverting the recyclable materials and food waste from the landfill waste bins. These materials should instead be placed into a separate recycling bin, or food waste bin for composting or other such recovery. Generally, recycling and food waste streams cost less to manage per tonne than disposing of in the landfill waste stream.

The Green Healthcare Programme found, that on average, the acute hospitals participating in the programme could make savings in the region of €7,500 by diverting commonly accepted recyclables from the landfill stream. If the waste contractor accepts additional recyclable material, commonly generated in the healthcare sector, the average savings increase to €11,500 per annum. For community hospitals the average savings could be in the region of €1,000 to €1,500 per annum.

How much of the landfill waste stream can be removed and managed better elsewhere?



Proportion of the general waste bags that was attributable to recyclables and food waste (across all facilities surveyed)

First thing to do - review your current recycling policy & system

Is there a clear recycling policy in place in your facility?

Is there a recycling policy in place in your facility, and is it supported by management? If the policy is supported by hospital management it will provide greater impetus for areas of the hospital to actively segregate recyclables.



Are mixed recycling bags used in your facility?

Cardboard is generally segregated in all facilities, as it is produced in large volumes and is easily recognised as recyclable. By separately collecting and baling cardboard a revenue can also be received.

Lots of other materials generated in your facility may also be recycled (e.g. paper, plastics, composite packaging). By using a mixed recycling bag for such materials, you can place all recyclables in one bag, reducing the space needed for multiple bins.

What resources for recycling are available in your facility?

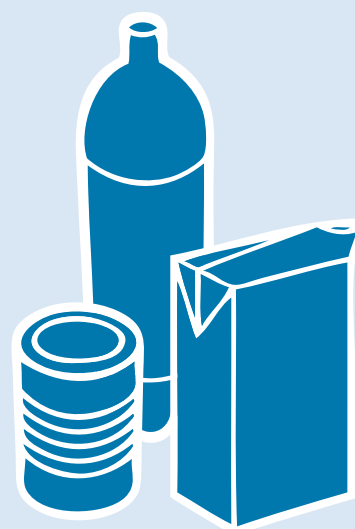
If you plan to increase recycling, ensure that you have enough space in your waste holding area to hold a compactor or extra bins, to store the recyclables.

Determine what can be placed in mixed recycling bags

Consult with your waste contractor, and suppliers where necessary, to determine what materials are suitable for inclusion in mixed recycling bags.

Everyday recyclable materials, which are recycled at home, are accepted in recycling bags (cardboard, plastic containers, newspaper, office paper, etc.). There are a number of additional materials generated in healthcare facilities which may be accepted in the recycling bag, composite packaging (peel pouch type packaging. Look at the table below for an outline of what is generally accepted in mixed recycling bags from healthcare facilities.

| Materials generally accepted in mixed recycling bags from healthcare facilities | | |
|--|---|--|
| Packaging (clean and uncontaminated) | | Other materials (selected facilities) |
| Rigid plastic e.g. milk & drink bottles, irrigation fluid bottle | Plastic film | Composite coverings Comprised of more than one material (paper and plastic). Paper covers with heavy plastic coating may not be accepted |
| Paper packaging, newspaper, magazines and office paper | Metal packaging e.g. aluminium cans, tin cans | |
| Composite packaging Comprised of more than one type of material e.g. paper and plastic. Plastic may be rigid or film | Plastic containers e.g. graduated bowls, suture kit trays | CSSD wrapping Wrapping used on sterilised kits. Wrapping can be paper based or paper/plastic composite |
| Cardboard e.g. glove box | | |





Look at the type of waste generated and review the general landfill and clinical waste bins provided.

If no landfill or clinical waste is generated in an area, make sure to remove these bins.

The more bins you provide in your facility, the more work needed to empty, re-line, and clean bins. If only small quantities are generated, then provide a small bin.

If the waste is only generated in one area of the room then move the bin to this location. For example, if only hand towels from the handwash sink are disposed of in the landfill waste bin, then place the bin next to the handwash basin.

For example, in one facility, the anaesthetist produces small quantities of clinical waste, but is not provided with a clinical waste bin. The waste is removed by nursing staff and placed in another bin. This reduces the work associated with emptying and replacing the bag in a barely filled bin.



Example of the correct provision of bins in the corridor of a ward. A large quantity of recyclables and a small quantity of general landfill waste are produced in the area. The corridor is thus provided with a large recycling and small general landfill waste bin.



Undertake a waste bin placement survey Do this in the different areas of your facility, to determine if the right bins are provided in the right location. See the **How-To: Undertake a bin placement survey** on the Green Healthcare website for more information. www.greenhealthcare.ie

Important steps to ensure your recycling bins are properly used



Make it clear what can be placed in the recycling bags:

Compile a clear list of the materials that are accepted in the mixed recycling bags, and provide this to staff ahead of the roll-out of the bags and campaign. Outline that all other material should be placed in the general landfill waste bag.

Particular types of recyclable materials may be found in large quantities or only in certain areas, e.g. large plastic containers in dialysis, CSSD wrapping in theatres, paper table covers in clinics etc. So you may only have to outline these materials on the list for these areas.

At the start of the programme, instructional signage may need to be placed on or above bins. As staff become used to the recycling system and what is acceptable in the bins; the signage may be removed from medical areas, in line with infection control best practice. University teaching hospitals may need to retain signage due to the high turnover of students. The signs should be retained on bins in areas with high public footfall (e.g. waiting rooms, corridors) to assist the public to correctly use the bins.

Important steps to ensure your recycling bins are properly used - continued

Ensure recycling bags are placed in the right location:

Ensure a recycling bin is provided in those areas where large volumes of packaging are generated (e.g. clean preparation rooms in wards, store rooms, etc.).

Within the room or area, position the bag where the recyclable material is generated (e.g. near workbench or near storage cupboard), rather than at the entrance to the room. Staff won't then have to carry the bulky recyclables a distance to the bin.



Make the recycling bins easy to use:

Consider using mobile bins where high volumes of recycling are generated in different areas at different times. For example, in a theatre, packaging is generated in the preparation area before the procedure and in the vicinity of the operating table during the procedure. The mobile bin can be moved to another area when needed.

Mobile bins are also beneficial if space is limited in connecting rooms (e.g. theatres, out-patients clinics and preparation rooms), and it is not possible to provide a recycling bin in each room. The mobile bin can be moved between the rooms, as needed. This also reduces the investment required for the purchase of bins.



A mobile recycling bin in use near an equipment preparation area.

Use different colour bins for each type of waste:

Where possible use different coloured bins for each type of waste. People recognise colours and symbols quicker than reading words - so by using different colours staff can quickly recognise what type of waste should be placed in the bin.

Suggested colours are:

CLINICAL: Yellow
(clinical bins are generally always provided in yellow)



GENERAL LANDFILL: White



RECYCLING: Green



Ideally general landfill and recycling waste bags should be clear plastic to allow staff to view the contents of the bag. They can then determine if the bag could be recycled. If available and economically viable, consider using clear green waste bags for recyclables. The use of coloured bags makes it easier for portering staff to identify the type of waste, especially when they manage different waste bags. Segregating all recyclables on the ward is only worthwhile if porters place the waste bags into the right compactor.

Where budgets for the purchase of different coloured bins are restricted, or a stockpile of bins are available, then consider using different colour identifying signs for each type of bin. For example the recycling bin sign should have green colouring and the general landfill a white or black colouring.

Commercial facilities can also recondition bins (spray paint) for other use, e.g. yellow HCRW bin to green recycling bin.



Important steps to ensure your recycling bins are properly used - continued



Prevent contamination with liquid and food:

Food or liquid waste (e.g. coffee) can easily contaminate a mixed recycling bag so badly that it has to be disposed of as landfill waste.

In areas where quantities of food or liquid waste are generated (e.g. areas providing food, waiting rooms with drink facilities, etc.), consider providing a food waste bin or liquid waste bin, to prevent the contamination of the mixed recycling bags.

The segregation of the food and liquid waste will also reduce the contamination of general landfill waste bags. These bags can leak during transport, resulting in possible cleaning and slippage issues.

In general, segregated food waste is also cheaper to dispose of than when the food is disposed of in the landfill waste stream.



Did you know...

Recyclables have a value.

Recyclables can be traded as resources on the open market, with waste contractors selling recyclables to recycling processors. The value of these materials varies, but can range from around €50 per tonne for low grade plastic film, to €850 per tonne for aluminium (March 2012).

For those materials with a high value, the waste contractor may offer a rebate (or money back) for clean, segregated material. For example, clean cardboard can attract a rebate in the region of €30 per tonne.

As recyclables have a value, waste contractors may collect recyclables for no charge per tonne, but charge for collecting the material (charge per lift of bin or compactor).

So, where possible, it is important to maximise the segregation of each type of material. For example, if cardboard is segregated, the hospital will receive money, but not if the cardboard is placed in the mixed recycling bag.

Keep this in mind when negotiating charges in your waste management contract.



Skips waste money!

Skips have been found to encourage the mismanagement of waste. Due to their size, recyclables can easily be thrown into the skip. Open skips allow rainwater to enter the skip, which is then absorbed by absorbent materials (e.g. cardboard). As skips are charged by weight, this can significantly increase your costs.



Example of a badly used skip containing WEEE and recyclables (cardboard, metal and plastic) - significant proportion can be recycled

Important to note is that WEEE should not be landfilled by law. The waste management contractor may sort out the materials at their own facility, but you will still get charged landfill rates for all of the weight of the skip.