



Case Study

Waste

Newcastle upon Tyne Hospitals NHS
Foundation Trust

Reducing the Carbon Footprint of Medicinal Waste Disposal

- Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH) is one of the largest NHS Trusts in the UK, offering a wide range of specialist services
- Operating from six different sites, the Trust aims to implement a sustainability strategy outlining their commitment to a sustainable future
- The management of resource use through the reduction of waste is one aspect of this strategy
- The introduction of the paper-based Bio-bins[®] offered a more environmentally friendly and cheaper alternative to the plastic containers that were previously used to dispose of medicinal waste



A traditional rigid plastic waste container



A paper-based Bio-bin[®]



What was the issue being addressed?

NUTH have set out a commitment to reduce their resource use, promote re-use of materials, promote correct segregation and waste disposal and to increase re-cycling across the Trust.

In 2011/12 the Trust spent over £1,000,000 on clinical waste disposal, accounting for approximately 1,370 tonnes of CO₂. It is common practice to segregate non-sharp medicinal waste from their Sharpsmart[®] units both to save costs and to comply with the Department of Health's *Safe Management of Healthcare Waste*. The traditionally used rigid plastic containers are heavy and it is estimated that the disposal of the containers alone accounts for 30-40% of the Trust's incineration bill.

How is this issue being addressed?

The Trust's Waste Officer, James Dixon, discovered there was a more environmentally friendly and cheaper alternative to the traditional plastic container he got in contact with Econix to arrange a trial. Key trial areas for the Bio-bin[®] were selected to ensure the new product was tested under the most difficult circumstances.

The introduction of the containers was accompanied by full on-site training, supporting material and instructional videos as well as ongoing technical support provided by Econix Ltd.

The Bio-bin is considered more environmentally friendly because:

- It is 96% paper – a more sustainable resource which also produces less harmful gases when incinerated
- It is almost 50% lighter than the equivalent plastic container - reducing transport emissions and waste incineration emissions for the same amount of waste
- New flat packed boxes take up less space to deliver and store – more containers can be delivered per journey reducing vehicle emissions

Carbon and Financial Savings

NUTH trials have shown that switching to Bio-bins[®] for non-sharp medicinal waste reduces the carbon footprint of this element of waste disposal by 46%.

The financial savings are two-fold as the Bio-bin[®] unit price is less than the previously used plastic container and as each unit is lighter the incineration bill is also reduced as the Trust is charged by weight.

Should the NUTH adopt the Bio-bin[®] for the disposal of all non-sharp medicinal waste then this would result in an annual reduction of 30 tonnes of waste being incinerated, saving over £13'500 and a reduction of 66 tonnes of CO₂.



Lessons Learnt?

Some early model Bio-bins[®] had temporary closure facilities that did not quite stand up to the rigours of a busy ward environment. Econix took these comments on board however and made changes to the manufacturing process to ensure a more robust closure mechanism was created.

In some specialist areas Bio-bins[®] were required to be off the floor but did not have space for the wall bracket accessory offered by Econix. Instead they developed a bespoke floor stand and trolley option that could be used to raise and or manoeuvre the Bio-bin[®] if required.

“The BioBins[®] are a real success story. From our point of view they have provided nothing but benefits to the Trust. They save us money, they reduce our waste disposal bill, they take up less storage space and they are more environmentally friendly than the plastic alternatives. I’d urge all NHS Trusts to give them a try.”

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