

# Waste Segregation Initiative in a District General Hospital

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## Background

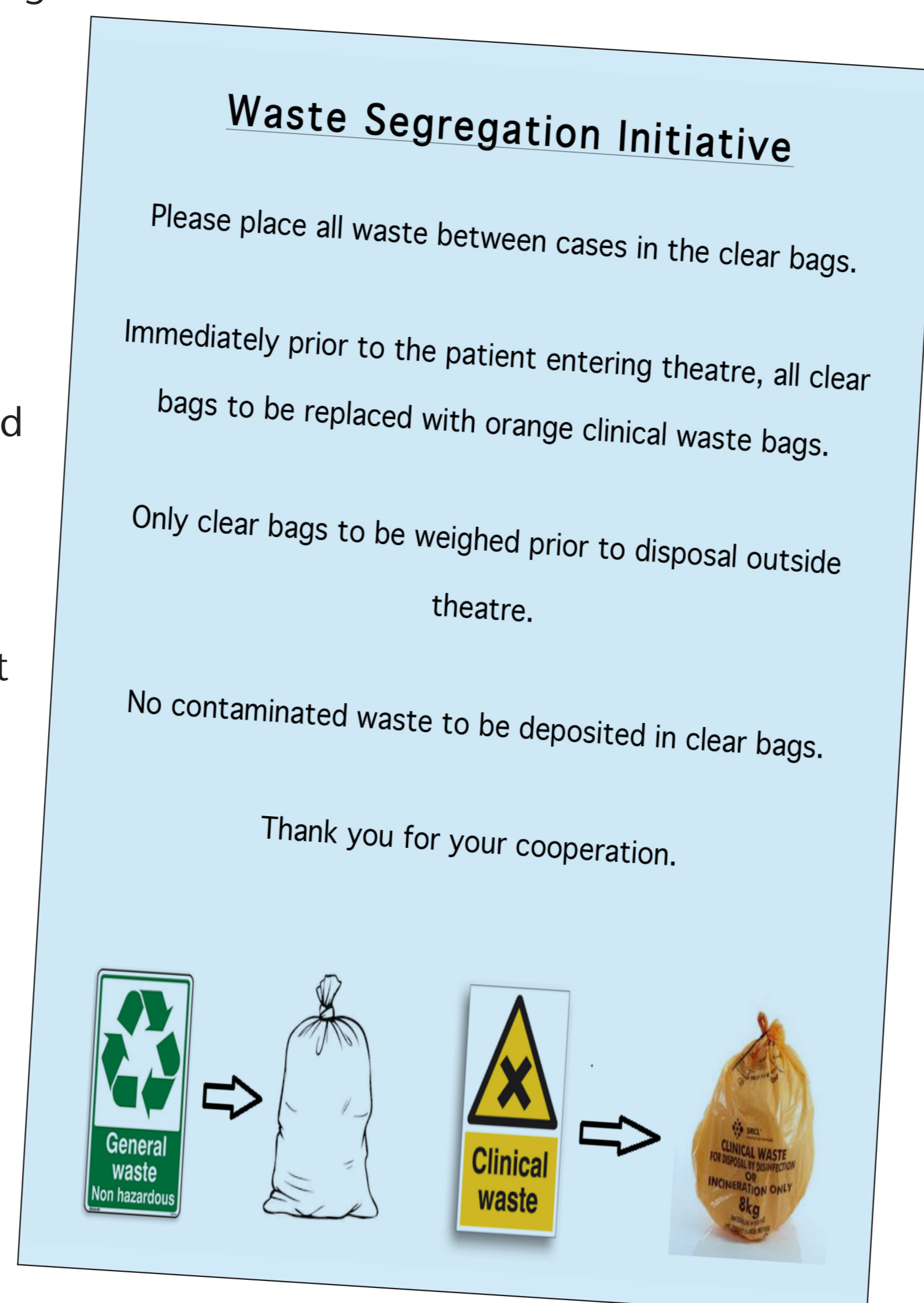
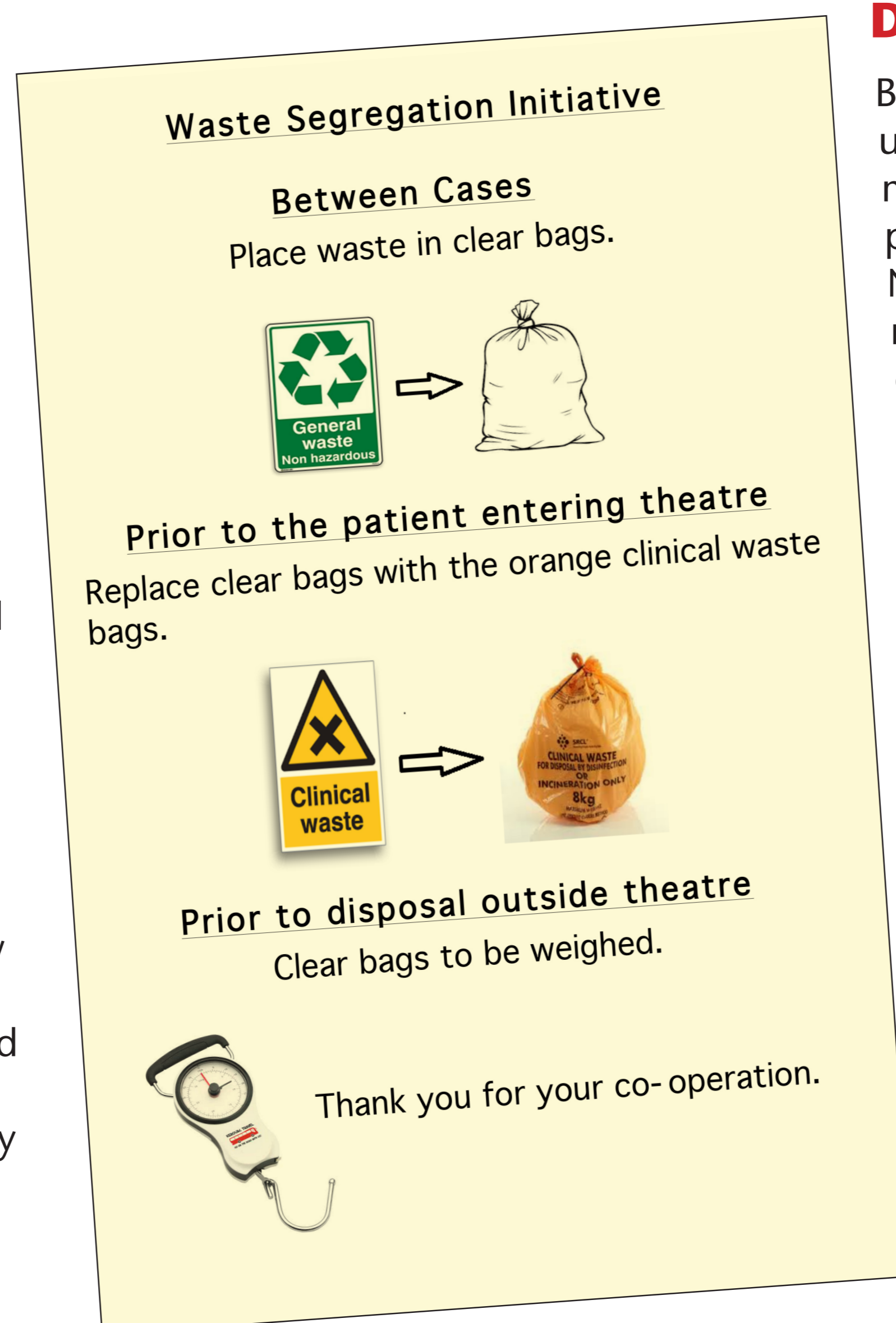
NHS Scotland spent more than £22 million towards waste management and disposal in 2012<sup>1</sup>. In order to curb this otherwise increasing trend, NHS Scotland produced its Waste Prevention and Re-use Guide to aid in waste reduction. Our theatre department treated all waste as clinical. We piloted a waste segregation initiative to calculate possible financial and environmental savings in our operating theatre

## Methods

The initiative was run in consecutive operating theatres over one-week periods in University Hospital Wishaw in 2018. All pre-theatre preparation waste (non-contaminated) was placed in clear plastic, general waste bags. These bags were removed prior to any patient contact and commencement of surgery. The process was repeated between cases. The clear waste bags were weighed prior to sending to an external facility for sorting and recycling. Theatre staff received training on segregation policies as well as information on the cost differences between disposing of clinical and domestic waste. In theatre, clear signage indicated when to use each type of refuse bag. Also, during the morning theatre brief in the lead up to and during the initiative, the staff were reminded about and encouraged to engage with the project.

## Results

During the pilot, the average amount of segregated waste was **505.5kg per week**. Information from the waste management company has demonstrated that we have reduced our clinical waste by an average of **1.9 tonnes per month** and increased our general waste and therefore recycling by 1.5 tonnes per month, compared to the previous year. The projected saving since commencing this initiative in November 2018 to date, will **exceed £22,000**. This is in part due to costs incurred when our health board didn't have a waste contractor.



## Discussion

By staff education, encouragement and updates, our new approach to waste management has become standard practice in the theatre department. NHS Lanarkshire has a new waste management contractor. The costs for clinical waste disposal will be £432/tonne compared to £95/tonne for general waste. The potential future savings will be approximately £8500 per annum. We plan to introduce local site champions to promote this project and future initiatives. They will ensure that the good progress continues and will educate new or agency staff of the initiative, which was a cause of some suboptimal collection days during the pilot.

We demonstrated that simple measures with no increased resource utilisation can yield significant impact. This is an easily upscalable activity and we plan to introduce similar schemes for items such as metal, glass and PVC products which are not currently recycled and disposed of via the clinical waste stream<sup>2</sup>. The other hospitals in our health board are now implementing similar schemes with positive results.

There is also proven environmental benefit by segregating waste. Disposal of clinical waste produces 3 tonnes of CO<sub>2</sub> for every 1 tonne destroyed. This will lead to a reduction in CO<sub>2</sub> emission by nearly **70 tonnes/year**. The NHS is the UK's biggest public greenhouse gas emitter, therefore we should all be working towards sustainable solutions to reduce this. With the continued support of all theatre staff and senior management, we believe that NHS Lanarkshire can make significant financial and environmental savings via simple sustainability initiatives and by embracing this as change in our organisational culture.

## References

1. Zero Waste Scotland. NHS Scotland Waste Prevention and Re-use Guide. Available from: <https://www.zerowastescotland.org.uk/content/nhs-scotland-waste-prevention-and-re-use-guide>. (Accessed 31st January 2019)
2. Zero Waste Scotland. <https://www.zerowastescotland.org.uk/content/zero-waste-scotland-joins-forces-nhsscotland-tackle-disposable-waste> (Accessed 3rd September 2019)