



Case Study

WASTE

**ROYAL LIVERPOOL & BROADGREEN
UNIVERSITY HOSPITALS**

Plaster Recycling



Orthotics Service use the plaster casts to manufacture foot orthoses, these comprise of specially fitted insert or footbed to a shoe to provide support for the foot by distributing pressure or realigning foot joints while standing, walking or running.

Approximately 1200 patients each year are referred to the Orthotics department for this type of treatment and each patient is measured and assessed by a specialist to determine the most suitable orthoses. Foam impressions are taken of patient's feet and are then filled in with plaster of Paris to produce a perfect cast, which are then used in the department's workshop to manufacture moulded insoles which are bespoke to each individual patient.

The Royal Liverpool and Broadgreen University Hospitals NHS Trust (RLBUH) is one of the largest and busiest hospitals in the North of England. It has more than 5,600 staff and sees 600,000+ patients per annum.

The Orthotics Department at Broadgreen Hospital receives patients from the North West area, Consultants and GPs referred patients, who require specialist orthotic treatment.

The casts from Orthotics and the Dental Hospital are made using fine high quality plaster. The hospital produces approximately 20 tonnes each year and was keen to ensure this material was recycled instead of being disposed as landfill.

"The disposal of high sulphate waste is limited in the UK but the major advantage of gypsum is that it can be recycled. The plaster produced by the hospital does not come in contact with patients and is not categorised as offensive waste, this allows for the plaster to be recycled. Previously, approximately 20 tonnes of material was sent to landfill each year."

Andrew Johnson
Energy Manager
Royal Liverpool & Broadgreen
University Hospitals NHS Trust



Used plaster casts waiting to be recycled.



First part of the recycling process is to remove any contaminants and grind the material into small pieces.



How did the Trust improve sustainability?

The Trust teamed up with Tradebe Ltd, a leading national waste company, with a recycling facility local to Liverpool.

Plaster casts are gypsum based products that can be processed and recycled as an alternative for natural mined gypsum. One of the major applications of gypsum is in the cement manufacturing industry, where its properties slow down the hardening of cement making it more workable.

Carbon and Financial Savings

The processing costs are similar to disposal but the Trust will benefit from not having to pay landfill tax approximately £1,440 each year.

The financial savings are not huge but this was an excellent environmental opportunity to recycle and avoid landfill disposal. This has helped to reduce the Trust carbon footprint by 1.8 CO₂e tonnes.

Website: www.tradebemineralsrecycling.co.uk

Further Information:

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Useful Links:

<http://www.tradebe.co.uk/local-news/168-tradebe-breaks-the-mould-when-it-comes-to-recycling>

<http://www.tradebemineralsrecycling.co.uk/minerals-recycling-news/tradebe-minerals-recycling-steps-challenge/>

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