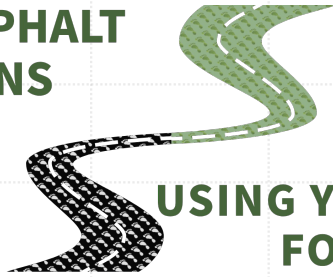


**GREENER ASPHALT
SOLUTIONS
Ltd**



**USING YESTERDAY'S ROADS
FOR TOMORROW**

Greener Drier Technology

The sustainable production
of topsoil from dried
gully waste creating the true
circular economy in the
delivery of highways
maintenance.

WINNER

MOBILE RECOVERY AND PRODUCTION
OF GULLY WASTE INTO TOPSOIL

AMEY HIGHWAYS

ENVIRONMENTAL SUSTAINABILITY PROJECT OF THE YEAR



INSTITUTE OF
HIGHWAY
ENGINEERS

MERCIA

**AWARDS
2024**





Project Overview

- With increased flooding it is vital to maintain drainage assets frequently and effectively. However, this maintenance leads to an increase in the amount of gully waste which can be challenging and expensive to dispose of

Recycle your wet waste

The conventional method for disposing of gully waste is to wash the waste and produce low-quality sand and gravels, with the rest of the organic and deleterious materials being sent to landfill.

- An innovative alternative to this practice was developed over a period of four years by a team of individuals from Greener Asphalt Solutions, Staffordshire Highways contracts and technical support from MTS Environmental Ltd.
- The aim was to recover most of the gully waste, diverting it from the landfill and producing topsoil that could be reused.
- Most counties have around 170,000 gully pots or more and produces 1,500 plus tonnes of wet waste annually, which is serviced by a fleet of tankers and additional contract vehicles.

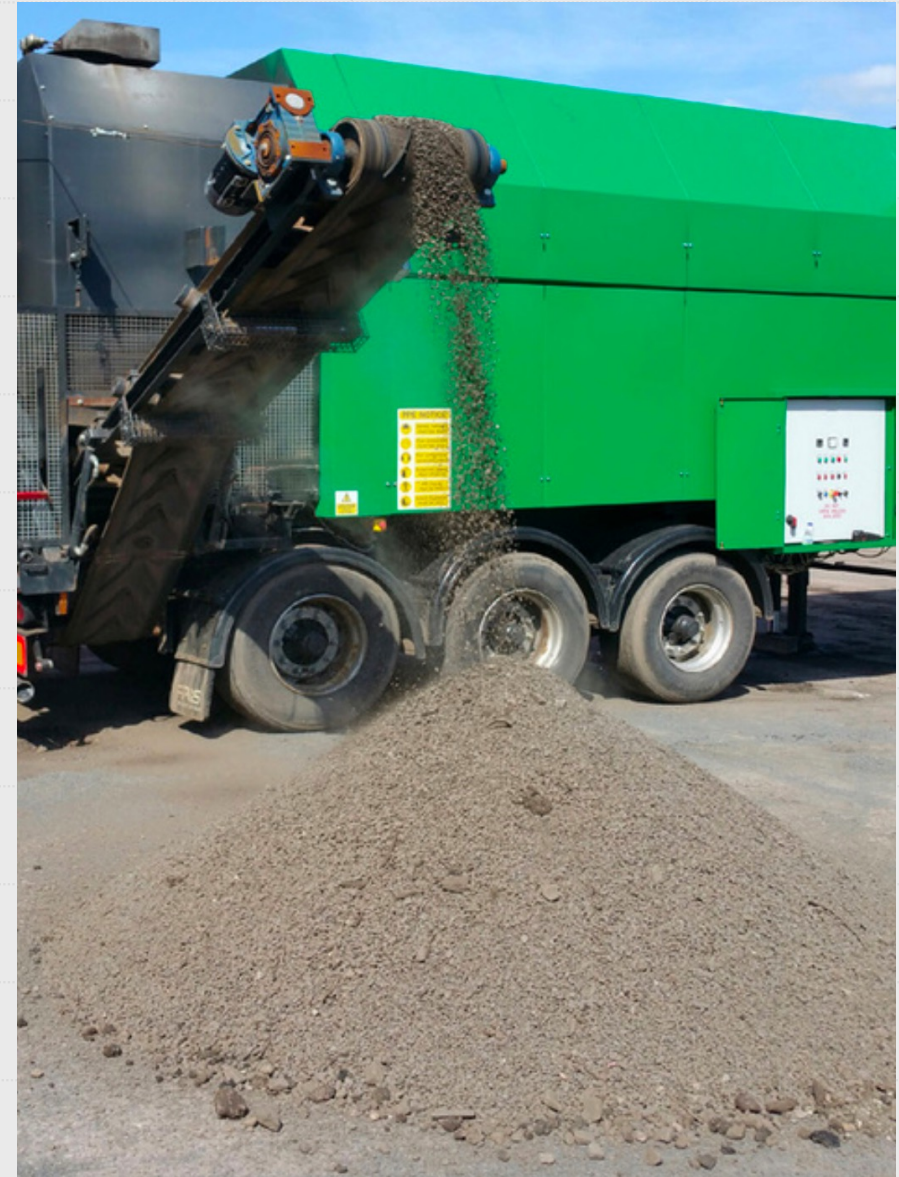
The Drying plant is capable of drying all manner of wet waste material to help you reduce your waste to landfill costs, removing water from your waste dramatically reduces the weight.

Can be used to dry aggregates, glass, organic waste, PFA and many more products.

Project Overview

- A unique mobile drying system was developed by the team to allow the waste to be screened and remove deleterious materials
- Drying involved the trial of various fuels to evaluate cost, performance and carbon emissions
- To produce suitable soil the team tested a range of screening techniques to ensure compliance with British Standard 3882 for topsoil production, adding to the product's intrinsic value
- Blending the dried gully waste with other materials to achieve the correct balance of nutrients and physical parameters led to the creation of a low fertility soil for verge dressing and grounds maintenance works
- The project demonstrated the principles of the Circular Economy and reduction in Carbon by taking gully waste from the kerbside, processing it and then reusing it on the adjacent verge

This initiative received significant support from the client Staffordshire County Council and local Councillors.





The Approach

- Global climate change has increased the urgency of finding new ways to address the worldwide shortage of topsoil
- Our goal focused on producing soil from construction waste and ultimately demonstrated the opportunities for this type of innovation
- We deepened our technical expertise in understanding the soil triangle and developing the correct ratios of sand, silt, and clay
- One key waste stream our clients worked with was gully waste, which has higher levels of sand and organic material from fields and hedgerows. They found it essential to increase the amount of material diverted from landfills and this innovative process allowed them to recover more than 90% of the dried gully waste



The benefits are numerous including availability of topsoil all year round at half the commercial rate.

- During the last 2 years, our client recovered more than 2,200 tonnes of gully waste and transformed it into topsoil for more than 100 sites. More than 40 projects have been supplied with the soil in the last 6 months alone with very positive feedback from operators commenting on the quality and ease of handling

Outcomes

Overall Objective Achieved

- The project's success lies in developing a system that significantly reduces the impact of drainage maintenance on the environment, reduces carbon emissions, and enables local authorities to reuse materials, creating a circular economy
- It was achieved with the initial drying of utility spoil to produce aggregate and subsoil, recycling of rail ballast and followed by recycling gully waste
- The final conclusion is that County Councils and other contractors can cost effectively use mineral drying as a method for achieving the circular economy recycling within their existing depot infrastructures





The focus was on gully waste as the most expensive waste to dispose of from the delivery of the highway maintenance service. The increasing costs of energy and materials have led to a significant demand for recycled aggregates, making the Highways waste recycling operation a viable and profitable project.

Our client's unique technique of transforming gully waste into soil has been a noteworthy success. By drying and blending the material the waste can be classified as soil, which meets the BS 3882 specification for multipurpose topsoil. Using a Commercial Grade soil with lower nutrient levels has been more economical, given that it is sufficient for verge dressing and fill applications

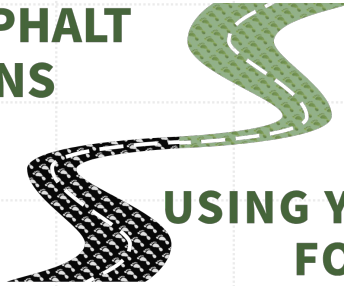
In the last 12 months, they have recovered 1300 tonnes of gully waste and transformed it into a suitable soil for use on several contracts.

The project is an exemplary demonstration of a circular economy, where waste materials are gathered, processed, and reused on the same contract.

The savings that the project generates in comparison to purchasing topsoil are approximately £32,000 per year. In addition, there is also a significant saving on logistics and transportation costs estimated at £16,000.

It is now established that the entire gully waste output will be recycled into soil.

GREENER ASPHALT SOLUTIONS Ltd



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