

NORTHAMPTONSHIRE HIGHWAYS

Gully Dewatering Bays



Northamptonshire Highways is the partnership between Northamptonshire County Council and MGWSP, and together, we maintain the highway network across the county. Our value of sustainability is at the forefront of what we do and from day one a dedicated team has been in place to ensure the organisation, and partners, live that value.

When we won the contract in March 2008 we inherited a poor waste management system where only about 50% was recycled and all gully waste went to landfill. At Northamptonshire Highways, gully waste is our most difficult waste stream as we produce so much and it is challenging to dispose of. It is not a case of simply getting rid of it as it requires storage, drying and can only then be recycled. The gully dewatering bays are our way of managing the gully waste successfully.

Northamptonshire Highways carries out the cyclical gully cleaning operations across Northamptonshire on behalf of the County Council. Gully cleansing produces a large amount of wet waste which past contractors had always disposed of in landfill sites, something we have worked hard to avoid since the start of the Northamptonshire contract in March 2008. We were also keen to address the Environmental Agencies increasing interest in what happens to waste streams.

By October 2008 we were achieving 95% re-use/recycling of waste on the contract across all depots but, after carrying out an internal waste audit, it became apparent that gully waste was the last of the waste streams that was not being recycled. We set out to change that with the objective of getting even closer towards reaching our target of 100% recycling/re-use.

We needed an alternative disposal route, one where we did not rely heavily on other contractors to meet our recycling targets. The alternative was to provide a more environmentally responsible and sustainable option, whilst providing the added bonus of reducing the costs associated with landfill tax. A de-watering facility was designed, enabling the reduction of the total volume of waste, with the liquid being discharged through the existing sewerage system. The solid waste left behind could then be recycled by composting. The result was what we had aimed for; the whole gully waste stream was diverted from going to landfill. This new project has seen our re-use/recycling reach 99%, a massive step towards reaching our final, 100%, target.

Not only does this innovation benefit Northamptonshire Highways in regards to recycling and reducing waste but it provides other benefits as well. Journeys to and from

landfill sites were reduced, therefore we are using less fuel which is having a positive effect on associated costs and emissions which has greatly increased the efficiency of the operation..

As a whole this project has provided numerous benefits to the environment, community, the company and the staff involved in the gully cleansing operations;

- **Environment –**

- Zero gully waste to landfill
- Reduced fuel usage.
- Reduced fuel emissions contribute to a reduced Carbon footprint.
- Waste recycled into a useful commodity for the company and community.
- Less vehicles on the road are beneficial to the community and environment.
- Recycling reduces raw materials obtained from the environment.

- **MGWSP -**

- Cost savings – waste not disposed to landfill.
- Reduced fuel expenses.
- Good environmental credentials.

- **Staff -**

- Reduced driving time.
- Reduced time spent compiling new resources due to use of recycled gully waste.

The construction of the two dewatering gully bays at our Brixworth depot has enabled an entire waste stream to be diverted from landfill, this equates to approximately 1776 tonnes annually. The dewatering facility allows the volume of gully waste to be reduced by up to 20%, with the liquid draining in to the existing foul water system and the remaining solid being sent for composting.

Annually, the bays have facilitated financial savings of £110,500 as the waste is now re-used in regeneration schemes within Northamptonshire. The estimated

distance travelled to the landfill site and then returning to Brixworth depot has been calculated at 1205 miles annually. The new gully bays enabled the elimination of this mileage as they effectively ‘cut out the middle man’ avoiding the journey to landfill sites. This reduces our impact on the environment, minimising waste and fuel costs and emissions associated with these journeys.

The next step for the company was to find a way to recycle our gully waste ourselves, on site, enabling us to store the by-products and then transport them to other depots to use across the county. After successfully trialling the recycling of dry gully waste, the MGWSP Senior Management team were happy to move the initiative forward. In June 2014 we received a permit to store dry gully waste at our Wellingborough depot enabling us to then recycle the waste ourselves .

The gully waste will be held in our dewatering bays for a maximum of 5 days, in which time it will have drained sufficiently to be moved to our other depot. The waste will be stored at the Wellingborough depot until a maximum of 1000 tonnes has been received. At this point a mobile washing and screening system will wash, separate and screen the waste. The vast majority of by-products produced from the waste will be sand and aggregates which can be reused throughout the contract. We expect there to be less than 1% waste produced which we cannot re-use as a material.

This new initiative will ultimately result in us reusing or recycling almost 100% of our waste and keeping our gully waste within the Northamptonshire Highways contract to be reused across the county. This process will see a reduction in travel time and fuel usage as the waste will no longer travel the same distance to be recycled due to the

depots being significantly closer. We will also reduce, if not eliminate, the travel time and fuel required to deliver aggregates and sand from other companies to our sites and depots as we will have our own supply which will be replenished approximately every 6 months. Less travel time and fuel usage further supports Northamptonshire Highways sustainability goals.

To conclude, the addition of the dewatering gully bays have been undeniably beneficial to Northamptonshire Highways as a whole. They have enabled us to divert nearly all our waste from landfill therefore contributing to our 100% recycling target. They have provided financial savings to the company and benefits to the environment, communities and members of staff. The gully bays mean that we now have control of all our gully waste. Critically we have developed a solution quickly to enable us get closer to our target of 100% recycling/reuse, one that we have now been able to replicate on other contracts in Surrey and Suffolk.

