



Widnes Biomass Plant



The project involved soil stabilisation contractor C J Pryor Stabilisation improving the soil by importing clay and improving with lime to achieve an engineering fill to enable the building of a new biomass facility.

The biomass-fired combined heat and power (CHP) plant in Widnes, Cheshire, is being developed jointly by Danish firm Burmeister & Wain Scandinavian Contractor (BWSC) and UK logistics company the Stobart Group. Based at the 3MG Mersey Multimodal Gateway, the plant will have the capacity to process 147,000 tonnes of waste wood per year to generate electricity for 49,000 homes in the Widnes area. The plant will also be capable of burring virgin wood and generating 3.5MW of renewable heat for nearby industry and the adjacent Stobart Park business development. Construction of the plant is due for completion in 2016.

Some 25,000m³ of soil was imported to raise levels. The only local source was too wet to use in its current state so Pryor Stabilisation carried out laboratory trials together with an onsite trial to establish that the addition of lime would provide the necessary soil strength and characteristics and so create a consistent, geotechnically stable formation level for the biomass plant's development area.

A clean clay capping layer was placed in the base of the fill area in order to separate the existing contaminated soils and the lime stabilised materials. The site has a long history of mixed use including chemical works and timber treatment. Contaminated soil includes "galligu" a local term for the waste resulting from the Le Blanc process associated with the Widnes Soap and Alkali manufacturing industry.



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Benefits

- Fast and efficient drying of wet soil
- Separation and containment of contaminated soil and the lime stabilised material
- Provision of geotechnically stable formation level

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The wet soils were then imported via 8 wheel tippers and lime was added using Pryor Stabilisation's Terragator Spreader and Fendt 939 with mixing drum.

Following the final trim of the stabilised layer, a crushed concrete protective layer was placed across the site area.



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Project details

Client:	Stobart Rail
Project duration:	5 weeks
Main contractor:	BWSC
Soil stabilisation contractor:	Pryor Stabilisation
Area stabilised:	25,000m ³
Soil type:	-
Blend:	-
Specialist plant:	Terragator Spreader, Fendt 939 with mixing drum