

Severn Trent Sewage Treatment

UNITED KINGDOM

The Problem

Scunthorpe Sewage Treatment Works serves the Scunthorpe town and villages in the surrounding area. The plant treats a mixture of domestic and trade effluent; in particular the effluent from a crisp manufacturer. The Sewage Treatment Works (STW) site had three distinct problems:

The primary settlement tanks were badly affected by gross volumes of floating solids.

The main feeder channels between the primary screens and the primary settlement tanks were blocked with thick sludge type deposits of fats and solids. The grease and fat was fibrous in appearance.

The sludge consolidation tanks were badly affected by gross floating solids. Floating sludge and poor sludge compaction was also causing a major problem with the sludge consolidation tanks.

The Solution

Bio2pure® undertook the scope for consultation and recommended application of its Formula 33® microbial aid formulations to the client. This solution was added with the incoming effluent using Bio2pure®'s pre-assimilated technology system and dosing into the stream was carried out on a regular basis. While the operations were in process Bio2pure® technical Team made regular site visits to assess the progress and undertake sample collection as per the predefined schedule.

The Result

After four weeks of treatment the primary settlement tank performance was significantly improved with only a small volume of floating sludge evident. This was easily controlled and efficiently dealt with by the surface scrapers. The problem of 'layering' of the sludge and the formation of a sludge blanket had been eliminated. The cleaning routines of the main feeder channels were reduced to once a week with only a general hose down of the channels now required. BOD from the primary tank was reduced improving the performance in the activated sludge plant. The most noticeable area of improvement centred on the sludge consolidation tanks (Refer Image on next page titled: After 2 weeks of treatment).

Achievements at Severn Trent Sites

Scunthorpe	Initial trial within STW. Successful long term use.
Newark	Scientific assessment of soluble COD reduction.
Nuneaton	Control of excessive load from meat rendering factory.
Melton Mowbray	Scientific Assessment of Foghog applications.

BEFORE TREATMENT



AFTER 2 WEEKS OF TREATMENT



Figure: Treatment of settling tank

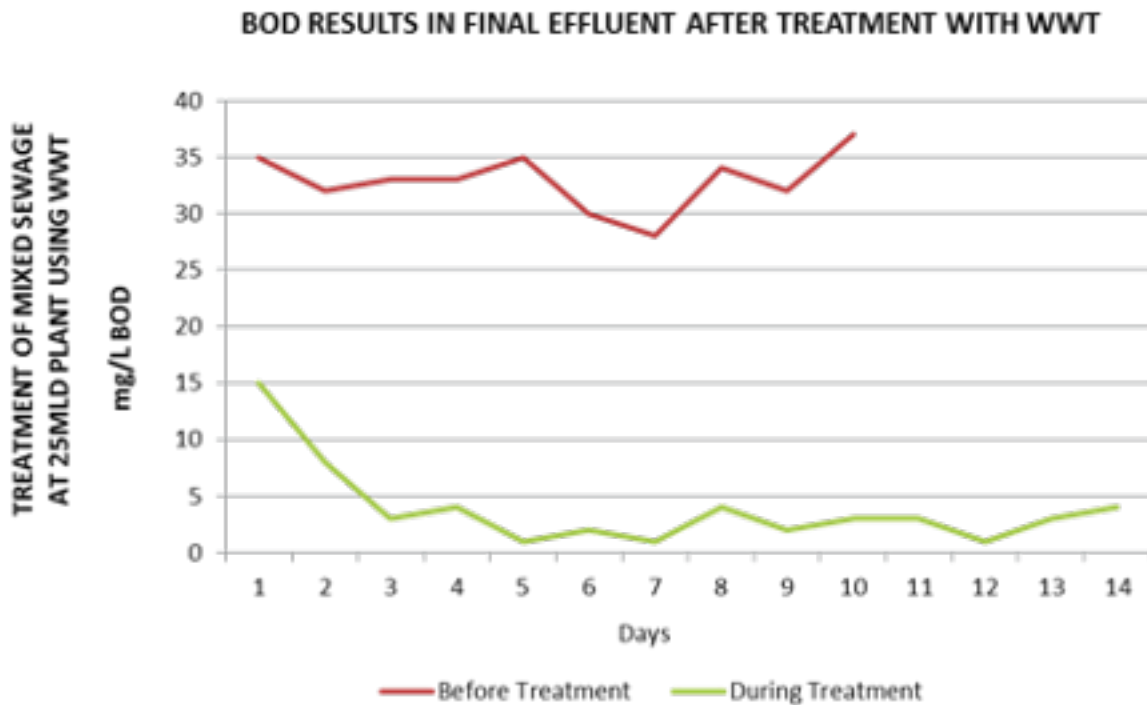
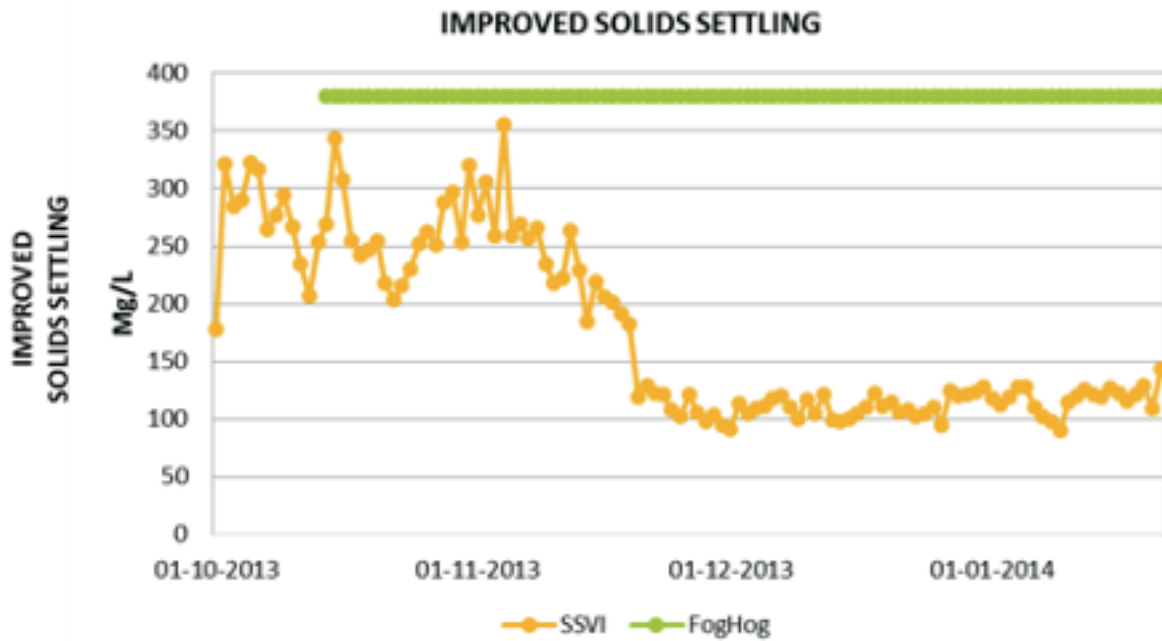


Figure: Water Quality Analysis of the sewage

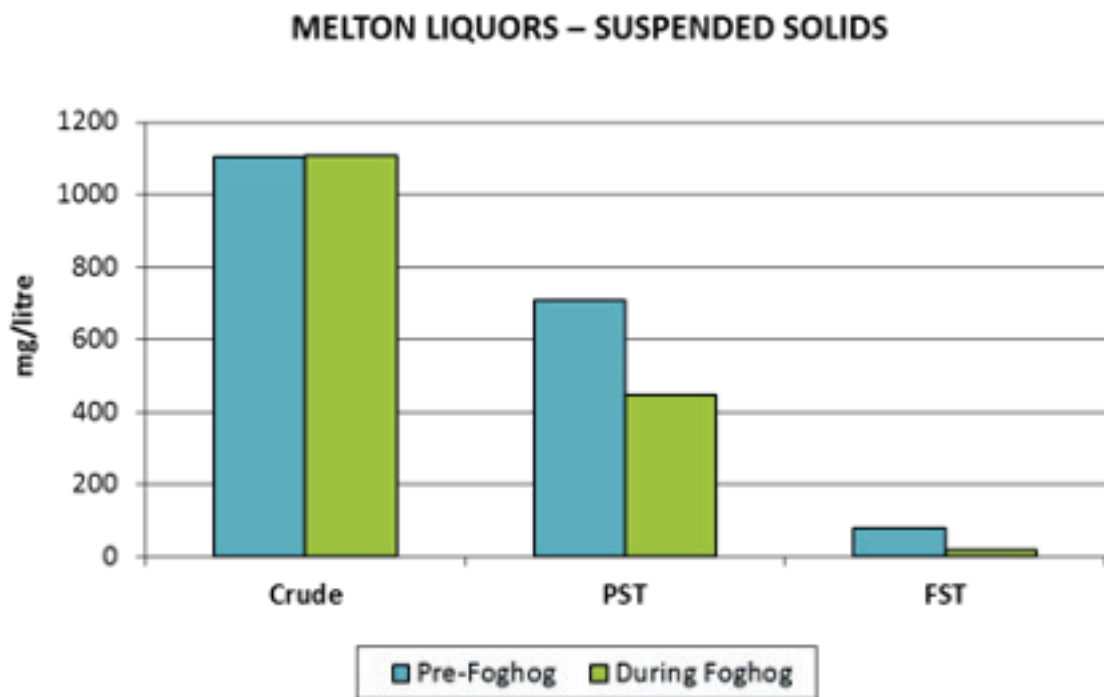
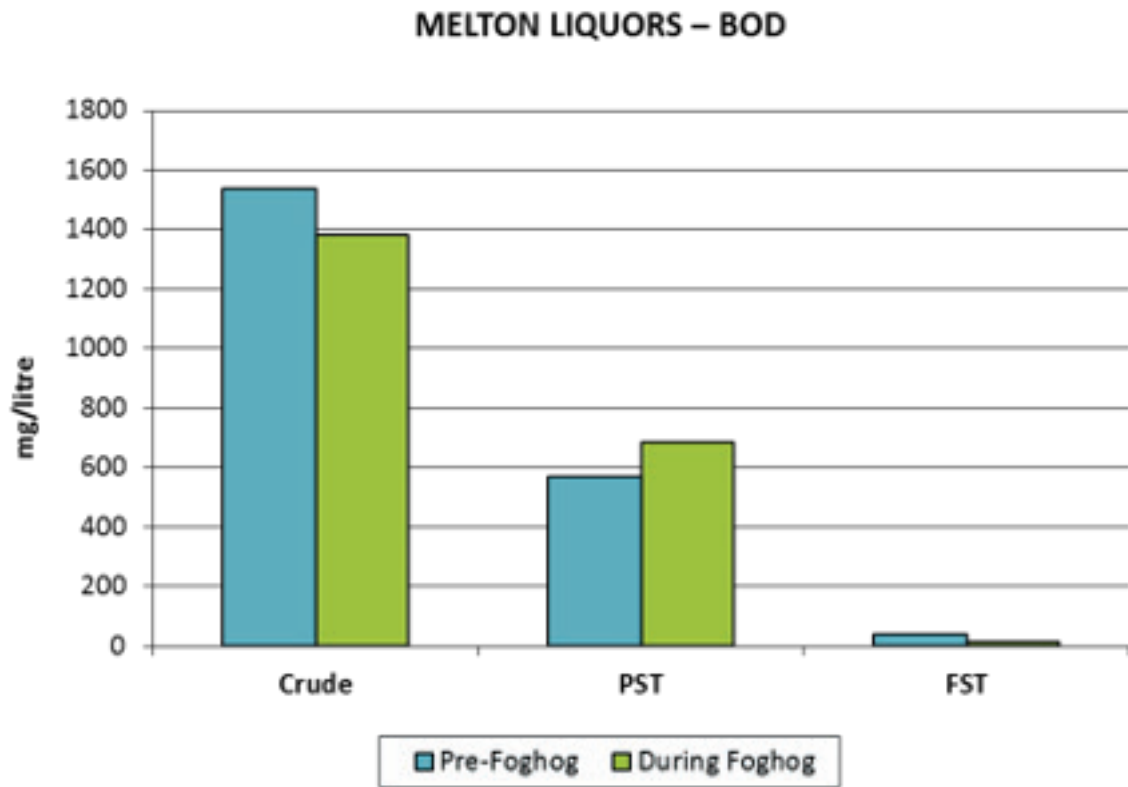


Figure: Pre and Post Fog Hog intervention

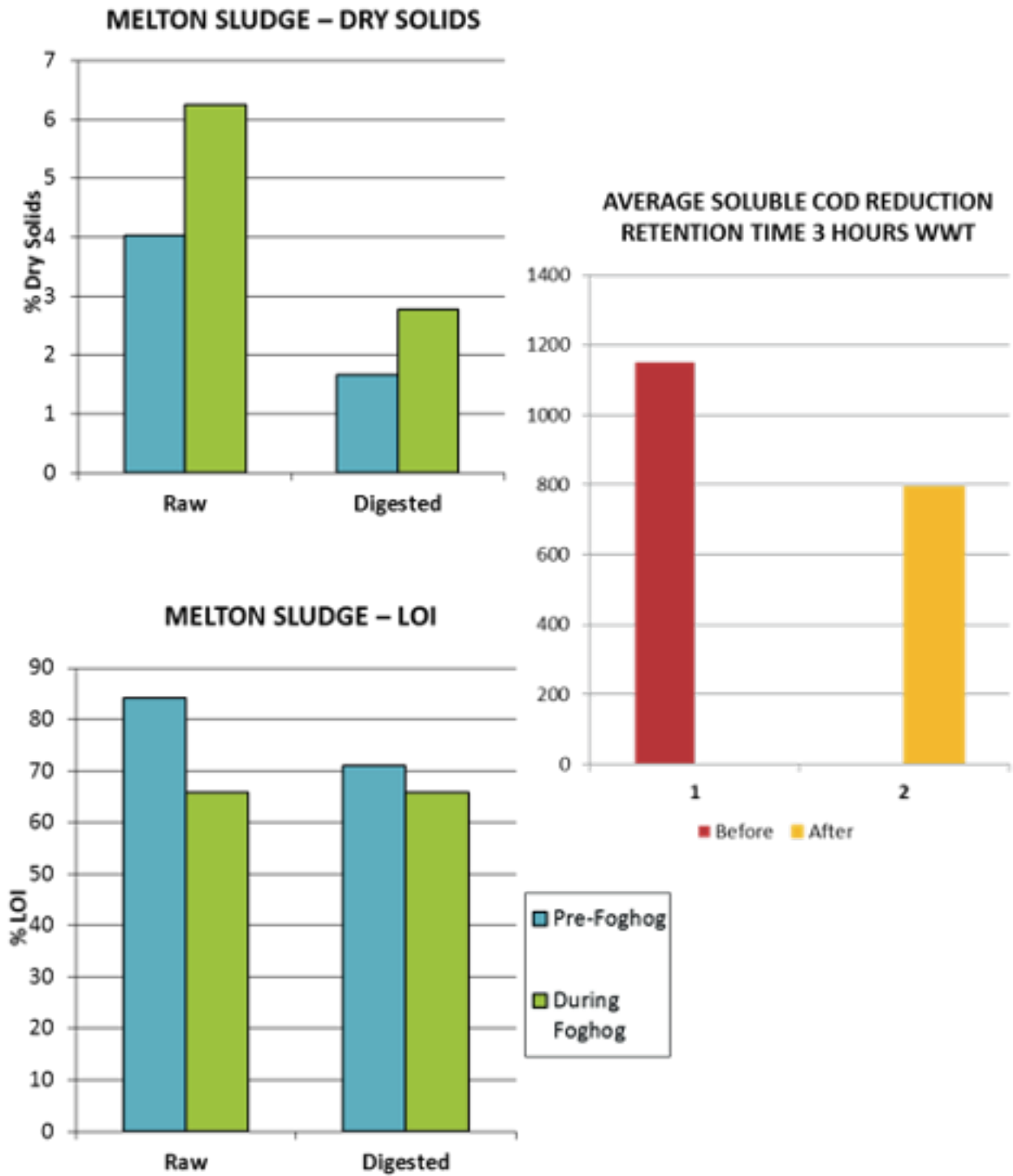


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