

DUO supply a TEREX wash plant for the CEMEX UK operation at West Deeping.

A new quarry at West Deeping, Lincolnshire has just started supplying high quality sand and gravel into the local market including CEMEX UK concrete and asphalt plants within an area of approximately a 50 miles radius and will also supply a new on-site bagging plant currently being built.

The new site at West Deeping which has replaced the now **exhausted** Manor Pit operation has reserves **which will secure the site for several years** and features a new TWS Wash Plant which has been supplied by the English and Welsh dealer for Terex Washing Systems (TWS), DUO (Europe) plc.

West Deeping is now one of three large processing operations within the CEMEX UK Central area with the others being Rugeley and Swinderby. The Manor Pit operation which is approximately 4 miles away had an operating life of 20 years and the site is now currently being restored.

*Philip McComb – Quarry Manager at West Deeping, takes up the story, “The old plant at Manor Pit was very large with a computerised blending system which is totally different to the new plant that DUO have installed, so it’s a complete ‘sea change’ for our operating team. Although we are still in the commissioning stage, after one month we are achieving the **optimum tons per day**. Early indications suggest that the new plant will be more efficient and more reliable and it all looks good so far.”*

Apart from the fact that the Manor Pit site contained a significant amount of ironstone the deposit at West Deeping is very similar, but much cleaner with a mixed deposit in bands with clay seams in the gravel which is efficiently dealt with by the new processing plant.

*Phil continued, “We have been very lucky that we started with a blank piece of paper and benefitted from previous experience with other plants supplied from **various** manufacturers’, so we are very fortunate that we have a plant that has been through a design process and eliminated issues we have experienced in the past. Working with the CEMEX Engineering Department we arrived at what was required on-site and after various consultation and site visits DUO designed us a plant based on the TWS Fines Master FM200C which was accepted, and they were subsequently awarded the order.”*

The sand and gravel plant:

Capable of operating at up to **220tph** the plant consists of a bespoke feed system which is fed by wheel loader, via a feed hopper which incorporates a remote-control tipping grid. Material is then fed up the inclined feed conveyor onto the 20 x 6 three-

deck rinsing screen which utilizes individually controlled spray bars on each deck which are fitted with polyurethane modular media.

Acting as a protection deck the top deck removes any rejects up to +90mm and clay to stockpile and any oversize +40mm being sent to a further stockpile with the bottom deck providing the feed to the Fines Master 200C to produce the required sands.

A static sand recovery unit on one chassis, the FM 200C features a centrifugal slurry pump, a 14x6 dewatering screen and twin hydro cyclones that produce two in specification sands

A specially designed rubber-lined underflow box allows blending to take place so that an acceptable coarse and fine sand ratio can be achieved. These sands are then delivered to separate radial conveyors and stockpiled.

Phil, commented, "Originally the radial arc was going to be two equal runs, but as we produce more sharp sand naturally we decided to install a split arc with most of the arc utilised by the sharp sand conveyor to allow us a larger stockpile."

Any remaining gravels off the first screen are then fed onto a second inclined transfer conveyor which feeds onto a 3-deck part rinser which takes out and provides feed to 6/10/14 and 20mm stockpiles.

Phil added, "This second split also features the option of redirecting the feed to the -6mm conveyor only, through a set of flaps. This is an event we schedule every couple of weeks to produce a 04/20mm for our concrete plants. This is, along with sharp sand our main seller; although currently 4/10mm is in demand and as our material is very clean the 2/6 and 4/10mm also have added value as they can be potentially sold as decorative gravel."

Phil, summarised, "The final specification included lattice conveyors with a full walk around for complete access and all bearings were specified SKF. Overall, we are very happy with the plant to date, its producing in specification material and providing us with much more control and flexibility over our production enabling us to efficiently satisfy the demand. With full confidence in the expertise and service that DUO provides, we are looking forward to our first full year of sand and gravel processing."

Total Solutions:

TWS provides cohesive solutions for all material and mineral washing needs through their English and Welsh dealer - DUO. Focussing solely on providing solutions to quarry, aggregate, mining and C&D recycling industries it is dedicated in providing reliable, high quality and very productive equipment with ease of transport and fast on-site installation

This is achieved through a broad product portfolio which offers modular, mobile and static wash plants with the ability to work in many applications. Meeting individual materials and mineral washing needs to achieve today's stringent specifications of clean material is at the top of the agenda.

