



# Construction and demolition waste recycling may be the key to recovery

The continued message from the UK Government is that the construction sector will lead us out of recession. With the Coalition committed to various schemes that will kick start the recovery in the public and the private sectors, the theory is sound but in practice the plan may be flawed. Peter Craven of materials washing and recycling company CDE Global reports on changes that need to take place to avoid a minerals famine in the UK.

Above: Aerial view of the Sheehan Group's Oxford-based C&D recycling plant.

While finance initiatives have been implemented, helped by various Government-backed expansion programmes for public sector building, and the private sector expected to contribute with more speculative works due to relaxed planning permissions, the construction-led recovery theory is encouraging. However, in practice, whatever the expectation, the success of these initiatives may be thwarted by the inability of planners to provide the necessary permissions to extract virgin aggregates.

The Mineral Products Association (MPA) recently reported that quarry and mineral producers would probably fail to provide enough rock, sand and gravel to supply the construction industry if and when recovery comes. With the UK's aggregate land banks weakened during the recession and the lack of permissions being granted by local authority planners to allow suitable

extraction, the industry is not strong enough to support such a recovery if and when it materialises. In 2012, the approvals for extraction of rock, sand and gravel took on average between 12 and 24 months which, according to the MPA, is not fast enough to provide much-needed materials for growth in the construction sector.

In line with another initiative from the Government, recycling of construction and demolition (C&D) waste material could well provide the key to recovery, with the industry being able to provide much needed resources, if planners embrace the technology.

During the construction of the Olympic Park for the London 2012 Games, 99% of all construction demolition waste was recycled. In addition, approximately 25% of all aggregates used on the Olympic project were from recycled materials. This should have been the benchmark for future UK construction projects. However, unless local authorities and councils make the recycling of C&D waste material part of the overall recycling plan in their regions, the likes of London 2012 may never be repeated. This isn't without irony, as the underlying message of the Games was enduring legacy and sustainability.

In the UK, over 90 million tonnes of C&D waste is produced each year from construction, demolition and civil engineering projects. In Europe, this figure is significantly higher – in excess of 1000 million tonnes. These figures represent a huge sustainable resource that, with permissions from planners, could be used as a quality material and realistically contribute to the needs of the construction industry and help fuel the much needed boom. It was the Government's introduction of the Aggregates Levy – the tax on the excavation of virgin

construction materials, that was supposed to encourage the recycling of C&D waste material. However, planners still seem unable to embrace the concept.

One recent CDE Global project took place in Oxfordshire, in the constituency of David Cameron, where a C&D recycling plant was installed after six long years of planning during which time 600,000 tonnes of construction waste was sent to landfill. The Sheehan Group of companies campaigned long and hard for permissions to install the recycling plant on the site of a minerals works and adjacent to the local recycling centre. Of those 600,000 tonnes of waste, over 90% could have been recycled and turned into good-quality sands and aggregates for a variety of applications including ready-mixed concrete.

With average replenishment rates of aggregate reserves (ie, the rates at which production is being replaced with new permissions) continuing to decline, the recycling of C&D material to produce usable construction materials is a realistic solution to the shortage of virgin aggregates. Less than 50% of sand and gravel reserves have been replenished in the last five years and approximately 67% of hard rock reserves, with these figures showing little sign of improvement in recent months.

The UK aggregates industry produces around 210 million tonnes of crushed rock, sand and gravel per year for construction use from over 1500 quarries. With current extraction rates of sand and gravel depleted by 50%, there is no guarantee that production could increase sufficiently to meet increased demands. With over 90 million tonnes of C&D waste being produced in the UK each year, at a recycling rate of 90%, this represents a substantial contribution of 81 million tonnes of reusable aggregates that could be diverted from landfill and find valuable applications in the construction materials markets.

**Research figures**

The most recent research figures regarding the consumption of aggregates in the UK show that approximately 20% of the total aggregates used in the construction industry are from a recycled sustainable source. While the potential total of recycled material from C&D waste material is 81 million tonnes, we still have the ability to use more in everyday construction projects.

Planners need to understand the bigger picture. When the construction industry does boom again, the aggregates industry alone will not be able to meet demand. The UK is an island and our valuable mineral reserves will not last forever. Increasing our usage of recycled materials will preserve our precious virgin reserves and ensure that for specific applications certain materials are available for longer.

Planners need to better understand the recycling concept and the impact these materials can have on the industry. The call is not for a replacement of virgin aggregates by recycling but for more of a balance of the two. The focus needs to be on granting the necessary planning permissions for aggregate extraction, while understanding the C&D recycling industry and providing the necessary permissions for new plants to exist.

The UK C&D materials recycling industry has the ability to provide a meaningful contribution to the overall construction industry well into the next decade and beyond, conserving precious raw materials, diverting materials from landfill and reusing existing material, which is processed into quality sands and aggregates. ●



C&D recycling plant installed in Oxford.



Aggregate washer.



C&D waste being fed into the recycling plant.