## Project Briefing

The project involved the infilling of 5 railway arches on a 150 year old viaduct which was in need of structural support, as serious movement was detected due to the constant train movements. Since it is the main supply line for deliveries of coal to the Corus Steel Works in Scunthorpe.

The design was for a light weight Foam Concrete to be used to support the 5 arches, this was required to ensure that there would be minimal disturbance to the existing ground conditions.

### The Arches

*Figure 1 - 5 x Arches For Infilling*
Form Work

These show the formwork required to hold the Foam Concrete, allowing the pouring in 1 metre layers. To ensure no leakage, the inside was lined with plastic.
The pictures below shows the subsequent pyramid layers of the Foam Concrete to an overall height of 11 metres just below the barrier as in the top right of the pictures.

*Figure 4 - Pyramid Structures Height 11M, just below the barrier as seen in the top right of the pictures*
The Foam Concrete Batching Plant

Below is the trailer unit used to supply the Foam Concrete. It is capable of producing up to 400+ m³ per day and can pump distances in excess of 500 linear meters. Being fully computerised the quality of one batch to the next is identical making top quality Foam Concrete. At the end of each days production the on board computer will print off the tonnage used on the cementitious material and the litres of water used to make the Foam Concrete, from these figures we can work out the volume supplied in conjunction with the mix design.

Since the batching unit uses Cement – Pfa or Cement – Slag combinations, delivered via cement tankers there is no contamination with other material such as sand, stone, or other impurities if supplied via a concrete company. From a 30 ton delivery we can manufacture between 50-130 m³ depending upon the density requirements on site. With cement deliveries that are timed to arrive on site every 90 minutes, so having a continuous supply topping up the silos. Another advantage is that with the silo topped up at night (40 + tons of material) we can start producing Foam Concrete first thing in the morning without having to wait for deliveries of material from a concrete plant to arrive.

Figure 5 - Our Specially Designed Batching Plant
Deliveries of material

Figure 6 - Cement Truck Discharging 30 Tonnes in 40 Minutes!

The Last Pour

Figure 7 - The last pour in filling the final lift
Foam Concrete Ltd

We have expertise and plenty of experience working in challenging environments, where our competitors would struggle to pump the volume, mix design or distances. Please contact Lynton Cox, who will be able to advise you on the best approach for your next project, references are available on request for this or any project that we have featured on our web site.