

April 2017

CHANGES THAT MATTER



Jay Leno had said that engineers can change the world and that caused me to reflect that many of the changes which I have made are virtually unrecognisable and passed over without comment by many people. This is because I was reclaiming derelict land – making it ‘green’ and attractive to new users. Memories of how the old place used to be can be extremely short. Of course much of the construction that engineers are responsible for lies underground, one will not find better examples of work of exceptional quality than in Bazalgette’s London sewers but few people ever visit them. Bazalgette and Brunel were contemporaries of one another and between them those two made enormous changes to the way that people lived. Brunel’s works especially are greatly admired for their impact on the landscape and travel. In marked contrast Bazalgette’s London sewers saved many thousands from death through cholera when the common opinion was that cholera was air borne rather than carried in water, especially foul water. John Snow demonstrated the truth of this misconception when he famously ‘shut the pump’ in Broad Street in Soho in 1854. Bazalgette’s impact on reducing the incidence of cholera in London was equally dramatic.



Quite often in civil engineering the intention is to hide construction by restoring the ground to its original condition after the civil engineers have left, pipelines spring to mind as a good example of this. In the case of pipeline construction for example, especially where these things run through agricultural land, the important issue is the restoration of the quality and productivity of the soil and this calls for careful analysis of the pre-contract site conditions and great care in handling stock, land drainage and the various layers of soil that will exist to say nothing of hedges and streams. The landowner expects nothing less.

But my main purpose as a civil engineer has been to make wholesale changes to improve the appearance and quality of a site. Quite a different proposition. When one is attempting to reclaim derelict land one will probably be facing a mess, comprised of a degraded landscape and industrial scars, and not have any soil at all other than materials like coal shales or metal contaminated slimes to use as a surface material. I am very pleased that we have seen sites recover a great deal of attractiveness for developers and visitors and create benefits for local communities.



As a reminder I have attached just one example of 'befores' and 'afters' of Fan lead mine near Llanidloes just to demonstrate the kind of changes that are possible. I could show you some photographs of pipelines that we have worked on too but that would not suit my present argument in the opening sentence.

Kind regards

Ivor

Managing Director

Richards, Moorehead & Laing Ltd.

LOW COST LANDSCAPES ARE NOT FAKE NEWS.



RML has long experience in producing low cost landscapes based on our understanding of the close relationship that exists between location, vegetation and soil. We have provided guidance on this topic for the European Commission and the UK Department of the Environment and the construction industry through the Construction Industry Research and Information Association (CIRIA). When we have been appointed as landscape designers we have practised what we have been preaching. A series of projects that we are particularly pleased with can be found at Greenfield near to Flint in North Wales. The Greenfield site was the location for huge industrial complexes that were abandoned in the 1980s. Demolition of the buildings created an area of rubble that covered 9.5ha.



The site lies between the Chester to Holyhead railway and the Dee estuary and was a significant industrial scar in an area along the North Wales coast between Connahs Quay and Colwyn Bay. This part of the country had long been written off of as a disaster in terms of landscape even in the 1960s in the AA's handbook 'Roads in Britain'.

Flintshire County Council, who were the owners of the derelict Greenfield site, asked for proposals to create some semblance of an attractive area where they wanted to establish a new industrial complex. The site would have to be attractive to developers on geotechnical, accessibility and environmental grounds. The Council received a proposal from a firm of traditional landscape architects to provide a new landscape at a cost of over £500,000. This was based on imported topsoil. The council officers had long been familiar with our approach to 'greening' industrial sites and they asked us to provide an alternative proposal.

Apart from the difficulty of obtaining a large amount of topsoil we considered that this was totally unnecessary and unsustainable as well. In addition we recognised that the Council's intention was that in time the site would be built-over and the valuable soil would not only be a nuisance but could be lost during the subsequent construction of buildings. We knew full well that introducing soil would increase the cost of establishment of grass on account of the inevitable seed bank which would be in the soil and the subsequent growth of the grass would be unnecessarily lush calling for increased cutting and costs. We proposed that the level surface produced under the demolition contract which was composed of crushed concrete and hard rubble should be crushed in-situ and rolled to produce a surface with a reasonably fine structure that would support grass. All that would be needed was some fertiliser and an appropriate mix of grasses. I think that the driver of the tracked vehicle got a bit bored trundling up and down the site to produce the surface that we wanted but it was all for a good purpose.



To create planting areas for trees we encouraged the council to import selected builders' rubble. The rubble was formed into mounds which would be the main elements in a new landscape that would not be disturbed by subsequent buildings. This rubble was covered with a thin layer of subsoil, covered with biodegradable hessian and the whole area planted up with pioneer tree species. Because the imported material was free draining, and had a friendly pH of about 7 or 8 root development was expected to be very good. From the appearance of the tree-covered areas after 20 years we would say that this has been the case.

Our scheme was robust too. The site was flooded when the tidal flap valve that protected the area from high tides in the Dee was stolen and on another day the hessian was burnt by vandals. Both the grass and the trees survived these mishaps and recovered well. The area is now filled with new industrial premises so most of our original grass has disappeared as we knew it would. Our trees have made significant growth and have been supplemented by self-sown trees which increases the diversity of the woodland copses.

The total cost of the original work was £35,600 in 1992, an average cost of 37p/sq. m.

Further work involved planting up an even larger area adjacent to the estuary which had been a tip for industrial waste and latterly used by 'bikers'. The council wanted to encourage the general public to get some pleasure from it by way of low level usage. To control access overall we planted-up areas with severely-threatening thorns along with pioneer tree species and prepared grassed avenues to encourage pedestrians to walk-over and enjoy the bracing estuary air.

Low cost landscapes are of value from a number of viewpoints. Apart from having a low initial cost, and low management costs, they mirror nature in their development because of the early reliance on pioneer species. Incidentally pioneer species have a greater chance of making an impact in the short term because of their early vigour. In years gone by planting schemes usually involved some exotic species just because they were exotic but we see this approach as entirely inappropriate. Our native species are a better guarantee of success.

Follow the link below to see how the site looks today on bing.com

<https://binged.it/2oUzhc8>

Kind regards

Ivor

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