

March 2017

PATIENCE, ENERGY & TIME.

In an April 2015 newsletter David reminded me about Kung Fu and Bruce Lee's comment *"Notice that the stiffest tree is most easily cracked, while the bamboo or willow survives by bending with the wind."*

Kung Fu is a Chinese term referring to any study or practice that requires patience, energy and time to complete.

In a newsletter that month we talked about the great variation in size, colour and habit that Willows display, all in the hope that this might encourage engineers to look a little deeper into how they could use these qualities in construction projects. I have long recognised that getting engineers to adopt practices that are seen by them not to be engineer-based is Kung –Fu, a long and frustrating process, it certainly requires patience energy and time to succeed. On dark Friday afternoons, you know the feeling, I do wonder whether we will ever complete the task. The task is, it still is, to get a wider appreciation of what vegetation can do to improve the performance of civil engineers and civil engineering. I have also learned recently that some people think that in building, as opposed to civil engineering, much more effort is required to increase and improve sustainable practice. Vegetation can play a key role in this.

But I wrote this on Monday morning!

Good morning! The world looks a better place today, in 2017, especially after a week in October last year which troubled us, especially Ivor; the disaster at Aberfan was in all of the news just then and brought back many disturbing memories. But the extensive treatment of that event encouraged Ivor to reflect how far things in construction, especially civil engineering, have progressed in 50 years.

For those of you who can remember those far-off days, life as an engineer was simpler. We were a law to ourselves, arrogant and scornful of what impact our work had on people and places. Specifications were standard things that were cut and pasted in offices from Lands' End to John o Groats, site work was started and finished without a thought given to seasonal effects, one walked away 'when the job was done' never to return to site again. Top soil was labelled as 'unsuitable', tasks involving seeding and planting were added into the final miscellaneous section of a bill of quantities as afterthoughts and would be deleted when budgets over-ran. Defects were certainly not trees or grass that failed to grow and of course 'we have always done it like this so what's the problem' was the prevailing attitude.

Is it any surprise that engineers often made a mess of things and it took the man-in-the-street and our President, Professor Hambly to join them saying in 1994 that 'We have had enough, engineers must respect our environment'?

So on this bright morning, the sun is shining, I am pleased to be able to recount how in Ivor's early days he wrote specifications that were specific for each site in respect of timescales, site characterisation, methods, earthworks that often did not involve 'earth' at all, contaminated materials, drainage, soil handling and storage, along with seeding, fertilising and planting. He also included some aftercare in the contract requirements, which was innovative in itself.

We now work in multidisciplinary teams, prepare and respect Environmental Assessments, show that we do care about fauna and flora, we make good use of the inherent qualities that willows display, we carry out longer term management tasks and talk to people about our work. We must admit that our practices can still be improved and that patience, perseverance and more energy will have to be applied. Neither must we forget that new entrant-engineers must be well prepared in order to be flexible like willows.

Kind regards

Idris

Chief ranter and problem solver
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LINES IN THE LANDSCAPE.

Improvement makes straight roads, but the crooked roads are roads of genius.

William Blake (in a previous newsletter I mistakenly attributed this to John Locke)

Blake seems to be saying that in creating beauty nature does things better. I am with Blake on this, I live in the Vale of Clwyd an area that is dominated by hedgerows and crooked roads. Much of RML's work is road related and has demanded of us a wide range of professional disciplines and skills. The long road we have trodden allows us to say we are experts in planning, landscape design and environmental management. Of course today roads and railways are constructed to follow broad sweeping alignments that are engineered for speed, safety and comfort, and take the most convenient route that satisfies these requirements. I must admit that I do admire them, to me they exude and reflect the confidence that civil engineers now have in working with the environment. RML's skills complement those of engineers when planning and designing such projects.

The building of roads and railways might be considered the work of great civilisations, but the straightest roads tend to be the work of dictators or military men because they can then get from A to B quickly to impose discipline on their citizens. British roads have in general been democratically aligned, that is, they take a pragmatic line and politely step aside to avoid unnecessary conflict and then do strange things when elected politicians get a bee in their bonnet.

Whether or not you consider HS2 to be a dictator's or a democrat's railway probably depends on whether you live close to the route or not. But for us mere designers and constructors – who only seek to serve - HS2 with its high-speed alignments and gentle inclines is an exciting challenge. And we all recognise that this huge, big budget project is not crossing lifeless, uninhabited desert; in fact the scheme poses numerous environmental challenges. RML has many of the environmental skills required to assist in the construction of roads and railways. Our teams include Environmental Coordinators, Civil Engineers, Landscape Architects, Ecologists, Soil Scientists, Hydrologists, Archaeologists and Arborists.

Due to its great diversity in terms of geology, mineral wealth, landform and environment Wales is one of the most intensely studied part of the earth's crust.

In our 33 years of working on new roads, particularly in Wales, we have researched into, advised on and faced complex design challenges in environmentally sensitive landscapes. We have just begun studying the construction of a third crossing of the Menai Straits. I would think that there are not that many sites in the UK that are more sensitive or of greater significance from an historical engineering viewpoint.

Each passing year has brought an increase in the complexity of town planning, environmental regulation and standards in respect of environmental analysis. A recent review of our QA system highlighted the increasing demands on our information storage on this account.

If Blake was around today I would point out to him that in recent years we have improved our practices in straightening roads but not claim that we are even close to emulating the genius of nature.

Kind regards

Ivor

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