

November 2019

A SIGN OF THE TIMES

We have been very busy for several months shredding thousands of ancient, scanned, paper records, reports, engineer's certificates and letters to help clear the office before redecorating. In all honesty we are rarely, very rarely, asked for details of some long past project. Current and recently completed projects are all stored digitally from the off. In recent months we have set about emptying bookshelves and filing cabinets and at the same time reducing the considerable loadings on our office floors.

Incidentally, the paper shreddings end up in our compost heaps. The filing cabinets and some of the bookcases have gone to a good home.

We are fortunate in having what I believe is a robust IT system. I have commented before on how every few years our system shrinks physically but expands in capacity, increases in speed, costs less to upgrade and is increasingly energy efficient. All of our 'desk-tops' are water-cooled for example and 'home produced' by David. There is a BT cabinet immediately outside the office too so when Gigabit over copper arrives, we should be well placed in respect of our connectivity with clients and partners.

Change is 'in the air' at RML.

During the clear out we found a set of railway curves in a nice wooden case that had been stashed away in a corner. No one had had to use them for years with the advance of AutoCAD and the like. They are plastic curves but I remember that we had a set of wooden ones in one office that I worked in. Our set of curves will be kept for 'old-times' sake. There is a note on the inside of the lid pleading with users to put the curves back in the correct order ranged according to the length of the radii. One can imagine the 'aggro' in the office if the curve that you wanted was not where you expected it to be. Andrew has reminded me about the frustration we all had with blocked Rotring pens! Things have moved on. Small events and reminders like this just underline the extent to which our working environment has changed.

More changes in our industry are on the way as people assimilate and then react to events such as the demise of Carillion and the experience of relying on auditors and, closer to home, forms of contract that revolve around 'private finance initiative', 'early contactor involvement' and 'design and build'. Watch this space.

The nature of our work has changed too and I commented in July in 'Feeling left out' on how we are required to report on topics that have to be taken into consideration if a project is to progress. As a mere mortal engineer I find these topics are more and more wide-ranging and demand a great deal of effort. The reports require us to demonstrate that we have thought about the work and do so by putting our thoughts into writing. This is no bad thing in my view and comes down to us communicating in a meaningful way with clients, other professionals and members of the public. Words are important.

Ivor

OBFUSCATION LEADS TO PARALYSIS

Obfuscation is a human trait demonstrated by many people and can be the death of a great deal of forward thinking and action.

Ivor Richards 2013

To obfuscate – to darken, to confuse, to bewilder, - hardly then the actions of someone who has the necessary qualities inherent in leadership. So often obfuscation is the only contribution that many people are able to bring to a discussion. Obfuscation frequently thrives when analysis extends to over-analysis and paralysis, and again when management by weakly directed committees is the norm. Avoid obfuscation at all costs but it is insidious by its nature and can be difficult to counter.

Prediction is usually based on hope and this element can be the factor that encourages obfuscation. If this happens any forward movement is frozen. Disappointment and frustration is the inevitable result amongst those anxious to see progress being made.

In Ivor's experience leading from the future as it emerges is creative, effective, delightfully simple and immensely satisfying. This kind of leadership calls for precipitate action and cuts out any opportunity for obfuscation. Ivor referred to [Otto Scharmer's](#) approach in respect of leadership in March when he was talking about change.

In addition this kind of leadership removes the rigour of corporate planning and I am sure that you recognise that it is at the planning phase of projects that obfuscation can be most damaging. Leading from the emerging future identifies opportunities and pathways for activities and can cut short preliminary discussions about what and when to do things.

But beware, preliminary discussions provide the environment where obfuscators breed and multiply. Forward facing ideas or activities can be squashed by someone simply mentioning something that darkens and confuses the field of action. We have all experienced this on countless occasions. Be honest, we have all fallen into the trap, the sad thing is that many obfuscators do not realise what they are doing and fail to apologise for the confusion which they have introduced. They probably think that they are being helpful but other darker motives can prevail too.

We are not talking about positive alternative ideas that contribute to an analysis but a few words that can derail the whole thinking process. Let us take a simple example that really happened. A group of people who were intent on promoting science were thinking about getting involved in junior schools in order to advance interest in science amongst the pupils. You may well say "Well what is wrong with that, isn't that a good idea?" Well, hold on a minute. One member of the group interjected "But there are hundreds of junior schools" and discussion stopped dead in its tracks. A classic case of obfuscation. Of course there are hundreds of junior schools but to their credit the group ignored the comment and now support a number of schools, to great effect.

As a leader with a burning desire to make progress how can one avoid obfuscation?

One has to be equipped and ready to deal with these circumstances, they are a daily occurrence, and for leaders their main role as doers is to prevent 'good ideas' dying. How does one achieve this? My best advice is to clear away confusion and bewilderment by being focussed and persistent, being single-minded also helps.

Idris.

COMMUNICATION

Although communication is so much faster today with the ease of sending emails and exploiting 'conference calls' or skype one wonders why it takes so much longer to get anything done compared with how it used to be in the 1970s and 1980s.

Ivor Richards August 2019

Slow progress in seeing infrastructure projects that will improve connectivity come to completion is particularly frustrating for us. Idris mentioned recently that improving connectivity between communities and between individuals is vitally important if we are to improve our productivity and hence our national wellbeing.

I complain frequently about how long it takes to get started physically on projects and my latest rant was prompted because a huge document had landed on my desk. Very recently we had completed the Environmental Assessment required for a highway improvement in a rural part of the country. The work involves upgrading a modest length of a single carriageway that is below-standard trunk road. The improvement stretches for about 5km through a rural area.

Taken together with appendices Andrew has been responsible for a document that runs to nearly 3000 pages and 200 figures and drawings and is in addition to what the engineers have produced. All of this enables the government to decide on a preferred route. This is the culmination of 2 years of work and yet more will be required to inform a public enquiry and then produce a detailed design. Of course the actual construction will be the subject of tenders submitted by perhaps 4 or 5 companies which will have to be assessed by yet another group of people.

We have recently shredded the Environmental Statement that we prepared in the early 1990s for the A55 improvement across Anglesey. That Statement was tiny in comparison with our most recent efforts. Those were early days and I think that our assessment was the first one done in Wales in accordance with Volume 11 of the 'Design manual for roads and bridges'.

One reason for all of this preliminary work is that there are now so many regulators and regulations controlling and approving what can be done if you want to build something. Another reason is that we now know so much more about how construction affects people's lives and environments and these effects need to be considered carefully and mitigated sensibly and sensitively. The scope of this work, the time involved in carrying it out and the many disparate groups involved in getting it approved and acted on has increased enormously in the last 20 years or so.

A great deal of environmental assessment has to be carried out with due regard the demands of regulators but I have no problem with this if it improves wellbeing and our performance.

However it is sad to relate that 'people' no longer trust experts when they believe that they are adversely affected by a proposed scheme. Once prejudice exists we find it is difficult to counter. What an 'expert' says is frequently dismissed as self-serving. A classic case of 'He would say that wouldn't he'.

Although communication can be faster, face to face contact is still an important feature of business dealings especially project management even though I see great benefits in conference calls and skype conferences. The actual mileage that our vehicles and the hours that staff are engaged in in travelling to meetings has reduced considerably over the last few years and this is good for them and the environment. But I know that from time to time face to face contact is vital.

Successful communication depends of writing well and I have always been pleased when clients have complimented us on the quality of our reports and again when others have pressed us to write reports and guidelines for the benefit of civil engineering in general.

Ivor

SURPRISE, SURPRISE, SURPRISE

Now this could be based on a true story.

Idris has been allowed some free reign recently, as you may have noticed, and we should have known better but everyone here has had their heads down for several months. Idris announced this morning that he had brought a friend to work for the day so we all stood around at the top of the stairs waiting for this friend to appear. We were expecting to see an Idris mark 2, even a lady friend perhaps. No such thing, it was a steaming mammoth. "I'll tie him up in the carpark" said Idris. "He is house trained", he added as if that would placate our overwhelming anxiety about how passer-byes or clients would react, never mind the office cat. I am pretty sure that the cat had never seen a mammoth before, we gave him an extra feed of special food developed for cats by [Jonathan Self](#) to placate him because he was a bit disturbed. Cats know how to show their feelings. I had to keep my feelings buttoned-up.

Things could have been worse, mammoths could be expected to cause something of a stir even in Ruthin, or more likely, especially in Ruthin. A client came up to me asking us to do a piece of work pro bono because he liked us and other people had actually quoted a negative fee to do the same task. I said "Thank you but not really, it's against my principles", actually I lied, because I don't have any principles. After he had pushed past the mammoth on his way out he muttered something about us being all mad and we haven't seen him since. I hope that he had luck with the consultants with the negative fee. We have decided to keep the mammoth tied up outside so as to deter frivolous enquiries, such as "Can you get me planning permission by the end of next month?" But sensible people are enquiring "Why have you got a mammoth tied up outside?" and "What do you use him for?"

Mammoths are very good at creating interest, not because they do anything except stand around and bellow, well not bellow actually, they sort of snort and f**t a bit. Anyway our neighbouring businesses are quite confused, "What is a mammoth is going to do for me?" said the hairdresser, and the opticians could not see the point of it at all. The butcher had his eye on the mammoth too but his plans were not that friendly even if business-like. "Is mammoth steak any different from Buffalo steak?" he wondered aloud. The owner of the hardware shop opposite was intrigued, he thought that he stocked everything but he had not thought of mammoths until we had one on show.

Our contractor clients tell us that they are very impressed, but they haven't explained why. "Is this the future RML" they said but I ignored the obviously barbed comment about our approach to the environment being a bit woolly. I put it down to jealousy, I mean, do you know any contractor never mind a consultant who has a mammoth as a pet. I did draft the last sentence to read 'do you know any contractor who has a mammoth as a pet never mind a consultant but realised that could be misconstrued although.....

I have been wondering who quoted that fee.

If you need some large animal droppings and shredded paper for your compost heap let Idris know.

Ivor

CUTTING GRASS-CUTTING COSTS AND CAPTURING CARBON

“All seed mixtures showed, low growth throughout the trial despite not being cut in nearly four years” - Sports Turf Research Institute report.

RML have been introduced to the results of a 10-year research and development programme that can provide a multiple of environmental benefits and more effective use of resources when the results are applied to the construction and management of highway verges. We would hope that the benefits can be accrued in other areas of construction too.

SO WHAT THE FUTURE HOLDS FOR US IS A LOW-GROWTH GRASS SWARD THAT WILL BE EVERYTHING THAT WE WANT VISUALLY IT WILL BE A COMPACT SWARD THAT WILL NEED ONLY VERY OCCASIONAL CUTTING.

ISN'T THIS WHAT OUR COLLEAGUES IN HIGHWAY MAINTENANCE HAVE BEEN LOOKING FOR?

WHAT IS ALSO INTERESTING IS THAT INFREQUENT MOWING INTRODUCES A DIFFERENT REGIME AND RESPONSE IN PLANT BEHAVIOUR AND DEVELOPMENT SO THAT MANAGERS CAN LOOK TO DEVELOPING QUITE DIFFERENT HABITATS FROM WHAT THEY ACHIEVE AT PRESENT.

AN ADDED BONUS IN ALL OF THIS IS THAT THESE GRASSES HAVE BEEN PRODUCED BY GENETICALLY MODIFYING WELL KNOWN VARIETIES WITH THE RESULT THAT NOT ONLY DO THEY GROW MORE SLOWLY BUT THEY SEQUESTER CARBON AT ENHANCED RATES. WE HAVE BEEN AWARE OF THIS RESEARCH FOR THE LAST 10 YEARS AND HAVE BEEN WAITING WITH SOME EXCITEMENT AND BATED BREATH FOR THE SEED COMPANY TO OFFER US THE OPPORTUNITY TO USE THEIR NEW PRODUCTS.

I HAVE WRITTEN ANOTHER NEWSLETTER ABOUT THIS TOPIC.

REDUCING THE FREQUENCY OF CUTTING WILL release management teams from what is a pretty tedious activity and allow other activities to take the place of 'grass cutting' and benefit landscape value and bioDIVERSITY. SEQUESTERING MORE CARBON IS AN ALL-ROUND WIN TOO.

WE ARE NOW AT THE STAGE WHERE WE CAN OFFER A DETAILED SPECIFICATION AND WORKING METHOD COVERING SITE PREPARATION, SEEDING AND ESTABLISHMENT AS WELL AS A MANAGEMENT PROGRAMME ON OUR CURRENT HIGHWAY PROJECTS THAT ARE AT THE DEVELOPMENT STAGE.

'GRASS THE FORERUNNER OF LIFE...'

'Grass the forerunner of life has fled' - Gordon Bottomley in his 'Ode to ironfounders'

[Gordon Bottomley](#) has been mentioned by me a few times in recent months because he was greatly concerned about the way that basic industries like the iron and steel industry had disfigured and poisoned the land in the search for industrial production. Land had been poisoned to such a degree that grass had disappeared. Grass the forerunner of life had fled' was how he put it in his 'Ode to ironmakers'. I have been a fan of Gordon and his views for years. Indeed Gordon certainly would have supported [Oliver Goldsmith](#)'s view formed about 150 years earlier of how 'ill fares the land to hastening ills a prey, where wealth accumulates and men decay' when he was talking about social problems in rural areas. I am sure that as a poet and a lover of words that Gordon would have been very familiar with Goldsmith's poem 'The deserted village' which condemned rural depopulation in the search for wealth. History repeats itself in so many ways. The land has 'fared ill' in recent times because of landowners seeking wealth at the expense of diversity in fauna and flora.

Gordon saw that grass was an important element in the natural world as 'the forerunner of life'. He has been described as an early environmentalist. Gordon died in 1948 so he was ahead of Nan Fairbrother.

Perhaps Gordon had a point about grass.

Grass has been very important in my world as an engineer. Our report for CIRIA on the use of vegetation in civil engineering started a whole new way of thinking about grass. In greening and stabilising derelict land grass has been a fundamental element in the scheme of things. Not only did grass 'green up' these areas but it stabilised the surface by preventing surface erosion and provided some level of security for other plants and fauna as well as, to a certain degree, some grazing for sheep.

In RML's world grass has recently taken on a new significance. We have been introduced to new grass varieties that sequester carbon into the soil at increased rates. With some significant human involvement nature has produced a seemingly excellent thing that we would do well to exploit.

Along with all plants, grasses sequester carbon into the ground but these new varieties sequester at up to two and a half times the rates achieved by traditional varieties. A seed mix that would be suitable for highway verges could be expected to increase the rate of sequestration by about twice as much as happens at present.

In other words a typical highway verge would sequester additional carbon dioxide equivalent at about 2 kg/sq. m /year if the new grasses were used, equivalent to 20tonnes/ha. A typical highway verge in hilly Wales - along with a cutting or embankment slope,- could extend to an overall width of about 10 metres each side, say 20sq.m/metre of highway (less perhaps in flatter eastern England). A kilometre of highway in Wales will therefore sequester 40tonnes of **additional** carbon dioxide equivalent /year. There are about 420,000 kilometres of paved roads in the UK. About half of these might have proper wide verges. Potentially that is a lot of sequestration.

Over a period of time the grass in these existing verges needs attention or even repair. How many square metres of grass is each highway manager in the country responsible for?

In an earlier newsletter I also mentioned that these same grasses will only need cutting perhaps once in 4 years.

TROUBLE AT THE HENGE

Stonehenge is in the news again. The Times has reminded us that in September 1915 Sir Cecil Chubb bought the site along with 30 acres of land and he handed it over the country in 1918. The public road ran close by the henge but at some time later the road was moved away from the monument. Local people agreed to the move only as long as they could have free access to the site. They still enjoy this privilege.

There have been plans to re-route the road once again. You have probably heard that a tunnel that is supposed to bypass the henge might be cancelled on the grounds of it being too expensive. Well I have noticed that things have got a bit busy on the road but hey the A303 runs through open countryside so I would have thought that moving the road over a bit would be a sensible thing to do but apparently not. It is the locals being difficult again. We have been there before!

Oh yes, oh yes, we had objections when we proposed building the henge in the first place.

As an alternative to moving the road moving the henge could work but I don't fancy the assessments that will have to be done if we have to move it back to Pembrokeshire say. Would they want it in Pembrokeshire now that the stones are second-hand? Just imagine if you can what would be required before one got approval. The Welsh are very keen on wellbeing these days but what would the henge do for the Welsh language and local culture.

I knew that the road that I built to move the blue stones there in the first place would come in handy one day. It is a pity that we were made to take it all up after we had finished with it, and all of those pesky assessments about how the locals would be upset before we could start building it are burned into my memory. A few taps with a cudgel helped to quieten down most of the objectors though. Some lessons and experiences in gaining public approval seem to have been forgotten over the intervening years but putting the clock back never works, more the pity in many cases.

If the tunnel or a new road has to be built I am available along with a few friends to quieten down the natives and RML's daily rates are pretty competitive even for very special services like this. I mean there are all kinds of risks involved and there is the travelling and accommodation to think about too. Taking our mammoths down the A303 in convoy would not be popular with Highways England or the motorists. How would they cope with all of the mammoths' droppings? It might require night time travel which always costs extra and makes the animals twitchy. Well you would be twitchy going along the A303 at night too.

Actually these kind of enquiries are keeping us very busy on highway improvements closer to home but for the henge we would make a point. After all the henge is special and as you can appreciate, because you are those kind of people, I feel very emotional about the henge. If anything it has stood the test of time pretty well. I reckon it has not done too badly, even though some of the stones have fallen down and a few were put back up a little while ago. After all, what did the Romans leave behind apart from a few roads that have had to be resurfaced and some coins that someone had buried against a rainy day?

Idris

55 WELL STREET, RUTHIN, DENBIGHSHIRE LL15 1AF

Tel +44(0)1824 704366, Fax +44(0)1824 705450

email: rml@rmlconsult.com web: www.rmlconsult.com

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