

**National Assembly for Wales Public Accounts Committee**  
**Inquiry into the value for money of motorway and trunk road investment**

**Comments from Chartered Institution of Highways and Transportation**

**1 Background**

- 1.1 The Chartered Institution of Highways and Transportation (CIHT) was established in 1930 as the Institute of Highway Engineers; it was granted its Royal Charter in 2009. Today it has around 13,000 members worldwide, with over 700 members in Wales, across both the public and private sectors and a range of transportation disciplines.
- 1.2 CIHT will be represented by Eurling David Meller, BSc(Hons), CEng, CEnv, MICE, FCIHT, MAPM, a committee member of the North Wales Branch with 30 years' experience in the highway industry, working on both trunk and county road improvements and maintenance projects. He has delivered a number of trunk road major projects in North Wales over the last 20 years, working direct to Welsh Government as client, and also worked extensively for North and Mid Wales Trunk Road Agent (NMWTRA). The comments made may not, however, address issues that have arisen in South Wales, nor are they based on a detailed knowledge of the routine maintenance activities.

**2 The effectiveness of Welsh Government planning and costing of schemes**

- 2.1 The Welsh Government's (WG's) approach to delivery of major trunk road projects is generally satisfactory. Our main observation regarding planning and costing would be to avoid 'stop-start' delivery, as this leads to waste. For example, one trunk road scheme in the recent National Transport Plan had previously advanced to publication of the statutory orders some years ago before being 'shelved' and the orders withdrawn. Quite apart from the fact that a number of incidents have occurred on that part of the network in the meantime, which would probably not have occurred had the scheme proceeded, the need to carry out renewed environmental surveys, and address revised design standards and procedures that have been introduced since the previous scheme was prepared, means that a considerable amount of work has been abortive. A similar situation may well apply to schemes such as the M4 at Newport. There is a common feature here between the major projects programme and the management and maintenance function, in that increasing certainty of expenditure and workload brings increased efficiency in delivery over the current short-term planning and funding regimes – on major projects it seems to be widely accepted that the Early Contractor Involvement (ECI) model is improving cost and time performance.
- 2.2 There have been problems in recent years with cost escalation during the construction phase of some schemes. While this is due to a number of factors, a common factor appears to have been delay in the procurement process leading to a delay in starting construction, and hence a compensation event from day one of the contract – WG needs to address this issue. There was also, during the recession, pressure on contractors to win work in order to maintain cash flows, which we believe led in a few cases to unrealistically low tenders being submitted, leading to attempts

to cover losses by exaggerating the cost of change. In the improving market such tactics are unlikely to be employed, but it is important that particular emphasis (perhaps greater than at present) is placed on quality over price in assessment of tenders, as too great a focus on tender prices leads to both higher out-turn capital costs and higher whole-life costs.

### **3 The approach to project delivery and evaluation of projects**

- 3.1 WG follow the project evaluation processes set out in the Design Manual for Roads and Bridges (<http://www.standardsforhighways.co.uk/dmrb/>) when assessing the forecast benefits of schemes, thus giving a high level of confidence that benefits will accrue to the community as a whole, and that any adverse effects will be appropriately mitigated. There does seem, however, to be a lack of transparency over the prioritisation of projects - looking back over the published programmes of the last fifteen years or so, projects have appeared and disappeared, or disappeared and re-emerged for reasons which are not entirely clear. As indicated above, such stop/start progression can lead to waste even in the scheme preparation stage.
- 3.2 Another area where improvement could be made is in post-completion evaluation of projects, to examine the extent to which the intended benefits have been delivered and to potentially learn lessons for the future. While 'cost reconciliation reports' are frequently produced, they consider only the construction phase, while we are not sure how widespread the production of 'design effectiveness reports' is, and there is little evidence of experiences being fed back into WG processes or the lessons from schemes being disseminated across the wider design and construction profession. We understand WG are intending to produce guidance on the content of a 'post opening project evaluation report', but are not aware of the timescale for this.

### **4 How the Welsh Government could improve its approach to planning and delivery of schemes**

- 4.1 Besides the comments made above, we would emphasise the importance of a clear pipeline of work, which allows the industry (both contractors and consultants) to maximise efficiency in delivery of schemes. We would also like to see a focus on 'medium sized' projects, which would allow Welsh SMEs to take a lead role, and develop experience both for the business and individual employees. At present, with the focus on rather larger projects, these businesses can only find a role in road projects as second or third tier in the supply chain, which stifles their ability to develop.
- 4.2 There is provision for 'medium' schemes to be delivered through the trunk road agents, but the threshold for such schemes has remained at, we believe, £2M for at least the last 20 years, and inflation has eroded the size of project that can be delivered. If the threshold were raised to, say, £5M, with delivery through the current framework consultants and contractors, there would be significant benefits for the 'Welsh pound' – while many of the large consultants and contractors have offices or depots in Wales, the work on the major ECI projects is often carried out by offices outside Wales. More modest sized schemes can deliver higher return on investment than the 'mega schemes' and, with usually shorter lead times (eg no public inquiry), the overall delivery timescale can be considerably shorter.
- 4.3 There is a medium scheme budget within the trunk road agent funding regime, but it has been severely curtailed in recent years. From being sufficient to fund construction of schemes in the £1M to £2M range some four to five years ago, we

understand the budget for NMWTRA last year permitted only some preparatory design work on a single project.

- 4.4 Efficiency of delivery by the trunk road agents is severely constrained by the annual funding cycle. While the agents have done what they can in terms of framework contracts that provide for rapid mobilisation of both consultants and contractors, the situation remains unsatisfactory. Budgets tend not to be confirmed until one or two months into the financial year, so preparation/design time is lost. The design is then carried out under time pressure which often means that value engineering opportunities cannot be exploited, and the actual construction work is concentrated in the last few months of the financial year, when daylight hours are short, and adverse weather has an effect on programme (and hence cost). The situation is particularly acute with regard to surfacing work, which is susceptible to disruption due to low temperatures, and surfacing contractors often have insufficient resources to deliver all the work on offer - we do not have evidence to confirm the perception that tender prices rise at this time of year, but it seems highly likely. It has also become the norm for additional funding to become available around November of each year, and the requirement for this to be spent by the end of March leads to considerable inefficiency – we make comments later about longer funding periods.

## **5 The extent to which the current approach to routine maintenance and improvement of the network via Trunk Road Agents has delivered value for money**

- 5.1 The trunk road agents, through the collaboration with local authorities, have generally delivered value for money in the routine maintenance and improvement of the network. Historically there may have been concerns about inefficiencies, but we believe the auditing regime established by WG and the pro-active management by the agents has driven out waste – though there is always room for further improvement. We would note that the audit reports do not appear to have been made publicly available and, while we appreciate that much of the content may be commercially confidential if it compares local authority prices with framework prices, we would suggest that at least the principal findings should be placed in the public domain.
- 5.2 In the rural areas of Wales, in particular, the sharing of resources between the county and trunk road networks means that operatives and equipment are available locally to respond swiftly to incidents, and works such as winter maintenance can be carried out with maximum efficiency.
- 5.3 With regard to the white-collar services, however, there is a risk that the significant financial pressures now being placed on local authorities will starve them of the resources to develop. We are seeing evidence of training budgets being drastically reduced, so that staff development is minimal. This comes at a time when many greatly experienced people are being lost through voluntary redundancies and yet the requirement for training is even greater, with the need to develop capability across a range of areas, for example in the application of BIM (Building Information Modelling). The same financial pressures are stifling investment in technology (both hardware and software) so that delivery processes are failing to keep pace with developments in current best practice. Across North and Mid Wales we are seeing the complete closure of in-house consultancy organisations in some authorities, with a consequent loss of capacity and capability.
- 5.4 While the agents have frameworks in place that allow for delivery of such services and, in theory, they should be able to pick up the slack, it seems that the private

sector consultants are now experiencing growing workload and being far more selective in accepting work. The NMWTRA Multi-Disciplinary Consultancy Services Contract was awarded in October 2014 and, for work under £50K in estimated value, provided for a 'preferred consultant' who would be offered all work within the scope of the framework. We understand that already, the lead consultant is declining work and, although there are two reserve firms, the fact that such a situation has arisen so soon, gives cause for concern as to what the situation might be further into the three-year term of the framework with regard to value for money.

## **6 How the maintenance and improvement functions delivered by the Trunk Road Agents can be improved, in the context of the on-going Welsh Government review of these agents.**

- 6.1 Given the combination of problems outlined above, of local authority consultancies losing experienced staff due to wider-ranging financial constraints, and private sector consultancies declining work due to insufficient capacity, a possible solution might be some sort of Public-Private Partnership which allows for retention of senior staff with their invested (often local) knowledge, allowing time for knowledge transfer to more junior staff, continued feedback of funding into the local economies, and the innovation and development of new technologies from the private sector partners. There is, of course, a multitude of questions that arise surrounding such a proposition, and we do not claim by any means to have all the answers, but suggest this is a potential solution worthy of further investigation.
- 6.2 In considering options for improvement, it is appropriate to look at how others do things. In England the Highways Agency (soon to become government-owned company Highways England) was formed in 1994 to manage the trunk road network, and initially maintenance work was performed by local authorities. From 1997 private sector firms were appointed – a Managing Agent (usually a consultant) to design and manage maintenance work, and a Term Maintenance Contractor. From 2002 these functions were combined into Managing Agent Contractors (MACs), usually involving a joint venture between contractor and consultant.
- 6.3 The MACs originally tended to be based on input specifications, which stated what the contractor/consultant was required to do, and related to the Trunk Road Maintenance Manual (TRMM, an updated version of which is still used in Wales). This approach later gave way to an outcome specification, which stated what performance level was required from the contractor, as now set out in the Network Management Manual and the Routine & Winter Service Code (RWSC). While the TRMM might require that gullies, catchpits and interceptors are emptied once a year, the RWSC requires that drainage systems are maintained such that there is no standing water on the paved area of the highway.
- 6.4 With public finances coming under greater pressure, the MACs started to be replaced by Asset Support Contracts (ASCs), which were intended to encourage providers to innovate and drive down cost. The first ASC was tendered in 2011, but their introduction apparently featured anomalies in the assessment of bids as well as delays to the tender process. Late last year the tender processes were halted for two areas, following financial evaluation, and revised tender documents are to be issued. In February it was reported that the Area 7 MAC (for which the current contract expires in summer 2016) will not be replaced by an ASC as originally intended, but there will instead be separate contracts for design, routine maintenance and construction.

- 6.5 This latest change in procurement policy is aimed at giving Highway England closer control of the network. It recognises that, with the establishment of the MACS, the Highways Agency lost its in-house expertise, and the ASCs have tended to put more control and knowledge in the hands of the suppliers. Highways England aims to be an intelligent client, but cannot achieve that ambition without understanding of the detail of the network. The change also acknowledges the fact that many of the ASCs were procured in a time when the industry was in recession, but the current recovery raises concerns that the rates in the contracts are probably now insufficient to cover costs, and quality may become compromised.
- 6.6 The creation of Highways England, with 5-year funding periods, is aimed at improving efficiency through increased certainty, bringing the highways sector into line with what is already happening in the rail and water industries. An area for concern with such models, however, is that the transition between funding periods can lead to troughs in workload, with associated loss of staff and experience, and a lag in delivery capacity as the supply chain mobilises for the new funding period. The water industry seems to be addressing this issue by establishing new delivery arrangements in advance of the new funding period; an alternative may be a rolling 3-year regime.
- 6.7 In Scotland the trunk road network is divided into four areas, in each of which a MAC-style arrangement is in place. In Northern Ireland the Roads Service is responsible for all highways, and is currently still a government department. Comparison with other parts of the UK therefore suggests that there are a number of options which should be carefully appraised before making changes to the way in which trunk road maintenance is procured. Again, it may be that a Public-Private Partnership model of some sort should be one of those options, and it may be that the alliancing model now being employed in the water industry is an option to consider.

## **7 Conclusions**

- 7.1 We conclude that WG generally obtains value for money in the maintenance and improvement of the Welsh trunk road network. The delivery of major trunk road projects is generally satisfactory, with scope for improvement in terms of evaluating outcomes of projects and some other areas of planning and prioritisation.
- 7.2 There is scope for re-introduction of a medium scheme programme, filling the gap between the modest safety improvements currently dealt with through the trunk road agents, and the major projects delivered through ECI contracts. Such medium schemes would provide a good rate of return on investment in a relatively short timescale, and bring substantial benefits in sustaining and developing Welsh SMEs.
- 7.3 The trunk road agents have provided a good service over the years and the partnership with local authorities has a number of advantages, particularly the ability to share resources and expertise in the rural regions. However, the wider financial challenges facing local authorities suggest that the current model may not be sustainable, particularly with regard to the white-collar services, and a change may be necessary. We urge caution, however, in making radical changes without full consideration of options.
- 7.4 Probably the greatest opportunity for increasing value for money in maintenance of the trunk road network lies in greater certainty of funding, which would lead to better planning of work, so that it can be carried out at the best time of year and make best use of resources as well as minimising disruption to road users.