

CSR Emoleum & Road Maintenance

Geoff Webb
Maintenance Auditor Contract 662

ABSTRACT

The introduction of long term road network maintenance contracts have brought new opportunities to organizations that are able to shape themselves into multifunctional service delivery businesses.

CSR Emoleum (CSRE) is responsible for the delivery of road and road corridor maintenance of Tasmania's southern road network for the Department of Infrastructure Energy and Resources (DIER). CSRE, the Maintenance Contractor, manages the assets under DIER'S control of about 1200 kilometres of road, associated bridges, traffic facilities and is also responsible for the land and environmental management of the road corridor.

The diversity of activities involved in the delivery of the contract ranges from snow clearing in alpine environments to pavement repair and resurfacing operations on busy urban highways. It also includes land management activities including, roadside mowing, landscape maintenance, weed control, protection of threatened species amongst other maintenance activities. In addition to the physical works performed, CSRE also provides the critical interface between the client (DIER) and the public, managing Public Enquiries and Complaints, Co-ordination with Police and Emergency Services.

At every point of every process involved in the delivery of the contract is **people**, and the successful fulfilment of the contract is dependant upon establishing and maintaining healthy and mutually beneficial relationships of all the participants through a partnering process. From process planning through to verification and completion reporting it is **people** who provide the essential interface that bring the **project** together.

The Department of Infrastructure Energy & Resources awarded a performance based lump sum contract for a ten year term to CSR Emoleum to provide road maintenance services for all State Roads and National Highways comprising the Southern Tasmanian road network. The contract is outcome or performance based and is now in its fifth year.

The contract involves the asset management and maintenance of the network of approximately 1,200 kilometres of road and road corridor. CSR Emoleum are responsible for the identification, investigation, design, planning, scheduling and programming of all maintenance services required to achieve the performance standards of the contract. The Maintenance Contractor also provides the interface between the public and the Department dealing with public enquiries and complaints and liaison with Local Government and Emergency Services.

The contract requires achievement of predetermined performance measures (Key Performance Indicators, KPI's) for pavement and land management conditions and for management reporting requirements. The contract has both short-term and long-term performance measures with short-term performance measures reported monthly and the long-term annually. The contract provides for financial sanctions to be applied for underperformance of the Key Performance Indicators.

The contract defines performance criteria for:

- PROJECT MANAGEMENT
 - o Management and Reporting of Emergency Activities
 - o Management and Work Completion Reporting for:
 - Routine Maintenance
 - Resurfacing
 - Reinstatements
 - Bridge Maintenance
 - Pavement Markings
 - Asset Inventory Adjustments
 - o Management and Reporting of Enquiries, Complaints and Ministerials
 - o Contract & Quality System Compliance

- ASSET MANAGEMENT - PAVEMENT CONDITION
 - o Roughness
 - o Rutting
 - o Cracking
 - o Skid Resistance
 - o Structural Strength

- ASSET MANAGEMENT - ROADSIDE CONDITION
 - o Weed Management & Control
 - o Management of Landscaped areas
 - o Management of rare flora, fauna and Archaeological sites of significance
 - o Management of coastal environments
 - o Roadside tree and shrub management
 - o Lateral Clearances for vehicle paths
 - o Erosion and Sediment control
 - o Rehabilitation of degraded sites
 - o Native vegetation management

- ROUTINE MAINTENANCE SERVICES
 - o Public Enquiries Management
 - o Emergency & Hazard Response
 - o Network Inspections
 - o Defect Identification
 - o Defect Rectification
 - o Asset Inventory Identification & Data Collection

To effectively manage the contract CSR Emoleum has established alliances with local companies, subcontractors and consultants to support the Project Management Team in the delivery of services.

Both parties recognised from the outset that the success of the contract would depend upon strong, open and honest relationships operating between all parties and with clearly understood responsibilities and lines of communication. This was recognised as vital to achieving the objectives of the contract and for stimulating innovation, new ideas and better ways of doing things. Partnering workshop sessions were instigated at the commencement of the contract and have been continued through its duration. A number of organisations have signed up to the Partnering Charter, which commits the signatories to work towards the achievement of Goals and Objectives set for the contract. Those organisations providing significant inputs to the contract and sharing those goals are the Department of Infrastructure, Energy and Resources (DIER), CSR Emoleum, Stornoway Maintenance, Land Management and Rehabilitation Services and Sinclair Knight Merz. There are also a number of other subcontractors and consultants providing inputs to the contract.

The Goals established for the contract are to:

- identify, meet and manage community expectations
- increase the capabilities of all parties
- enhance the reputation of our organisations
- provide leadership, innovation and continuous improvement in road maintenance practice
- facilitate effective response to change in the operating environment over the period of the contract.

In order to progress these Goals into Outcomes the parties to the contract recognised the fundamental importance of robust quality management systems and processes to ensure continual improvement in the planning and delivery of services. Plans have been developed and implemented which define roles and accountabilities, deliverables and timeframes for service delivery.

Comprehensive internal audit systems have been developed and implemented that continually measure the effectiveness and conformance of systems utilized and of work performed that ensures compliance targets are achieved. The internal audit system provides the evidence necessary for demonstrating compliance with Contract, Quality, OH&S and Environmental Management requirements.

ASSET & INFORMATION MANAGEMENT

In order to manage the vast quantity of asset information and programming requirements of the contract CSRE have chosen the EXOR for Highways asset information management system. The system is a powerful Oracle based database that provides secure data management functionality and warehousing.

The database is the repository for asset information and the tool used to generate work orders for identified defects. Other information managed within the system includes:

- Public Enquiries
- Inspection Schedules
- Defect Identification by type & location
- Intervention Levels
- Response Times
- Works Order Generation
- Hazard & Emergency Responses
- All Inventory Items together with their respective attributes
- The Road Network (GIS)
- Structural Projects (including treatment history)

CSRE, through the services of specialist Pavement Management Consultants CERTS International also utilise the dTIMS™ CT asset analysis & optimisation software system developed by Canadian company Deighton Associates Limited. Amongst other features, this tool is used for life cycle analysis in the assessment of alternative pavement maintenance strategies.

HUMAN ASSET MANAGEMENT – THE PEOPLE FACTOR

“Data is not information, information is not knowledge and knowledge is not wisdom.”
Author unknown

It is easy to be dazzled by the spectacularly sophisticated and powerful tools available to today’s practitioners but not many of them function without an operator nor are the results of analysis of any benefit if they are not implemented. The critical interface that remains essential in the transfer of data to information and from information to knowledge and from knowledge to decisions that can be instructed and implemented is people. We can’t get away from it, and I for one say thank God!

The business of road maintenance starts with people, the road users. State Government Ministerial responsibility is executed through the Department by people. The Department procures contracted management, goods and services all of which are delivered by people.

It is true to say that road maintenance is delivered by the people for the people. After all isn’t the purpose of maintaining the road infrastructure asset to preserve its usefulness which is to provide communication routes for people.

It is the people, working together, under the constraints of contract and commercial confidentiality requirements, providing the interface and transfer of data to information, information to knowledge and knowledge to decisions that is the substance of delivering road maintenance services.

The poster on the wall in the CSR Emoleum Contract 662 Project Management office reads “Right People – Right Attitude” and serves as a constant reminder of the simple yet crucial importance of developing and maintaining the right attitude in all business dealings.

In order to maintain an environment that produces innovation and at the same time fulfils the requirements of responsible custodianship the Maintenance Contractor needs to keep a focus on the importance of the people who are the start, in the middle and at the end of every maintenance task delivered in the road maintenance business.

A few of the innovative solutions that have been applied to maintenance needs on the southern Tasmanian road network include:

- Environmental Management Maintenance Prescriptions
- Sprayed thin thermoplastic pavement markings
- Temperature sensitive road warning signs for ice & frost
- Foamed bitumen stabilisation of pavements
- Thin Open Graded Asphalt Surfacing – TOGAS

The Goals established for the contract will be fulfilled by people operating in an environment of open and honest relationships within the context of clearly defined roles and accountabilities.