

# Protecting the asset

With Ireland's significant economic development in the 1990's and 2000's came the construction of the Motorway network.

"ATKINS WERE AWARDED THE NATIONAL ROADS

NETWORK MANAGEMENT SERVICE

CONTRACT (NMSC) BY TII."

In 2000, the network extended to approximately 350km. This increased to 1,224km by 2010 when the last of the inter-urban Dual Carriageways (mostly Motorways) linking Dublin and the other major cities was completed. The National Roads Authority (NRA) (now incorporated into Transport Infrastructure Ireland [TII]) oversaw the delivery of a massive road building programme which now provides a first class asset for the country. With this development, TII needed to transform its role from being road builder to road manager. Atkins, a multidisciplinary design

consultancy with offices in Dublin, Cork and Galway, has been central to assisting the TII in making this transformation over the past 5 years.

Atkins were awarded the National Roads Network Management Service Contract (NMSC) by TII to develop a strategy for the future maintenance of the 744km, generally the non-PPP element of the inter-urban motorway network. Atkins had a long history in the road maintenance sector in the UK and their experience of developing road maintenance strategies across several

countries was key to their appointment to the commission.

Before this commission commenced, each Local Authority maintained the extent of the motorway network within their respective boundary with funding provided by TII. This included the provision of routine maintenance, winter service and incident response on these strategic sections of the network. In terms of the maintenance aspect of this service, the existing service was mostly reactive (responding to major failures) rather than proactive (planned intervention).

Another aspect of the motorway system was the Public Private Partnership (PPP) Contracts that exist on parts of the network. These are long term commissions that pass responsibility for maintenance and operation of parts of the network to private operators in return for financing and building that part of the network. The PPP schemes were being maintained to a high standard and disparities were apparent in the visual performance of parts of the network and the active management of major incidents on the network.

### Strategy

TII wanted to consider all options and adopt the best possible practice at the most affordable price: Atkins were commissioned to research best practice from around the world and develop a maintenance strategy which was appropriate for Ireland. The research from England, Scotland, Holland Australia and New Zealand demonstrated that maintenance, in most developed countries, was predominantly carried out by the private sector using various forms of contract.

Based on the research and cost-benefit analysis, strategic decisions were made to:

- Centralise maintenance of the motorways, with responsibility being placed with TII. This would provide consistency of performance across each of the 21 Local Authorities affected;
- Privatised the maintenance function: this had the benefit of utilising the significant knowledge and experience of the road maintenance industry which private contractors had developed, mainly in other countries, but also on the PPP contracts in Ireland;
- Divide the country into 3 maintenance regions which were large enough to encourage interest from the road maintenance industry;
- Only permit operators to maintain a single region, thereby establishing 3 contractors and encouraging long-term competition in the marketplace;
- Develop specifications which were ensured best practice and best value;
- Utilise a medium term contract duration (5 years plus Client option to extend by a further 2 years), which would encourage investment by the private operators;
- Consider the transition to a more effective, possibly longer term, contract at the end of the current contracts;
- Develop a bespoke form of contract, based upon the Public Works Contracts, to capture the differences between 'Construction', which is what the existing Public Works Contracts were developed for and 'Maintenance', which has a whole different set of issues;
- Provide strategically placed maintenance depots around the network.

As stated above, TII owned depots were a strategic requirement of the maintenance contracts. Atkins, as a multidisciplinary design consultancy, developed seven depots to planning stage and undertook detail design and provided construction administration and site supervision of four depots. The services that Atkins provided included:

- civil and structural engineering
- mechanical and electrical engineering
- architecture
- environmental assessment

- geotechnical engineering
- planning services
- health and safety compliance and advice
- project management
- fire safety
- disability access
- interior design
- traffic and road safety
- landscape architecture
- quantity surveying

- Incident support the emergency services;
- Winter services (gritting and snow ploughing);
- Asset collection and management;
- Renewal works.

TII, in parallel, were seeking to appoint a company to represent their interests on all motorway related maintenance operations. They developed a contract for the Motorway Contracts Audit and Administration Services (MCAAS) and tendered it on the open market. Atkins were again successful in securing this commission.

The role to date has comprised of the following:

- Administration of the MMarC contracts;
- Audits of MMarC and PPP contracts;
- Design;
- Contract supervision;
- Inspection and monitoring;
- Advice;
- Project and programme management;
- Cost consultancy;
- Value Engineering.



**“DEVELOP SPECIFICATIONS WHICH WERE ENSURED BEST PRACTICE AND BEST VALUE.”**

The depots have a consistent appearance and were constructed to similar performance specifications which have been designed to last. The depots are an investment and an asset that can be transferred from one generation of maintenance contracts to the next.

### Implementation

In conjunction with TII, Atkins developed the new maintenance contracts, referred to as the Motorway Maintenance and Renewals Contracts (MMaRC) and TII tendered these contracts on the open market. The contracts include the following services:

- Routine and reactive maintenance;

### Challenges and Success Stories

As with all new Contracts, challenges emerged for the operators, TII and Atkins. All parties have worked closely and cooperatively to resolve these challenges. Some of these challenges included the existing asset condition, the collation of data across a number of data headings (asset data and inventory associated with that asset), incident data (on all incidents that occur on the network), monitoring and reporting on potential insurance claims related to Road Traffic Collisions and winter related data (such as salt usage, etc.) in addition to adopting and dealing with this new Contract type (and its associated requirements) within

this industry. There have been many success stories associated with the MMarC contracts such as the improved conditions achieved on the network over the past 3 years, the consistent and quick response times to incidents on the network, the completion of a number of pavement schemes as well as the rectification of a considerable number of defects across the network (particularly in relation to safety barrier and drainage assets). In addition, the data collection exercises, while far from complete, have given TII a greater understanding of the asset that they are managing and the need for its maintenance and potential upgrade over the coming years.

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‘A new contract always brings new challenges and in this case there was a steep learning curve for the team. However Atkins has risen to the challenge and together with the Client, TII, the contractors and all of the stakeholders, we have developed an excellent product to enable the motorway assets and its users to be safeguarded.’ stated Sean McDonnell, Associate Director, Atkins who has been helping to manage this project since the beginning. Sean went on to say that ‘excellent working relationships was the key ingredient to the success of the contract. The contract was new for all parties involved and it was imperative that all

stakeholders contributed effectively. Atkins spent considerable amounts of time developing the collaborations between the various parties and the contract’s implementation, as a result, has been a wholehearted success.’

The general consensus, across TII, the Local Authorities and the industry as a whole seems to be that the services provided are key to the successful operation of the network and that the contracts have been a success to date, providing both value for money and a consistency of service across the country.

The expertise delivered by the Atkins team on this commission across a range of services and areas of expertise is indicative of the services similarly offered to a wide range of public and private sector clients across all areas of the engineering and architecture spectrum. Clients continue to return to Atkins as they know that they will get a first class service and approach that has the confidence of being backed up by industry experts in their field to ensure successful project delivery. This is the approach that is taken on the MMaRC project and with a number of years remaining on this commission it is hoped to continue this level of service to ensure its continued successful delivery.

## “TII OWNED DEPOTS WERE A STRATEGIC REQUIREMENT OF THE MAINTENANCE CONTRACTS”

