



Case study

Limerick Tunnel Operation & Maintenance



Project: Limerick Tunnel operation and maintenance

Key task: Procurement of O&M contract

Investment: Circa €120,000

Benefits: Cost variability and risks reduced;
performance and value of service assured

Adding value through contract procurement

High standards of performance from the Limerick Tunnel have been assured for a further six years, following appointment of a new Operation & Maintenance contractor. Careful attention paid to correct processes in the tendering and awarding of the contract was matched by the way the new deal was set up to be monitored by concessionaire DirectRoute – ensuring the continuing success of this vital piece of infrastructure.

Traffic on Ireland's principal road network has been using the Limerick Tunnel for nearly seven years now, with the tunnel operated and maintained to a high standard. This level of performance is set to continue, due to procedures and historical information included by DirectRoute in the tendering of a new Operation & Maintenance (O&M) contract.

DirectRoute is the special purpose vehicle, owned in part by Meridiam, holding a 35 year concession to design, build, finance and operate the Limerick Tunnel and its approach roads for the Irish government agency Transport Infrastructure Ireland (TII). Maintaining the performance of the tunnel, its carriageway and various mechanical and electrical systems is vital for all concerned – for road users, TII and all of the project's stakeholders.



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The O&M contract that started as the tunnel first became operational in 2010, held by Lagan O&M, was due to come to an end towards the end of 2015. This gave DirectRoute and Meridiam opportunity to review and reset the contractual arrangement for maintenance and operations, in a way that adds value for all stakeholders.

“We had three initial options in front of us for this,” says DirectRoute General Manager, Declan Cahill. “We could re-engage with the incumbent contractor for renewing its existing contract, or go out to the market to re-tender a new contract, or elect to set up a new organisation within DirectRoute to self-perform the O&M works.”

The third option was rejected due to it being considered too risky a proposition; it was potentially the least expensive way of delivering O&M aspects of DirectRoute’s agreement with TII, but it also stood a fair chance of being the most costly route. The risks were too high.

Dialogue commenced with the existing contractor Lagan O&M to explore how its contract could be renewed to add value. Five years’ experience of operating and maintaining the Limerick Tunnel had presented a lot of useful information for re-allocating risks and therefore getting a better price for the O&M works (see box), but doing this with the incumbent contractor was rejected as a feasible option by the board. Other contractors represented on the executive board as shareholders in DirectRoute had expressed interest in being given a chance to bid for a retendered O&M contract.

Meridiam Senior Investment Director, Richard Ashcroft, says: “Selection of the second option of tendering a new contract was the correct thing to do. It was only right that all shareholders in DirectRoute and other companies in the market were given opportunity to bid for the work.

“It was also the best route for allowing us scope to fully consider and correctly allocate the risks associated with operating the tunnel. In light of knowledge gained about all that was involved in delivering the O&M contract to the desired performance levels, we were able to develop a new contract structure; one that would deliver a very high quality of service and reduce risks for DirectRoute’s shareholders.”



This second option of re-tendering the O&M contract was certainly not to be taken lightly. Its estimated costs were expected to be in the region of €120,000, but this was money well spent on ensuring ongoing performance and value. It was also vital that the new contract procurement procedure was carried out in the right way.

“It was a big challenge, to tender a contract to a market that included DirectRoute’s existing shareholders in a way that was fair and transparent and complied with all relevant European procurement rules,” Richard says, “but we developed a comprehensive and robust tendering process that treated all bidders equally and was approved by the DirectRoute board of directors.”

A sub-committee was formed to develop and carry out the O&M contract procurement, consisting of DirectRoute directors not conflicted by an interest in any of the bidding companies, plus Declan, as General Manager, and an external consultant as an independent advisor. The UK arm of Arup was selected for this role due in part to it having no other interest in DirectRoute or the Limerick Tunnel.

“Arup recommended use of an NEC Type 3 form of contract, as it’s generally quite straightforward, easily understood and



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widely recognised,” Declan says. Among other aspects of the procurement procedure, Arup also provided advice on the criteria for evaluating the bidders’ submissions. These would be judged with a weighting of 60/40 in respect of quality and cost.

“This recognised the importance of the delivery aspects of the contract. The availability of the tunnel and its condition through the performance of the O&M works is ultimately DirectRoute’s responsibility and its highest priority,” Declan says.

Services to be carried out by the winning O&M contractor were essentially routine and cyclical maintenance of the tunnel and its approach roads, plus provision of equipped emergency and incident response teams, implementation of a winter maintenance plan, inspections, reporting and all that’s involved in supervising and controlling the safe operation of the tunnel.

The companies that were invited to bid for the new contract were Lagan O&M and other Direct Route shareholders Strabag, Roadbridge and Sisk, with the addition of one further external bidder Egis.

“We were happy with this number and variety of bidders. All were given access to the same secure website for reading the tender documents. They all shared the same Q&A data as well and were invited to visit the site,” Declan says. “In the end we received three tender submissions. Strabag declined to bid and Lagan and Egis submitted a bid as a joint venture.”

It was then down to the sub-committee to score the submissions on quality and cost – out of a total of 600 marks for quality and 400 for price. “The Egis Lagan JV came out as the winner, which it did predominantly on its score for quality. One other bidder was marginally cheaper, but Egis Lagan’s bid was better overall,” says Declan.

Several positive outcomes came from the O&M contract procurement. DirectRoute’s shareholders have gained more assurance of protection against risk, as more of the elements

of work that can vary have been transferred to Egis Lagan’s responsibility. This change to putting the onus on the contractor absorbing the variation of tasks also means DirectRoute has gained more certainty of delivery, performance and costs.

On price, the initial and new O&M contracts are comparable: Egis Lagan will deliver O&M services for €1.2m per year; Lagan O&M’s contract was priced at €900,000 a year, but with a further €200,000 allocated for variable works. “At face value there are no initial savings from the new contract, but a lot of additional services have been transferred to Egis Lagan, with less risk of escalating variable services for DirectRoute,” Declan says.

Furthermore, a vital clause and process of quality assessment has been added to Egis Lagan’s contract, as Declan explains: “Nobody wants to see a failure of performance, least of all TII. As part of our quality assurance procedures we regularly carry out internal audits to check compliance. We’ve added similar to Egis Lagan’s contract as a step before that.” DirectRoute can and is carrying out quality assessments with a penalty system applied to incentivise a high level of performance from Egis Lagan.

“It’s working well,” Declan adds. “We’ve been assessing performance during one or two days every month since Egis Lagan began operating the tunnel last year. The contractor has scored very well so far, but we’ll not be letting up to allow any complacency. We have another five years of high standards to maintain.”





Intelligence gained: the risks of tunnel operations explained

Procurement of a new Operation & Maintenance contract presented opportunity to add value for DirectRoute, partly because it was the first time it's been done for the Limerick Tunnel. When the tunnel opened in 2010, with Lagan O&M immediately starting its contract, it could not be known exactly what would be involved, how many task orders would be called up for work such as winter maintenance and barrier and carriageway repairs and other activity in response to incidents and traffic collisions.

Lagan O&M's contract was drawn up against this relatively unknown risk profile, with fixed costs for items whose frequency was known, such as cyclical maintenance, inspections and reporting. But some variable work could only be priced in a way that left the cost of additional task orders unfixed, over and above

an agreed threshold. This was DirectRoute's risk to absorb.

It was experience gained after five years of performing these variable tasks that gave DirectRoute the data it needed to procure greater value. The new O&M contract could be drawn up to a higher degree of certainty, with more risk transferred to the contractor. It was up to the bidders to decide how they would price variable items based on a known likelihood of frequency. Costs incurred above that price were theirs to bear.

DirectRoute cannot escape the cost of unforeseen tasks altogether – that would make the contract price too high to entertain – but the risks have been reduced by far, with greater certainty of cost and performance assured in turn.



An asset worth looking after

The Limerick Tunnel is a vital piece of infrastructure, providing a road crossing beneath the River Shannon. It was opened in 2010 as part of a new 10km dual carriageway built to connect the motorway network to the west of Limerick with roads to the east and south. The tunnel and road link have diverted a lot of traffic from the centre of Limerick City, so easing congestion in the city, while boosting economic development with completion of a strategic transport corridor across the region.

The tunnel itself is a 675m long immersed-tube structure. Reinforced concrete box sections were built on land, on the banks of the River Shannon, then floated out and sunk into place through a carefully controlled procedure. The €660m construction contract was carried out for concessionaire Direct Route by a joint venture between Strabag, John Sisk & Son, Lagan Holdings and Roadbridge Ltd.

DirectRoute's 35 year Public Private Partnership with the Irish government's Transport Infrastructure Ireland was signed in August 2006, with construction of the project getting underway in the autumn of that year. The partners within Direct Route are Meridiam (25%), AIB (25%), Strabag (20%), Roadbridge (10%), Lagan (10%) and Sisk (10%).

