

M6 Toll, United Kingdom

WHY READ THIS CASE STUDY?

- A** It is the first and only highway/motorway project under tolls within the UK PPP program (Except for major bridges).
- B** There was a major delay in implementation due to public objections both to the road and to the charging of tolls.
- C** The project was subsequently refinanced after opening, with overall financial benefits shared between government and concessionaire on non-contractual basis i.e. the contract did not include sharing of benefits.
- D** Related to point 3, it is now good practice that all recent PPP projects worldwide have contractual agreements that include benefits to be shared by the public sector in any proposed refinancing, 'windfall' profits and renegotiations.
- E** There were environmental mitigation measures.
- F** There is an electronic charging system and variable tariffs by time of day.
- G** Actual traffic did not meet the original traffic forecasts and especially relating to heavy vehicles, but refinancing was achieved satisfactorily.

Background

The M6 through the West Midland conurbation is a very major UK transport artery with serving, local, regional, national and even international traffic. It is/was one of the most congested motorways in Western Europe.

Prior to the opening of the new toll road, the M6 through the east side of the West Midlands carried up to 160,000 vehicles a day - it was built to accommodate just 72,000. The average speed between junctions 4 and 11 of the M6 (the section bypassed by the M6 Toll) was approximately 17mph (27 km/h), producing rush-hour journey times of up to 79 minutes.

A new road to the west of Birmingham had been proposed for many years and severe congestion was causing high vehicle operating costs to users and regional economic development constraints. Lacking the public funding to develop the roadway, the Government in 1991 decided the M6 Toll road would be a privately funded venture through a public-private partnership and a design-build-operate-maintain-finance concession arrangement.

The M6 Toll Road was built eventually in 2003 as a privately financed and operated six lane motorway that bypasses the busiest section of the existing M6. It is 27 miles (43 km) in length and has eight entry and/or exit junctions, and six toll stations and is the first tolled motorway scheme in the UK.

Project Objectives

- To ease chronic traffic problems in the West Midlands.
- To bypass the most congested parts of the M6, which serves the second most important urban conurbation in the UK, after London.
- To support regional/national economic development

How it Works

Charges:

Tolls vary by classification of vehicle, time of day, and which toll station(s) passed on the journey and can be paid by cash, credit cards, or electronic toll collection (ETC) transponder.

CURRENT (2008) PRICES AT MAIN TOLL PLAZAS				
	Day (06:00 - 23:00) UK£	Night (23:00 - 06:00) UK£	Day (06:00 - 23:00) USD *	Night (23:00 - 06:00) USD *
Class 1 (e.g. motorbike)	£2.50	£1.50	USD 5.00	USD 3.00
Class 2 (e.g. car)	£4.50	£3.50	USD 9.00	USD 7.00
Class 3 (e.g. car & trailer)	£8.00	£7.50	USD 16.00	USD 15.00
Class 4 (e.g. van/coach)	£9.00	£8.00	USD 18.00	USD 16.00
Class 5 (e.g. HGV)	£9.00	£8.00	USD 18.00	USD 16.00

* USD included for comparison purposes at UK£1.00=USD 2.00

Tolls are quite expensive and truck operators and some car users, who are potential customers, have exhibited, so far, an unwillingness to pay. Most of the longer distance traffic continues to use the existing, congested road to the east side of the conurbation and it is probable that shorter distance traffic avoids both routes if it can. The recent substantial increases in fuel prices may have an impact on usage.

Technology

As drivers approach a toll station on the motorway they are filtered into specific toll lanes. These toll lanes contain clear signs above the toll booths as to which form of payment will be accepted.

Payment can be made at a manned booth by credit card, debit card and cash; or at an automatic booth, using credit or debit cards, or coins only (no change given).

Drivers can also pay in advance of their journey using the electronic toll collection (ETC) system whereby an electronic tag is attached to drivers' windscreen, which includes a microchip that is automatically read at each toll booth.

This entitles drivers to go through the ETC lane which does not involve any stopping but speed is reduced both by speed restriction limits within the toll booth area and by rumble strips (low speed humps) on approaches to the toll booths.

To use ETC, the driver sets up an account with the private company operating M6 Toll. This system works in the same way as a top-up mobile phone - the driver 'tops-up' their account with money including by phone.

Enforcement

Self-enforcing. Drivers cannot use the toll road unless they pay.

Partnership Basis

This highway is the UK's first privately funded tolled motorway even though the government had introduced its Private Financing Initiative in the early 1990s. A 53-year DBFO concession contract was originally awarded in 1992. However, local opposition and legal delaying tactics meant that the PPP process did not restart until 2000 and the road opened to traffic in 2003. The concession ends in 2054.

The PPP partners include:

- ① Public Sponsor: Highways Agency (HA).
- ② Private Concessionaire: Midland Expressway Ltd (MEL) which consists of the following two partners: Macquarie Infrastructure Group (75%) and Autostrade (25%)

Supporting the initial development/concessionaire were the following functional bodies:

- ① Technical Advisor: Jacobs Babtie
- ② Construction Joint-Venture: CAMBBA Construction Group, Carillion, Alfred McAlpine, Balfour Beatty, Amec
- ③ Toll Operations: Ascom
- ④ Financiers: Banque Indosuez (lead), National Westminster, Barclays de Zoete Wedd
- ⑤ Other Private Advisors: Dresdner Kleinwort Benson, Ashurst Morris Crisp, Berwin Leighton

NB The above information from internet sources and assumed correct

PPP Issues and Strategies

Delay

There was substantial public opposition to the project as it was the **first toll road**¹⁷ and the UK government had funded all previous major roads through either public procurement or PPP arrangements that were based on shadow tolls and availability payments and not tolls. Opposition was based on both the concept of user tolls and the negative impact of the construction of new roads/major roads in general.

As part of the environmental mitigation the M6 Toll uses a noise reducing asphalt that significantly reduces the environmental impact of the highway on adjacent neighbourhoods and provides a more comfortable journey for patrons of the toll road.

Under the terms of the agreement, the concessionaire bore the entire risks for the project except for design standard changes. This included planning, delivery, cost, quality, revenue, and some statutory risks.

Highway standards changed over the eight years delay and affected the cost of the project. These risks had been allocated to the HA, which subsequently bore these costs, since the changes were generated by the HA.

Once the public opposition to the project was overcome, most other risks were allocated and managed by the concessionaire, led by Macquarie Infrastructure Group (MIG), which owns 100 percent of Midland Expressway Ltd.

The successful management of these many risks may be attributed to the following features of the concession arrangement:

- The technical capability and experience of the concessionaire;
- The long-term commitment of the concessionaire to the project;
- Delegating technical quality approval authority to the concessionaire, which allowed for timely structural inspections and approvals and enabled the design-build program to proceed on schedule;
- An integrated contract that included delivery of the tolling systems under the main DBFO contract;
- The strong positive partnering relationship that was established and maintained throughout the project between the concessionaire and the project sponsor, the Highways Agency.

17 Except major bridges and tunnels including the Severn bridges, the Humber bridge, QEII Bridge (London), Mersey Tunnel, Dartford Tunnel and a number of major bridges in Scotland. A recent change in the political Administration in Scotland has led to the revocation of tolls on all major bridges in Scotland due to their general unpopularity.

Revenue

- The Concession agreement provides for the private company, Midland Expressway Limited, to carry out the design, construction, financing, operation and maintenance of the M6 Toll at their own cost and risk, without recourse to government funds or Government Guarantees.
- No figures have been released on annual revenue.

Benefits/Results

- Traffic flows have improved as have journey time savings and reliability.
- A Trafficmaster survey estimates that using the new M6 Toll has reduced some journey times by up to 45 minutes.
- Diversion of car traffic to the M6 Toll resulted in freight hauliers benefiting because of lower levels of congestion on the existing M6.
- However, the use of new road by heavy vehicles, so far, is very limited.
- The impact on other roads in the conurbation is more mixed with overall traffic level in the M6 corridor having increased.
- In addition to the beneficiaries on the existing M6, the other main beneficiaries of the M6 Toll are car travellers who divert to the new road, with a high willingness and ability to pay.
- Introduction of new tolled road facilities has caused substantial changes to route choice and departure time choice. These vary by day of week and season of year.

The project has been open for over four years with the first two annual monitoring reports available. Car volumes are more or less as expected, but truck volumes are much lower than forecast. In late May 2008, the Government granted MIG, as the sole owner of the M6 Toll concession, permission to refinance the project by restructuring its USD 1.1 billion in debt so that the debt service on the project better matches the cash flow expected from the project over the 54 years of the concession.

This has enabled MIG to take out early profits from its investment in the project. The refinancing is expected to provide MIG with significant gains, amounting to about UK£350 (about USD 700 million). Unlike most other PPP projects sponsored by the Government, MIG it is not legally required to share the gains derived from refinancing with the project's public sponsor, the Highways Agency.

This is because in earlier UK contracts, the thinking was that as the concessionaire assumed most of the risks for this project as a toll road, instead of a shadow toll road or availability payments which is the way all other PPP projects in UK have been financed, it should reap all the benefits of refinancing. This is no longer regarded as good practice and most PPP contracts worldwide are expected to include sharing of benefits in some way.

Therefore, even though not legally obligated, MIG agreed to reinvest 30 percent of its refinancing gains to fund several neighboring public projects of great interest to the Highways Agency. These include a toll-free extension of M54 to the M6 Tollway plus

expansion of an interchange at the southern end of the M6 Tollway. Both projects will improve accessibility to the facility.

This has been represented as a win-win solution for both public sponsor and private provider in the PPP, whereby the Highways Agency gets several priority projects built without cost to the public, while MIG receives the benefits of increased traffic volumes and toll revenues on its toll road as a result of the improved accessibility to other portions of the region's highway network, 70 percent of the proceeds from the debt restructuring, and a more positive public image for its contribution to the area's highway infrastructure.

MIG also agreed to operate and maintain these additional facilities during the concession period.

A request to the Highway Agency for the concession agreement was not responded to.

It should also be noted that in 2008, the Scottish parliament removed payment of tolls from all toll bridges in Scotland, making them free and with the administration paying off the debts outstanding.

Conclusions

As the first toll road in England to charge motorists a direct charge for using a highway, the M6 Toll represents a move to use different financing arrangements to the traditional UK shadow/availability tolling approach in order to (i) augment the insufficient funding resources for highway development and (ii) to minimize the project risk to the sponsoring Highways Agency.

While traffic continues to gradually grow but truck traffic continues to lag expectations, there was discussion about extending the M6 Tollway 50 miles north towards Manchester for a total cost of USD 6.5 billion (£3.25 billion).

However, several factors caused the proposal to be abandoned in late July 2006, including:

- High cost of right-of-way needed for the project;
- Significant local opposition to tolling along the proposed corridor; and
- Lack of private partner interest in the project given the early performance of the existing M6 Toll and
- The perceived risks of advancing such an expensive project in the face of local opposition.

Without a private concessionaire willing to tackle the project, the Government has elected to increase the capacity of the existing M6 expressway from 6 lanes to eight lanes, thereby reducing significantly the cost and land needed for the project.

The main drawback of returning to the traditional approach to highway development is that the new capacity will not be available until 2017 at the earliest, assuming the Treasury has the funds to widen the road, which is not assured.

Other Aspects

The Government has agreed that before any decisions about whether to proceed with more tolled motorways are taken there is a need to provide more detailed information and to assess a full range of potential social, economic and environmental impacts, and the scope for minimising any adverse impacts, as well as maximising the benefits.

A multi-agency steering group looking at the impact of the M6 Toll has commissioned a '12 months after study'. This will cover traffic flows and journey times on the M6 Toll as well as safety issues for the M6 Toll and the wider area network.

The group has also commissioned a report looking at the environmental impacts of the new motorway. Land use and regeneration have longer term effects and thus will be the subject of a longer term study.

Further information



Commission for Integrated Transport (CfIT), 1/F16, Ashdown House, 123 Victoria Street, London SW1E 6DE
E-mail: cfit@dft.gsi.gov.uk: Road Charging Scheme: Europe - UK, M6 Motorway Toll Road (M6T) Europe - UK.



AECOM CONSULT, an affiliate of DMJM HARRIS: 2007.
Case Studies of Transportation Public-Private Partnerships around the World.:
http://www.fhwa.dot.gov/PPP/int_ppp_case_studies_final_report_7-7-07.pdf)



Concessionaire Website: M6 Motorway Toll Road: www.m6toll.co.uk.