

Response by Mr Peter Handley

**TOLLED BRIDGES REVIEW
PHASE TWO CONSULTATION
April 2005**

This response to the Phase Two Consultation process of the Scottish Executive's Tolled Bridges Review is essentially a personal view and does not necessarily represent the view of Hyder Consulting Ltd or any of its employees, other than myself. It is offered in a spirit of co-operation and is based on over two years' close involvement with both the Forth and the Tay Road Bridges. I have been the Project Manager involved in formulating tolling strategies for both bridges, and have attended Board meetings to present my reports. Before this, whilst with Hyder, I have been closely involved in the initial stages of the UK-wide Lorry Road-User Charging scheme and a comparable project in New Zealand.

Because I am now Project Manager for the on-going work to reconstruct the toll plaza at the Forth Road Bridge and to replace the toll equipment, I am intimately involved with several of the issues that the Review is exploring. (Any further work by Hyder Consulting at the Tay Road Bridge beyond June 2005 is not yet agreed.) I am therefore most interested in any recommendations that the Scottish Executive may make. Hyder Consulting is keen to assist with any help or advice that the Executive requires in this Phase or in the future.

Exemptions for Disabled Drivers/Blue Badge Holders/Emergency Vehicles

Question 1 – Do you think that the system for verifying Blue Badge exemptions should be changed? If so, can you suggest what these changes should be?

First of all (as I understand it) Blue Badges were introduced to enable disabled people to **park** in places (or designated parking spaces) offering a convenience; e.g. the parking space was close to their place of work. Perhaps because of the link between payment for parking and payment of tolls, perhaps also out of sympathy for people who were at a disadvantage compared with the rest of us, Blue Badges have also become a means of gaining exemption from toll payment; in Scotland this is a blanket measure, although in the rest of the UK implementation is varied.

Clearly, parking and toll payment are two different things, and the only credible justification for continuing the Blue Badge toll exemption in my view is the argument used in paragraph 35 of the Review that public transport is frequently not a viable option for people with disabilities. It may be odious to get into a debate on that basis as to whether a particular degree of disability should or should not qualify the sufferer for toll exemption.

A Blue Badge is now more valuable to a thief than a car radio. Instances of Blue Badges being stolen from parked cars are on the increase. A Blue Badge gets you exemption from the London Congestion Charge, as well as from charges at Scotland's toll bridges. If you can't "buy one off a bloke in a pub", you can download an image from the Internet; I know of such a site. All you then have to do is print the image and laminate it; some people may consider this to be acceptable.

Bridge managers will all tell you that Blue Badge exemption is their fastest growing business. Almost certainly, most exemptions are genuine, but perhaps some exemptions are abuse. Some exemptions may also be fraud (i.e. stolen, forged or 'cloned' Blue badges as stated above; but also there is an 'impersonation' fraud, where a genuine badge is 'borrowed'). Therefore all bridges should currently operate a procedure whereby the badge is inspected, and the necessary photo-ID verified (i.e. that the person is actually in the vehicle) in addition to the process of filling in the voucher. Of course, the voucher is still required at present, for reconciliation and to prevent any toll-collector (so inclined) from perpetrating his own fraud.

Yes, I think that the system for verifying Blue Badge exemptions should be changed.

Verification needs to be made (a) more rigorous and (b) faster.

It should be a criminal offence to attempt to use a Blue Badge to obtain goods, services or exemption from payment without entitlement. Hopefully it already is.

There could be many solutions to (a) & (b) above. In electronic toll plazas, one suggestion could be that the vehicle with a Blue Badge should go through a manual lane, and the Badge should be handed to the toll collector, enabling him to use a barcode reader to scan the card. If the person shown on the card is in the vehicle, passage should be granted without further form filling. An 'enforcement' image of the vehicle, taken by the in-lane cameras could be saved for later reference. Barcode data should be analysed to indicate the likelihood of a particular card either being forged or cloned, allowing the Authorities to take action. Sometimes, toll collectors might need to retain a Blue Badge.

Problems may arise when a vehicle fitted with an electronic transponder enters an electronic toll lane, since the lane equipment will already have deducted the toll fare before the vehicle arrives at the payment window, with the driver brandishing a Blue Badge. Therefore, not only would a more rigorous verification require electronic toll systems to be capable of performing it, but also, procedurally even if the process remains as it is, bridge administrators will need to be ready to process refunds when a car in which a Blue Badge holder is (for instance) being given a lift is found to have paid the toll electronically.

I do not advocate giving exemption tags to Blue Badge holders without there being very rigorous checks made in the lane; it seems to me to be inviting 'rent-a-granny' fraud.

This whole issue also concerns Bridge Managers in other parts of the UK. A UK-wide solution is therefore preferable.

Question 2 – Do you consider that the exemptions for emergency service vehicles should remain limited to the Ambulance, Fire and Police Services, or should we consider extending this to cover other key services ?

Yes, Police/Fire/Ambulance should be exempt. You don't mention the Coastguard. Perhaps the difference is that when a policeman (etc.) finishes his shift, he does not take the patrol car home, whereas a Coastguard officer might be able to use his vehicle for journeys between home and work (for which no exemption should apply) simply to allow him to respond quickly if an emergency arises when he is not on duty; (the AA work similarly). On the other hand, one or two journeys made by the limited number of Coastguard vehicles in Scotland hardly causes a problem.

At the Forth Road Bridge, we have designed a lane that could be used to allow emergency vehicles to bypass any queue at the toll plaza. Qualifying vehicles (including buses) may be issued with an 'exempt' transponder that will automatically open the lane, allowing the vehicle to proceed. Even if a vehicle is not fitted with a tag, the toll collector in the adjacent lane should be able to open the barriers in the bypass lane, using his control keypad. An enforcement image would be taken to verify absence of fraud.

I occasionally see 'Bomb Disposal' trucks going at high speed under a blue light. These seem to belong to the Royal Logistics Corps and should probably be exempt, whereas normal Army, Navy and Air Force vehicles may not be (according to whatever local bridge regulations apply). However, whether the Royal Military Police should be exempt is a question that the Scottish Executive may wish to consider.

Question 3 – Vehicles used by bridge authorities to respond to breakdowns on each bridge are exempt. Do you see a case for extending exemptions to the AA, RAC or other commercial breakdown services responding to breakdowns on the road network other than where this is the responsibility of the bridge authorities ?

No, I see no case for this.

The RAC and the AA have national networks, and if occasionally the nearest patrolman is forced to pay a toll to get to a customer, or to transport him home, well that is the same today as yesterday; the patrolman claims the toll as an expense.

Neither do I see a case for an AA/RAC recovery vehicle that needs to cross a toll bridge being exempt from the toll. Once you make them exempt you open the door to a thousand others who believe they also have a legitimate claim. (Why not Highway maintenance operatives ?)

AA & RAC patrolmen generally also take their vehicles home, so journeys home (or indeed for occasional 'social' purposes) would become temptingly exempt and perhaps cause staff to be subject to disciplinary measures, which would not be a desirable consequence of exemption.

Question 4 – Should public transport vehicles and multiple occupancy vehicles be considered for exemption from bridge tolls ?

This measure is essential if people are to be encouraged out of their cars and on to alternative forms of transport. So, PSV's yes – but how do you define it ? Most classifications are based on the number of seats, but even LWB Land Rovers or 'stretched limousines' could qualify. It is not for me to say if that is desirable, but the definition of the exemption for PSV's needs to be watertight.

Multiple Occupancy Vehicles should in my view not be wholly exempt. Modern replacement toll systems should be specified that would allow differential tolling by vehicle class and occupancy, although the principle can still be applied in manned toll lanes.

Thus **class** = bus might qualify for exemption (or 100% discount).....
whilst **class** = car, and **occupancy** = 'more than 1' might qualify for a lower toll fare than for a single occupancy car.

The issue of whether it is an exemption or a 100% discount is of interest because it may be (legally) more difficult to re-apply an exemption than it would be to vary a level of discount.

Discount Schemes

Question 5 – Should tolled bridges offer multiple crossing vouchers to all bridge users, or particular classes of users such as buses or multiple occupancy vehicles ? If so, why should this be ?

In my opinion, vouchers have served their purpose and should be phased out. But the issue (in my view) is not the voucher itself, but the issue of discount.

In part, the principle of appearing to give discounted travel sends the wrong message. However, the use of vouchers actually permits bridge administrations to lower collection costs (vouchers can be quick, and there is less cash to handle (which costs money)) thus enabling them to pass on the cost-savings to customers as a form of encouragement to them to adopt that means of payment.

However in new electronic systems, customers who previously bought vouchers might wish to use electronic toll collection transponders (tags), which present even greater advantages to them. Toll collection costs via ETC should be even lower, and administrations may need to offer ETC accounts + tags at a 'discount' to encourage take-up. But it isn't a discount – it's a sharing of cost-savings, just like a season ticket. If you abolish discounts, you may also remove the incentive for travellers to use more cost-effective ways of paying tolls, thereby preventing the uptake of technology and artificially keeping the costs of toll collection higher than they need to be.

Therefore, vouchers for buses should be phased out, and ETC tags employed instead. I have never heard of a voucher being used for multiple occupancy vehicles. There is probably nothing for which you would in the past have considered it sensible or economical to issue a toll payment voucher that could not now be done electronically.

By itself, it isn't a discount/voucher scheme that will encourage modal shift, but a properly organised toll schedule that has the capacity for differential tolling on any basis that will encourage the desired behaviour. Differentials could be considered on several bases, e.g. occupancy, time of day, revised vehicle class structure, vehicle emissions class etc.

Finally, there may be certain low-paid classes of worker who are more or less forced to travel at peak times (e.g. teachers, nurses etc.) that might experience higher toll charges under any future differential tolling scheme. Be prepared for them to suggest discount vouchers that will prevent them experiencing financial hardship. I am not suggesting that the Bridge authorities should give discounts, but it may help to be aware of the possibility that groups of people will ask.

Classification of Vehicles

Question 6 – What are your views on a common vehicle classification system for levying tolls at all Scotland's tolled bridges ?

A common nationwide classification system isn't 100% necessary as far as the individual toll plaza is concerned, but without it the wider picture gets more difficult. Interoperability – meaning that any vehicle only needs a single transponder in order to pay electronically at any toll system – more or less requires a common classification system.

Perhaps the two most important national influences that should drive common classification are the move towards European tolling interoperability and the UK's Lorry Road-User Charging project.

Classification is so important that FETA, TRB Officers, The Department for Transport and Hyder Consulting are already talking about it. However, the difficulty is that although it may be relatively easy to define what classes should exist, it isn't so easy to detect those classes in the lane.

Automatic detection of class is important for the following reason:

You might want to charge a 44 tonne truck (say) 20 times the toll for a car, because of the wear and tear caused by that truck. You then need to make sure that the truck doesn't get through the electronic toll lanes for £1 simply by buying a transponder for a private car and transferring it to the truck. This means that you need equipment in the toll lane that can compare the class declared by the tag with the reality of the vehicle in the lane. The critical fact is however that there is no reliable way of automatically and accurately detecting the parameter that is of most interest – weight. This is why classification systems are based on parameters such as height, length, width or the number of axles, which can all be determined with the required level of accuracy, and together provide a proxy for weight.

Interestingly, in Scotland, only two of the three toll bridges charges different tolls for different classes of vehicle, so a common classification would mean a fundamental change for some. Whilst I think common classification is very important, we should be aiming for a common UK classification system to avoid having to change when LRUC arrives; but what about Europe ? Would we have to change yet again ?

Reducing Traffic and Congestion on Tolled Bridges

Question 7 – Should we encourage modal shift from single occupancy cars to public transport and multiple occupancy vehicles on all tolled bridges ? If so, how might this be achieved ?

Yes, the essential thing to do, for the sake of the Planet is to cut down on the polluting forms of energy consumption, and to continue to use every form of innovation in order to do that.

Modal shift should reduce the number of journeys made, but this is not our only weapon. It is actually only scratching at the surface. We have already discussed lift sharing. What about work-timeframe shift, away from to 9-to-5 culture ? What about work-location shift (and I don't mean exporting jobs to India) ? Can employers (for instance) propose more flexible hours, or tele-commuting based on broadband services to the home ? Employers need to be sure that they are being as flexible as possible (within practicable possibilities) by answering the following questions about work: *what, why, when, how, where and who ?*

Although we might start off by proposing 'compromise' solutions based on minimum personal inconvenience, new thinking is required. The problem is that the people who are causing the congestion and all the consequent damage are only trying to get to work, do their 8 hours on the treadmill and get home. We need to be thinking about what alternatives we can give them. If cost of living and quality of life drive them out of the city, who can be surprised if congestion is the result? Also, families can't afford the cost and disruption of moving home every time one person changes his or her job; to minimise big capital costs, they just drive further.

Question 8 – Do you think that raising tolls at peak times would result in less congestion at those times ?

Yes, obviously as a principle, raising tolls at peak time (i.e. differential tolling by time of day) would reduce the number of journeys made at peak and reduce congestion. However, the difficulty is to set a toll that finds the point of optimum commuter 'pain' that will reduce the level of congestion sufficiently to have a beneficial effect. Some work previously done for FETA suggests that the level of toll might have to rise very considerably in order to have a useful effect.

In fact, this links with the previous question. Some employers may still be using 'old' thinking by applying production-line shift patterns to professions that demand flexible working. But in 2005 we now know more about how people respond to their work environment, and not surprisingly, people vary.

Some people are 'morning people' and some people get going a bit later. So probably, many people would be happy to try to shift the timeframe of their working day left or right, benefiting from a smoother ride to work, as long as they were not then still expected to attend too many work functions outside their working day.

However, the trouble with differential tolling by time of day is that it can discriminate against workers who do not have flexible working options. News media enjoy interviewing low-paid nurses or teachers whose journey to work has just become more expensive. As stated previously, there may be pressure to admit a discount for such workers. And the result of bowing to such pressure would be to open the floodgates to all other 'hard' cases. The introduction of differential tolling by time of day will have knock-on effects other than the intended reduction in congestion, and it would be wise to be sure of what the policy really is, and to formulate that policy to achieve the objectives and answer the difficult questions that will have to be faced.

Tolls Reflecting Cost of Wear and Tear

Question 9 – Should tolls reflect the impacts of different vehicle types on the need for maintenance, repair and strengthening programmes ? If so, do you have suggestions for how this might be done ?

Yes, tolls should reflect the impact that different types of vehicles have. Nationally, we have begun to establish principles such as "the polluter pays" to try to ensure that within reason everybody is responsible for the impact that their activities have on the environment and on their neighbours.

However, experience shows that whenever new regulations are introduced, human ingenuity springs into action to try to minimise the personal impact of the new regulations. But we have to stick with the principle ("think global, act local") because if the polluter (to continue the analogy) does not pay, then he is not forced to adopt measures to control the undesirable effects of his activities. Just as there is no such thing as a victimless crime (i.e. 'the insurance will pay') then if the polluter doesn't pay, then everybody actually suffers. The same principle applies to 'wear and tear' on bridge or highway structures. There is no doubt that HGVs cause far more damage than private and light goods vehicles, so in theory they should accept a practical level of responsibility for repairing the damage caused by their use of the bridge.

The word 'reflect' is key here, as it will be practically impossible to use toll levels to exactly match the real impact that vehicles have on their environment. As stated previously, each vehicle is different, but detecting the critical difference (in terms of weight) is impossible in a moving environment; (you can't stop every vehicle and weigh it, can you ?).

Because you can't weigh every vehicle in order to compute a fair toll, you are either (a) forced to depend on the classification system to provide a proxy for weight by measuring other parameters

or (b) you need each vehicle to be capable of signalling its main parameters in a tamper-proof way. Just think of the problems. Two 'identical' 5-axle vehicles carrying 30 tons travel through the tolls. One has lifted an axle so that only 4 axles are in contact with the road; it therefore causes more wear and tear than it would normally do. The other has replaced the dual tyres fitted on specific axles with 'super-single' tyres; it therefore causes more wear and tear than it would normally do.

It seems that without infinite foresight, technology and a desire to avoid or evade high levels of toll will always find ways to thwart attempts to make users of any service pay the real cost imposed by their activities. Therefore, at present, there only seems to be a crude answer to the problem of vehicle weight, which is to lump HGVs into one or possibly two broad categories, probably by axle-count. Thus (as a simple example) 2-axle & 3-axle HGVs would fall into one category and 4-axle vehicles and above would fall into a higher category.

Procedure for Changing Tolls or Charges

Question 10 – Do you think the current process involving Public Local Inquiries (PLIs) is appropriate for making changes to tolls or charges to meet the costs of managing, maintaining or operating a bridge ?

Tolling is a very interesting topic when you take a historical view of things. In the UK, tolls have generally been established by Act of Parliament. One result of this is that historic toll schedules make entertaining reading, and no two seem to be the same – no scope for common classification of an ox-cart in the 1700's, then. Another result is that any change in the toll order also has to be referred back to the Legislature, often following the holding of a PLI.

Naturally, the public takes the opportunity to raise objections, so that (for example) even to achieve a modest toll increase that hardly keeps pace with cost-inflation is an arduous task. Whilst some may argue that PLIs maintain a necessary brake on the financial ambitions of monopoly toll administrations, two facts should be considered:

1. At least two of Scotland's toll bridges are under the direction of Boards of locally-elected councillors, who (due to the instinct for self-preservation) are extremely unlikely to permit any change that has not been properly justified by the bridge management.
2. A private toll operator such as the 'M6 Toll' is far less constrained in his ability to introduce changes. But what is the difference other than the factor of 'profit' ? Both the M6 Toll and FETA (for example) have to cover their costs. In the case of the M6 however, fewer people object; those who feel strongly need not use the service.

Naturally in time a constant toll level begins to be non cost-effective, and it needs to be revised. Why should we hamper a public organisation, and accept the right of a private company to charge a commercial level of toll ?

Question 11 – Do you consider that final approval by Scottish Ministers is an essential safeguard for toll/charge payers or do you think the final decision is a matter for the management authority for the bridge.

As these answers are a personal view, and as I am not resident in Scotland I do not know that I have a right to have my view considered on this matter.

However, in my view, the 'final decision' should be a matter for the management authority of the bridge. The bridges are already subject to regulations passed down by Scottish Ministers, the UK Parliament and the EC. If the management of a particular bridge is competent to implement these regulations, then it must be assumed that its budget has been competently produced with a view to all factors within its field, and that any local operational change (e.g. a change in toll fare) is only proposed in order to take account of the known situation. Such a change will necessarily also have been approved by the Bridge Board. But whilst the 'final decision' should be taken by the Board, in my view that decision should also be ratified by Scottish Ministers to give the decision the force of law. The only grounds that Scottish Ministers should have to refuse any change should be that they can demonstrate within 3 months that the change is not required because the factors driving the change can be overcome in another way, without any detrimental effect to the structure.

My reason for this opinion is that managing each one of Scotland's toll bridges is complex, and requires skills that have taken individual people many years to acquire. The tolls are only levied because they fund the care of a structure that requires constant and extraordinary levels of maintenance. I feel confident that the individual management organisations in charge of Scotland's toll bridges are composed of highly skilled engineers, who are devoted to the safety of the travelling public by preserving a high level of safety on their bridges.

May I offer this thought:

If you think the cost of safety is high, try thinking about the cost of an accident.

Because toll receipts represent the cost of operation plus safety and on-going maintenance; tolls are the consequence, not the *raison d'être*. If the appointed and responsible Board needs a toll increase, the sensible thing seems to me to be to accept the fact as quickly as possible.

Question 12 – Do you consider all tolls should be subject to increases linked to an inflation index ?

The toll at the Forth Road Bridge has just gone up to £1. If inflation over the year to April 30th 2006 is 4%, should the toll be £1.04 ? My answer is "no"; but even if the answer were "yes", we need to think of the practical effect that such an increase would introduce. In an all-electronic tolling environment, perhaps "yes" is an achievable answer. But where cash is still accepted, and is likely to be preferred by the majority of customers (or a large minority) the added transaction time to accept £1.04 or give to change from a larger sum is likely to cause delays on the toll plaza and contribute to congestion.

However, as stated in the previous answer, tolls are the consequence, not the *raison d'être*. Whilst some costs are clearly subject to inflation, other costs are periodic and arise under the influence of wear and tear. So a toll increase is probably more driven by the need to safely maintain the structure and by the advent of some special maintenance requirement than to give a cost-of-living pay rise to toll collectors.

So – "no" tolls should not be subject to increase in line with an index of inflation. "Yes", tolls should be set at a level that will properly fund operating expenses, to some extent 'smoothed' so that at times (where possible) a surplus may be accumulated in order to pay for anticipated expenses.

Executive/Transport Agency

Question 13 – What advantages and disadvantages do you see if any or all of the tolled bridges were to be managed by the Scottish Executive or the national transport agency ?

The only advantages that I could see from such a step would be that all experience could be pooled and some slight degree of personal responsibility might be passed up the line. However, I think that the disadvantages far outweigh the advantages.

For example, there is already a pooling of experience on a UK-wide basis, as bridge managers regularly meet to discuss issues that they have in common; after all they are not in competition with one-another and are normally keen to explore solutions to engineering problems.

As to passing responsibility up the line, my view is that by making the decision-point remote from the operational centre no advantage would arise, only difficulty and delay. Briefly therefore, my advice would be "if it ain't broke, don't fix it."

Regional Transport Partnerships

Question 14 – Should we consider transferring some or all of the powers and functions of current bridge authorities to Regional Transport Partnerships in future ?

The spirit of my answer to question 13 also holds true here. Surely the answer is to include the bridge authorities in the RTP's, but with the bridge authorities retaining all their current powers ? At present all the bridge authorities have highly technical responsibilities. FETA as a Transport Authority also has a public responsibility. My feeling is that all bridges should be managed as Transport Authorities to ensure the need to consider the needs of the public and to give the bridges power to invest and co-operate with local schemes designed to benefit the public.

My feeling is that RTPs would be unlikely to have the skills to manage any of Scotland's bridges to the required standard of safety. These skills could be diluted if transferred to the RTP, and bridge authorities might come under different pressures, perhaps inconsistent with the need to make safety the prime consideration..

Question 15 – As the Erskine Bridge functions both as a key national and strategic link for the West of Scotland as well as an important local link for communities north and south of the River Clyde, do you see any argument for de-trunking it so that it could become the responsibility of the RTP for the West of Scotland ?

Clearly there is such an argument. However, my fear would always be that by subordinating the needs of the Erskine Bridge within the RTP it might need to compete for attention.

History does not make the problem easier to solve, but with the benefit of hindsight it seems to me that the Scottish Executive has no real business (or value to add) in running toll bridges. However, I am not sure what the right solution is. If the right solution were to adopt the FETA model (for instance), there would be difficulty in getting to that position. However, that 'difficulty' is not an excuse for transferring responsibility to the RTP just because it may be easier in the short term.

Joint Board (FETA Model)

Question 16 – Do you have any views on the advantages or disadvantages of the FETA model, for any or all of the bridges ?

In my view, the FETA model presents the best operational advantages.

In comparison with the Erskine Bridge, and without any intention of denigrating the work done by the organisation managing that bridge, as a commercial organisation it still has to make a profit. FETA does not have to make a profit. Any surplus can be retained against future expenditure, not distributed, and the customer is certain to get best value as a result. FETA can also set tolls at a level that will generate a surplus that can be used to benefit local transport-related projects.

In comparison with the TRBJB, Officers know that the new environment for transport in Scotland obliges them (from a common-sense point of view) to consider how they provide value to their wider customers in the community. Yet by the letter of their law, they can absolve themselves of this responsibility. This is falling short of the ideal, but FETA is not constrained, and actively considers ways in which it can search for the "win-win" in as many situations as possible.

My ideal solution would be for the FETA model to be adopted on all Scotland's tolled crossings.

Joint Board (TRBJB)

Question 17 – Do you have any views on the advantages or disadvantages of the TRBJB model, for any or all of the bridges ?

The TRBJB model currently places the Board and its Officers in something of a dilemma. Their mandate is to ensure safety (etc.) and to use toll receipts to cover expenses and repay the original loan. There is no stated requirement *per se* to consider local transport schemes, such as Park & Ride (etc.). However, initially because of the interface with the Dundee Central Waterfront Development, the requirements of the wider environment have become obvious. The TRBJB model stops short of formally requiring its Board members and Officers to become involved in something that all their senses tell them is important.

Single Tolled Bridges Authority

Question 18 – Do you think there would be any merit in having a single body responsible for operating and managing all tolled bridges in Scotland ?

No. Each bridge is different. Many similar tasks need to be done (and some unique ones) but in a different way in each case. You would immediately have to split the body into individual units to take special responsibility for one bridge. The value in performing common tasks centrally (e.g. procurement) would probably not justify a move to a single body. The requirement for hands-on local management conflict with the 'single body' argument.

If you were managing three or four separate tolled motorways instead of bridges, my answer might be different because the similarities would permit a greater degree of commonality.

The bridges are all different; we should be brave enough to see the truth and value in this argument, and be proud of the quality of engineering expertise and management that has been devoted to these structures over the years.

Question 19 – If you think all bridges should be run by one body what form, powers and functions should this body have ?

Not applicable.

Question 20 – Are there any other management options that you would like to suggest ?

No; but I feel that “out-sourcing” is not an option that should be considered at either Forth or Tay. Personally I have never seen any lasting benefit from outsourcing.

Additional

I feel that the Scottish Executive should seek advice from an organisation that has worldwide experience in the tolling and Road User Charging fields. This is because over time, perhaps as far away as 15-20 years, tolls will become exceptional charges levied for the use of special structures such as bridges or tunnels, but collected electronically as part of a wider Road User Charge.

The issue that concerns me is to seek to avoid technological, infrastructural or legal difficulties in the transition from tolling to RUC. Thus to take an example, the distinction between exemption and 100% discount becomes important; in the one case removal of an exemption is more difficult than varying the level of discount. Many more examples exist.