

NATIONAL ROADS AUTHORITY

DRAFT AMENDED TOLL SCHEME FOR THE DUBLIN PORT TUNNEL 2005

REPORT OF

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Introduction

In 1999 the then Minister for the Environment and Local Government approved a toll scheme for the tunnel entitled the 1998 scheme. The NRA now states however, that having regard to a number of changes in circumstances since that time, it has reviewed the toll levels and hence has prepared this 2005 draft toll amendment scheme. The legislation provides that if objections are made to the Draft Scheme within the statutory period and not withdrawn, the Authority shall arrange an oral hearing to inquire into matters pertaining to those objections.

A total of 7 objections was submitted in writing to the NRA within the statutory period and were not withdrawn.

By letter dated 8th December 2005 the National Roads Authority appointed me as the Inspector to hold the Oral Hearing to inquire into the matters raised in the objections received to the Draft Scheme. The letter required me to prepare a report on the Oral Hearing, inclusive of any recommendations I might deem appropriate, for consideration by the Board of the Authority.

The Hearing took place in the Burlington Hotel, Dublin 4 on Tuesday 17th January 2006, commencing at 10.00 am.

I carried out a site inspection of the scheme on Tuesday 10th January.

This report is in accordance with the warrant appointing me and reflects the proceedings of the Hearing.

Description of Toll Proposal

The proposed road to be tolled is 5.6km long of which 4.5km approx will be in tunnel. It is intended to be classified as a motorway and will provide a direct link between the M1 motorway and Dublin Port, linking the M1 at Santry at the Coolock Lane junction, to the north port area at Promenade road and to East Wall road at the Tolka Quay road junction. There is one toll collection location proposed only and that will be situated at the southern end.

The draft amended toll scheme was prepared by the NRA in accordance with the statutory provisions of the Roads Act 1993 as amended by the Planning and Development Act 2000. It varies in a number of respects from the 1998 scheme particularly in relation to the classes of vehicles and road users (to be) exempt from tolls and in the estimated amounts of the tolls to be charged and the timing of the application of the various tolls throughout the week.

The Draft Scheme also provides that the charges specified are an estimate at August 2005 prices and may be updated periodically.

Summary of written objections/submissions

Objections/submissions were received from the following

- Drumcondra 2005
- Senator Tom Morrissey
- State Street International
- IBEC Transport and Logistics Council
- Dublin City Council
- Charles O'Neill
- Vivendi International
- Irish Continental Group and Irish Ferries (late)

One submission is concerned about the effects of traffic in surrounding residential areas which, but for the tolls, would otherwise use the tunnel. These concerns are articulated by reference *inter alia* to the lack of implementation of other projected traffic management initiatives. Another concern is that the use of the tunnel outside of peak hours will not be optimised because of the high level of tolls being demanded, notwithstanding the increase in capacity from that initially proposed. A third submission is concerned at the possible effects of the tolls on access to the Financial Services Centre. A fourth emphasises the considerable importance to improving access to the port and relieving city congestion. This would be put at risk with the high levels of tolls proposed. In that connection also, reservations are expressed particularly in relation to Dublin's role as Ireland's main distribution hub for a range of sectors. There are concerns in relation to general levels of tolling, for example, the level of €6 for off peak traffic, and a number of submissions call for zero tolling for taxis and also zero tolling for general traffic at night-time. Other submissions include requests for free passes for people employed locally and for car ferry traffic.

Proceedings of Oral Hearing

In my opening statement (copy on file tabbed 1) I set out the purpose of the hearing (to inquire into objections raised and not withdrawn), described the toll scheme and the differences proposed from the 1998 scheme, summarised the objections received and set out how I intended to conduct the hearing.

Mr O'Brolochain representing Drumcondra 2005, objected at the outset to the venue chosen for the hearing, stating that it should have been on the north side of the city. He felt that the NRA had made no serious effort to find such a venue.

Appearances

NRA

Mr Diarmaid McGuinness SC

Mr Hugh Creegan, Head of Programme Management NRA

Mr John Spiers, Hyder Consulting Ltd

DRUMCONDRA 2005

Mr Donal O'Brolochain, secretary

Irish Continental Group and Irish Ferries

Mr Alec Colvin

Irish Business and Employers Confederation

Mr Reg McCabe

DUBLIN Chamber of Commerce

Cian Connaughton

Note

While Dublin City Council did make a written submission they were not represented at the Hearing. The Dublin Transportation Office did not make a written submission nor did they attend the hearing.

Submissions on behalf of NRA

Mr Diarmaid McGuinness, Senior Counsel, in his opening remarks, set out the background to the coming into being of the Port tunnel stating that it had its origins in the Dublin Transportation Initiative (DTI), whose final report was published in 1994. He referred to Government decisions following on from there approving of the construction of a dual carriageway tunnel including, in particular, that tolling measures should be adopted, as recommended by the DTI.

He summarised the reasons why it was felt necessary to amend the 1998 toll scheme. These included greatly increased emphasis on tunnel safety and the significant economic growth and consequent growth in traffic since the adoption of the earlier scheme. In respect of the latter there was a concern that this growth might conflict with the primary objective of providing a high quality access to the port of Dublin with increased commuter trips to the city and there was a further concern of a build up of traffic congestion in the tunnel which would also have safety implications.

Mr Hugh Creegan, in his first of two submissions (tabbed 2 on file), tendered general background information in the form of an overview of the tunnel project and the existing toll scheme. As well as that, he detailed the statutory requirements and the manner in which they had been complied with.

He considered that with the bringing into operation of the tunnel, many benefits would ensue for the city of Dublin and country as a whole. These include:

- Support for national, city and local planning policies;
- An overall improvement in the amenity of the City of Dublin in the context of reducing the separation of communities due to traffic, particularly heavy goods vehicles;
- Facilitating the continued development of Dublin Port through the provision of a high quality access to the motorway system;
- Reduction in heavy goods vehicles in the city centre, across the canals cordon and, in particular, on the city quays;
- Reduction in heavy goods vehicles on local residential roads; and
- Providing increased potential to implement public transport, cycle and traffic calming measures.

The Tunnel was part of a long-term transportation strategy for the greater Dublin area. The DTI recommended that access to the Port should be tackled by an integrated package of measures, involving HGV Management, the construction of a new port access route (the Tunnel) and the introduction of tolls to manage effectively non-HGV traffic using that route. The DTI went on to state *inter alia* that HGVs should not be tolled and that the issue of attracting extra cars into the city centre, particularly in the morning peak, should be examined.

The Government announced in October 1994 that the Dublin Port Tunnel should proceed subject to:

- the route being constructed as a dual carriageway (mostly in tunnel) from the airport motorway at Whitehall to the North Port
- the route being classified as a proposed national road, thereby placing its construction under the overall responsibility of the National Roads Authority

- and
- the implementation of the project being accompanied by traffic management measures (including tolling and a truck management system) on the lines recommended in the DTI Final Report.

The development and implementation of the project has proceeded on that basis.

The approved 1998 Toll Scheme provided that all vehicles, *other than* (my emphasis) goods vehicles having a design gross vehicle weight exceeding 3,500 kilograms, official vehicles being used in the performance of their duties in relation to the proposed road by staff of Dublin Corporation or the National Roads Authority, buses, taxis, hackneys and vehicles adapted for the use of the physically handicapped, would be subject to tolls.

That Scheme set a basic charge of £1 to apply to all (non-exempted) classes of traffic in both directions in the Dublin Port Tunnel. To achieve the stated objectives of the Toll Scheme regarding traffic management, however, a toll of £3 was established as the toll charge to be levied in the morning peak period from 7 a.m. to 10 a.m. on the southbound carriageway, i.e. in the direction from Santry to Dublin Port on weekdays only (Monday to Friday inclusive). The approved toll charges were based on July 1998 prices. Converting these charges to euros and inflating using these indices to 2006 prices establishes the basic toll charge at €2.01 and the morning peak-hour charge at €6.03 in current prices.

Since 1998, significant developments have occurred in both a national and international context that impact upon the effectiveness of the 1998 Toll Scheme in ensuring the satisfactory performance of the Dublin Port Tunnel.

At a European level, the importance of tunnel safety has become increasingly recognised in recent years leading to the enactment, in April 2004, of European Directive 2004/54/EC – Minimum safety requirements for tunnels in the trans-European road network. The Directive seeks to address the issue by defining a minimum standard of safety provision within tunnels and by implementing procedural arrangements to address the safety of tunnels in operation

Mr Creegan outlined in some detail how the tunnel fulfilled these safety requirements. In that connection, he emphasised as well the importance of preventing congestion arising in the tunnel to ensure that all vehicles in front of an incident can continue to drive out of the tunnel tube and allow the smoke to then be pushed forward into the empty tube. The increased toll charges proposed in the Draft Toll Scheme are considered necessary to address the potential for a substantial anticipated increase in car traffic demand in the tunnel under the current toll arrangements, which (without the toll deterrent mechanism) could result in congestion occurring within the tunnel.

In the light, therefore of:

- the increases in traffic levels in Dublin City since the original Toll Scheme was prepared in 1998;
- the provisions of EC Directive 2004/54 on minimum safety requirements for tunnels on the trans-European road network;

- the necessity to ensure that the Tunnel remains capable of fulfilling its primary objective of providing an access route to Dublin Port for heavy goods vehicles; and
- the levels of economic growth since 1998 and the consequential impact on the deterrent value of the car toll level in dealing with commuting into the city centre in the peak hours via the Tunnel;

the Authority undertook a review of the tolling regime provided in the original Toll Scheme.

Arising from that review, it was identified that amendments would be required to the approved 1998 Toll Scheme to:

- ensure that the non-HGV traffic would not interfere with the ability of the Dublin Port Tunnel to meet its primary objective of providing a high-quality access route for HGVs to Dublin Port;
- that the Tunnel would not cause an increase in car-based commuter trips into the city centre and
- to limit the potential for traffic congestion to occur within the tunnel.

The amendments proposed include the adoption of increased toll charges and the alteration of certain categories of vehicles previously exempted under the earlier scheme.

The charges proposed are as follows:

Type of Vehicle	Time Period	Direction	Proposed Toll	“Adjusted” 1998 Toll
for cars/light goods vehicles/ motorcycles	6am-10am	southbound Mon-Fri	€2.00	€0.03
	all other times	southbound Mon-Fri	€6.00	€2.01
	4pm-7pm	northbound Mon-Fri	€2.00	€2.01
	all other times	northbound Mon-Fri	€6.00	€2.01
	24 hours Sat/Sun	north and southbound	€6.00	€2.01

The proposed Toll charges are inclusive of VAT (if applicable). The “adjusted” 1998 charges are exclusive of VAT.

These charges had *not* been set for revenue-generation purposes but have been established as the appropriate charges to ensure that the Tunnel is able to fulfil its primary objectives safely.

The other significant proposed change in the Draft Toll Scheme relates to the use of the Tunnel by taxis and hackneys. The 1998 Scheme provided for taxis and hackneys (as defined therein) to be exempt from tolls. At that time, the number of taxis and hackneys prior to deregulation was of such a low order that the toll-free provision could be considered without any concerns on the attendant effects on the capacity and satisfactory and safe operation of the Tunnel for heavy goods vehicles. The

deregulation of the taxi industry since the publication of the original 1998 Toll Scheme has led to a very substantial growth in taxis in the Dublin area from, in the region of 2,500, to over 12,000. Because of this very large increase in numbers, it is now necessary to regulate taxis and hackneys in a similar fashion to private motorcars in order to protect the principal purpose of the Tunnel.

Mr Creegan, in conclusion, outlined (in page 12 of his submission) the statutory basis for the making of the Scheme and the various procedures required to be gone through, leading up to the holding of the oral hearing itself. (In reply to a question of mine) he considered that the statutory process of publicising the making of the Draft Scheme had worked well.

Replies to Questions

Toll revenue is expected to yield €12 million per annum. The operating cost of the toll facility is likely to be of the order of €2.5 million. Much of the remainder (€8.6 million) will be taken up with cost of operating/maintaining the tunnel itself.

The EU (Safety) Directive has not yet been transposed into Irish law. It should be within two years time.

The justification for the change in the toll has been set out both in the explanatory statement of the Scheme, and in the evidence submitted to the Hearing. Risk analysis is an exercise that must be done under the Directive, but it is not the primary driver of the toll charges. There was good reason for having to look again at the toll charges for all the reasons outlined earlier. The analysis that was carried out was done so to establish whether or not congestion would occur in the Tunnel. It was the traffic analysis that identified what the capability and capacity of the Tunnel was to carry vehicles and, arising from that, what the level of tolls necessary to deliver that was going to be. Risk analysis procedure has been ongoing for almost ten years. It will be continued by the operator. “The risk analysis is a much bigger thing than the Draft Scheme which is dealing with purely one aspect (congestion) of the operation”.

Suggestions had been made in terms of looking at the East link, West link and the Tunnel in tandem because of the cumulative costs involved. Mr Creegan stated that the concerns expressed were understandable. The NRA, however, had to identify these (Tunnel) charges for the function that they are performing, which was largely safety orientated. The West Link and East Link are built into the Dublin Transportation Transit model and they are a separate issue.

Mr John Spiers of Hyder Consulting gave evidence in relation to the traffic and revenue forecasting work undertaken in the preparation of the traffic toll Scheme. (Copy of his submission is on file tabbed 3).

The Dublin Port Tunnel forms a key link in the strategic road network for Dublin, as it will provide a direct route for heavy goods vehicular (HGV) traffic between the M50 motorway and the Port. As such, it forms part of the long-term transport strategy for Dublin. Together with other demand management measures, the diversion of a substantial proportion of goods vehicles from the city road network to the Tunnel will contribute to a reduction in road congestion and the freeing up of road space for reallocation to public transport.

Although primarily for goods vehicles, spare capacity will be utilised by other vehicle types. To avoid unacceptable congestion and to help maintain safe operating conditions in the Tunnel at all times, certain of these other vehicle classes will be subject to tolling and complementary traffic demand management measures.

Since the publishing in 1998 of the Environmental Impact Statement (EIS) for the Tunnel, the overall travel demands in the region have risen significantly more than expected, due largely to high levels of economic growth and the very successful regeneration of the Docklands. In addition, new legislation governing tunnel safety has been introduced at a European level that requires re-examination of the potential for traffic congestion to occur within the tunnel.

In light of the resultant changes, it was appropriate to re-visit the traffic management and tolling strategy. A traffic and tolling study for the Tunnel was, therefore, undertaken. There were a number of objectives for the study and these included:

- to identify the level of traffic that will maintain an acceptable level of service such that congestion and queuing do not occur in the Dublin Port Tunnel; and
- to identify the level of tolling required to keep traffic at that level.

Complementary traffic management measures will be beneficial to help maintain the traffic at the appropriate level through the Tunnel. This would help to smooth the inevitable traffic peaks (notwithstanding the general control provided by the tolling system) and to help manage incidents.

The starting point was an examination of the traffic flows that are expected to use the Dublin Port Tunnel and the surrounding road network. As the Tunnel is expected to open in 2006, the initial forecasts represent the traffic levels at year of opening. Traffic flows between 2006 and 2016 have been interpolated from the two design year forecasts. For years beyond 2016 forecasts have also been extrapolated.

The Tunnel is a major piece of infrastructure that will influence demands over a large part of Dublin. The anticipation is that it will be attractive for many of the daily goods-vehicle journeys, not only for those vehicles going to and from the Dublin Port Tunnel, but also for goods vehicles accessing other parts of the city. In addition, as part of the longer term strategy for Dublin city, it is expected that goods-vehicle bans will be put in place in the city centre to encourage those vehicles to use the Tunnel.

Because of the area-wide influence of the Tunnel, traffic forecasts must necessarily be estimated using a transport model that covers the area of influence of the scheme, in this case most of greater Dublin and the surrounding areas. The only model that has this geographic coverage is the DTO model. This model, therefore, provided the basis for the traffic analysis used for the tolling analysis reported in this evidence.

The level of tolls required to contain traffic to the maximum desirable capacity was unknown when the analysis commenced. A wide range of toll alternatives was therefore looked at so that the required toll could be established. The alternative options examined were:

- a zero toll on all vehicles to give a 'maximum' flow through the Tunnel and allow for interpolation at lower toll values

- base tolls, as described in the 1998 Toll Scheme and
- tolls of €5, €10, €15 and €20.

The 1998 base tolls were €3.81 (in 1998 prices) southbound in the morning peak and €1.27 (in 1998 prices) northbound in the morning peak and in both directions for the remainder of the day. The other values were chosen to provide a wide range from which the likely preferred toll could be identified. Different toll regimes were tested for both the a.m. peak and the off-peak.

In the traffic modelling, the toll value (€) had to be converted into time value, because the model works in terms of time. When one is calculating the route that somebody will take to get between their origin and destination, the price has to be converted into a time so that it effectively tries to find the most efficient journey between any origin and destination using the total time taken. In terms of the working and non-working time, if somebody is travelling in their own time, that is non-work time. It has a lower value than somebody who is travelling in work time because, effectively, the latter might be paid by their employer. They would, therefore, have a higher value than if they are travelling in their own time.

The analysis of the Tunnel alone showed that, under perfect operating conditions, a maximum flow of 3,800 passenger car units (pcus) in each direction could be accommodated without flow breakdown. (A car represents one pcu, whereas a truck is modelled as being between 1.5 and 3 pcus). This analysis assumes an average pcu factor of 1.75. This maximum flow figure is applicable if the goods vehicles are kept moving and do not slow below about 20 kph.

However, at this level of flow, only a small incident or increase in flow would introduce flow shockwaves with resultant stop-start conditions (and a change in the goods vehicle pcu factor from 1.75 to 2 or 3). To provide some margin of safety, a level of about 10% below this figure, i.e. 3,450 pcus, is considered as representing the realistic maximum capacity of each Tunnel tube.

The analysis of the *toll plaza* showed that it could handle a flow of 3,450 pcus per hour with no significant queuing back into the Tunnel. There is an inherent assumption that goods vehicles will keep moving, as they will have a toll-free lane with no barrier.

However, the Tunnel does not operate in isolation and is instead part of an overall road network. There are a number of possible constraints caused by the road network, particularly to the south of the Tunnel, which affect and further reduce the maximum desirable capacity. Depending on the traffic operational strategy adopted (in terms of the signal settings for traffic to/from the Tunnel and surrounding road traffic) the maximum desirable capacity value could be reduced southbound to between 1,800 and 2,800 pcus per hour. Northbound, the same constraints would reduce the traffic that is able to reach the Tunnel from East Wall road to between 720 to 940 pcus per hour (the traffic from the North Port is additional to these figures).

Thus, the tolling of the Tunnel is also required as a result of the interaction of the Tunnel with the surrounding road network and not only as a consequence of any Tunnel capacity limitation.

The DTO Model only forecasts selected daily figures. There is a need to identify a traffic toll and revenue profile throughout the day. DTO have calculated factors to apply to the a.m. peak and off-peak to expand to a daily figure. These are useful check figures, for total daily demand, but, on their own, they are not suitable for calculating the tolling strategy and daily traffic. To try to optimise traffic throughput, it is desirable to have different tolls during periods of significantly different traffic flows. However, it is also desirable not to have too many traffic toll changes or too many toll differentials between periods. That would confuse motorists and/or possibly lead to traffic speeding, or deliberately slowing down, to travel through a lower toll band period.

There are significant differences in the desirable maximum flow allowable through the Tunnel depending on the assumptions adopted about the traffic operations on the road network to the south of the Dublin Port Tunnel. This will influence the levels of toll required to maintain the traffic levels through the Tunnel at acceptable levels. Alternative scenarios were examined, using the a.m. peak period to identify the effects of a range of toll levels. From this analysis, the NRA and the City Council determined the most appropriate priority arrangements that would apply at the southern end of the Tunnel. This took into account City Council improvement proposals for the East Wall Road. The selected arrangement provided for balanced priority between Tunnel traffic and local non-Tunnel traffic on East Wall Road.

The traffic analysis work identified the permissible flows to and from the Tunnel. In relation to the southbound traffic flow, the demand was found to be 3,024, the maximum flow possible 1,807, giving an excess flow of just over 1,000 vehicles. In the northbound direction, the demand was estimated to be 954, the maximum flow 566, giving an excess flow of 388. (Tables 1 and 2 of Mr Spiers submission – page 6).

The figures for the northbound direction exclude the traffic flows arriving from Dublin Port which are additional to the values in the table. These are actually the East Wall Road flows and there are additional flows from Promenade Road that go straight into the Tunnel.

Having established the desirable maximum capacity of the Tunnel and its interactions with the surrounding road network, the next step in the process was to identify the resulting toll regime to achieve the maximum desirable capacity. The work undertaken identified the toll levels set out in Table 3 (below) as compatible with the desirable maximum capacity.

Table 3: Identified toll levels compatible with desirable maximum capacity

Description	Toll Levels 2006 (€)		Toll Levels 2016 (€)	
	<i>S/B</i>	<i>N/B</i>	<i>S/B</i>	<i>N/B</i>
<i>AM Peak</i>	10	4	10	5
<i>Off Peak</i>	4	4	9	4
<i>PM Peak</i>	4	5	5	5

The above figures are in 2001 values and require factoring into present-day values. The NRA, having reviewed the analysis carried out, identified a two-charge tolling structure as the preferred tolling arrangement and these are set out in the Draft Scheme.

(I questioned the apparent increase of 50% between 2001 and 2006 prices, specifically from €4 to €6). Mr Spiers replied that there was a mixture of charges and that there was in fact one instance of a € charge in the 2001 prices (2006 pm peak (northbound)). Mr Creegan later confirmed that the indexation factor from January 2001, this is the Consumer Price Index, to August '05, is approximately 17.4 percent. Mr Creegan also stated, in relation to that off-peak toll rate, that the rate of €6 was proposed having regard to the outcome of the analysis presented in Table 3 (above) of Mr Spiers' submission. This indicated that while an off-peak charge of €4 would appear sufficient to achieve the toll Scheme's objectives in the opening year, the level of this charge is required to grow in subsequent years with a toll level of €9 required by 2016. Mr Creegan stated that the charge of €6 was set as being an intermediate point between these positions.

The DTO model predicts daily traffic using a combination of the a.m peak and off-peak models. Based on traffic profiles through the day, they have estimated that the daily traffic is 3.75 times the peak hour plus 11.35 times the off-peak hour. These were used to get overall daily traffic and revenue figures.

The estimated average daily traffic flow predicted through the Dublin Port Tunnel at the anticipated year of opening, 2006 (and passing through the toll plaza) is 21,600 vehicles, of which approximately 29 percent are heavy goods vehicles above 17 tonnes laden weight.

Based on the daily estimates of the traffic volumes using the Tunnel, the gross amount of toll revenue in the first year of operation is estimated to be approximately €12 million at August 2005 prices.

Replies to Questions

I suggested to Mr Spiers that the whole strategy of tolling seemed now to have changed from that the basis of the original scheme (which had an emphasis related to financing the building of the tunnel). Mr Spiers replied that the tolling was now directed to achieving the desirable capacity for safety reasons. On East Wall Road there will be traffic coming from the Tunnel that will turn right out of the Tunnel turning towards the city. There is an issue that if too much traffic is coming northbound (to the Tunnel), it will block those right hand turns and, consequently, cause backing up into the Tunnel. It will be necessary, therefore, to control the traffic going northbound, as well.

The data that was used for the traffic model on which the analysis and the derivation of the traffic figures was based, all dated from 2001 or earlier. The decision to de-exempt taxis was, as outlined in the evidence, based on the significant increase in their numbers since de-regulation (2,500 to 12,000 at end of 2005). The issue was not so much how many taxis would use the tunnel as how many *could* (my emphasis) use it. The NRA has some data on the level of taxi traffic but it was not up to date. The

Annual Average Daily Traffic (AADT) has been validated by the DTO using statistical techniques and by taking over 500 individual counts. It was validated in 2001 and then forecast forward to get the future traffic flows.

In relation to the new Government policy document Transport 21 and the explicit exclusion of some of the measures in the DTO vision document Platform for Change, that all reinforces the need for the tolls. If there is a slow down in the development of the public transport, then the likelihood may well be that car traffic will increase even more than was anticipated. Transport 21 does not detract from the toll strategy, it actually reinforces it.

It was suggested by the objectors, that the theoretical flow capacity, of 3,450 vehicles an hour, provides a figure of roughly 7,000 vehicles per hour as the theoretical capacity in both directions. Having looked at the constraints in both directions on the Tunnel, a figure is quoted of 21,600 vehicles per day. From that, the objectors asked whether one would conclude from that, that the average volume or the average traffic flow in the Tunnel would be of the order of very roughly 800 vehicles per hour, as against the theoretical capacity of something like 7,000? Mr Spiers replied to this question by stating that, in terms of the peak hour, you could get virtually 2,400 vehicles an hour through the Tunnel, and that is the number that is shown in the traffic and tolling study. There is a lot less traffic in the night-time period. The 21,000 is taking account of the maximum you would get in the peak and slightly less in the off-peak and very little overnight. It isn't 800 vehicles an hour, it is actually 2,400 is the maximum flow during the peak hour.

The completion of a full eastern bypass link would certainly permit a higher flow through the Tunnel, because the constraints of the southern road network would be removed to a large extent.

A further issue was raised to the effect that the traffic through Dublin Port is quite managed as it is related to vessel arriving times, departure times and terminal opening times. This, at the moment, means that, somewhere between 5.30 am and 7:30 - 8 a.m., most traffic has already vacated the Port. It is not understood why concessions to Port employees and ferry traffic are being prohibited when most of the traffic has actually gone and exited the Port. That traffic, at present, travels through Alexander Road, Tolka Quay Road and exits south via the East Link or East Wall Road towards the M50 direction. The question was raised by the objectors that the utilisation of the Port Tunnel just makes an awful lot more sense at a time when normal traffic is not on the road. Last year 240,000 cars travelled out of Dublin Port? Mr Creegan replied that the NRA had to look at the Tunnel in the sense of how it would operate safely. They had maximised the throughput that could be put through on a toll-free basis. Adding to that, however, by identifying particular groups and saying "We will add these people to the exemption category", fundamentally undermined the philosophy developed. It is not possible to accommodate such groups. Mr Spiers added that there are a substantial number of cars that go into the Port between 7 am and 9 am. It is more than 600 vehicles, which would presumably use through the Tunnel. It is a significant number of vehicles that would add to the flow through the Tunnel. The charges have been set in a way that it is maximising the use of the Tunnel within the constraints of safety. To try to add an additional free traffic stream as proposed would "start to impair that objective completely".

The Authority was not in the business of setting the toll charges to either cover the costs of operation of the Tunnel or revenue maximisation. The approach to the Toll Scheme was not done on that basis. It was approached on the basis of safety and fulfilling its objective first. The toll charges that emerged from that analysis are the ones presented.

Responses of NRA (Mr Hugh Creegan) to submissions (tabbed 4 on file)

Mr Creegan summarised the principal points made in each submission and replied to them. (I shall confine myself to commenting on what I consider require particular emphasis for the Board. While I shall deal separately with the individual submissions I don't intend to repeat comments already made in respect of an earlier submission).

Response to Drumcondra 2005

An HGV management strategy is being developed, and will be implemented, by Dublin City Council. Public consultation in regard to the proposed strategy is ongoing at present.

It is recognised that a balance exists between vehicles able to access the Tunnel and vehicles remaining on surface routes. The Explanatory Statement sets out the rationale for the adjustments proposed to the currently approved scheme and the flows predicted to utilise the Tunnel following the implementation of the revised toll charges (if approved). It is considered that the correct balance has been achieved when the issues of safety and the need to prevent congestion within the enclosed environment of a tunnel are evaluated. It is worth noting that more vehicles are forecast to use the Tunnel upon opening than were predicted to use the Tunnel under the original proposed scheme.

The preparation of an Environmental Impact Statement for a Draft Toll Scheme is not a requirement of the legislation..

The primary purpose of reviewing the original toll scheme and proposing the amendments in the Draft Toll Scheme is to ensure that the tolling arrangements that will apply to the Tunnel will ensure that the Tunnel can perform its primary function of providing a HGV access to Dublin Port effectively and safely. The removal of toll charges in the northbound direction is incompatible with that objective. It would reduce the capacity of the Tunnel for HGV traffic and create a congestion risk which would both be unsafe and contradictory to the recently enacted EU Directive on tunnel safety.

Response to State Street International (Ireland) Limited

The importance of the International Financial Services Centre to both Dublin and Ireland is undisputed and indeed the Tunnel project will, both directly and indirectly, provide benefits to this area in performing its primary function of providing an HGV access to the Port effectively and safely. The levels of toll charges proposed have been identified as those necessary to achieve this objective.

Senator Tom Morrissey

The Draft Toll Scheme does not preclude a reduction of the toll charge between midnight and 6 a.m. if, following experience of the operation of the Tunnel, it is considered that increased car flows can be accommodated.

The night-time hours when traffic flows are at their lowest is the period when much of the required maintenance work is targeted to be carried out within the Tunnel. Similar to all major road tunnels, preventative and routine maintenance will need to be carried out on a regular basis to the various mechanical, electrical and safety systems incorporated into the Tunnel. Tunnel walls will need regular washing to maintain the reflectivity of the finished surface. Carriageways and walkways will need regular inspections, maintenance and incidental repairs.

It is intended that as much as is practical of this work would be carried out during night-time hours to minimise disturbance to traffic and inconvenience to Tunnel users. Some of this work will require lane closures whereas other works will require occasional closure of individual Tunnel tubes during night-time hours.

Setting toll charges to zero between midnight and 6 a.m. may not be compatible with the above arrangements, and, accordingly, is not recommended. In addition, the number of users who would avail of such a proposal during these hours would be very limited and the impact on the maintenance operations of the Tunnel is likely to be disproportionate to the benefits provided.

In relation to the predicted non-increase in traffic over the design period, the number and percentage of heavy goods vehicles using the Tunnel will grow over this period and this will cause, due to the capacity constraints, a displacement of non-HGV traffic from the Tunnel. So while the number of passenger carrying units (pcus) using the Tunnel will increase over the relevant period, the total number of vehicles will remain relatively similar.

Response to IBEC (Mr Reg McCabe)

The Draft Toll Scheme does not preclude a reduction of the toll charge between 10 p.m. and 6 a.m. if, following experience of the operation of the Tunnel, it is considered that increased traffic flows can be accommodated.

In relation to the proposal to establish a daily toll-free "taxi quota," the result of such a proposal would be to increase the number of vehicles utilising the Tunnel. The proposed toll levels set out in the Draft Toll Scheme have been established with a view to maximising the use of the Dublin Port Tunnel while ensuring that it operates safely and effectively. Adding an additional traffic stream of toll-free taxis is incompatible with the delivery of this objective. In addition, the logistics and management of such a proposal would be exceedingly challenging and difficult.

In regard to the proposal that toll concessions should be introduced for port employees, the proposed toll levels set out have been established with a view to maximising the use of the Tunnel while ensuring that it operates safely and effectively. Adding an additional traffic stream for port employees (which are understood to number several thousand persons) is incompatible with the delivery of this objective. In addition, there are no policy reasons to justify granting toll-free

concessions to port employees while denying the same privilege to other groups in the area, e.g. IFSC employees or residents of East Wall Road. Neither, for the same reasons, would it be appropriate that toll concessions should be introduced for port ferry passengers.

Response to Dublin City Council

This submission proposed that a third level of toll significantly less than € be introduced for the period from 8 p.m. to 6 a.m. daily. Again, the Scheme does not preclude a reduction of the toll charge between 8 pm and 6 am if, following experience of the operation of the Tunnel, it is considered that increased car flows can be accommodated. The reservations remain as stated already.

Response to Mr Charles O'Neill

The need to regulate taxis and hackneys is clearly set out in the explanatory statement accompanying the Draft Toll Scheme and arises from the major increases in taxi numbers following the recent deregulation of the taxi industry.

Response to Vivendi

Adding an additional traffic stream for East Point Business Park workers is incompatible with the delivery of the objective of maximising the use of the Tunnel while ensuring that it operates safely and effectively.

Response to Irish Continental Group

The submission that HGV traffic and coaches, vehicular traffic to/from ferries, employees of Dublin Port and taxis be exempt has already been dealt with in the responses to the earlier submissions. HGV traffic is exempted.

Submissions of “Objectors”

Drumcondra 2005

Mr O’Brochain, Honorary Secretary of the group, stated that his submission would complement the (extensive) response already made to the advertisement inviting submissions. He outlined in his submission who the group comprised, why they were at the Hearing, what their attitude was to the proposed changes and what they wanted from the Hearing process (copy of his submission is on file tabbed 5).

The group of eight resident’s associations straddled the main road from Whitehall to Dorset Street and was mainly residential and educational. There were many trip attractors/generators bringing traffic through the area including Croke Park and the Mater and Beaumont hospitals.

The changes proposed in the toll scheme will do nothing to achieve the aims of the Dublin Transportation Initiative (DTI) of providing “a balanced transportation system in which public transport provides for mass transportation needs”.

Their hope for the Tunnel was that it would free up road space for improved public transport. The Tunnel was to be one of a number of mutually reinforcing measures to improve the environment of the area.

The Scheme cannot improve air and noise quality in the area because of the absence of other facilities. Road space, that may be freed up by removing Port-related HGVs, will become clogged again by other vehicles – taxis and hackneys - which will adopt other routes if they are subject to tolling. As well as that, there is not one single measure that would achieve the DTI agreed aim of a 14% modal shift to which people go by car.

The Government decision to approve another terminal at the Airport, together with the application for a new runway and other initiatives planned there, will worsen an already serious situation.

Mr O' Brolchain concluded that the tolling scheme be rejected for reasons including:

- is not complemented by the other measures deemed necessary in the July 1998 EIS.
- there is no health assessment of the effects
- traffic projections seem simplistic
- no mitigation measures for the undoubted deterioration in air and noise quality in the area
- the NRA is not an appropriate authority to decide on tolling schemes (as they affect) inner suburb roads

Irish Business Employers Confederation

Mr Reg McCabe, Transport Director with IBEC, the Irish Business and Employers Confederation, wished to record that he found himself in an uncomfortable position of being listed as an objector. IBEC could not be in any sense be construed as an objector to the Dublin Port Tunnel Project. He did not intend to go into much detail because their submission is on the record – additional copy of that 10.10.2005 submission now on file tabbed 6 - .

A considerable number of their members would be directly involved in the retailing and in the distribution industries, and of course, in manufacturing. And in those capacities they would actually be operating very substantial vehicle fleets, right across the spectrum in terms of size. Quite a number of their members would, in fact, be large scale HGV operators in their own right and key users and key customers of the Port. So the whole issue of access to the Port is critical. On that basis, he would have to say that IBEC have been very strong proponents of the concept of a Port Tunnel. IBEC, however, have always emphasised the need for a full link to the east of the city. They see the Port Tunnel as being one of two key elements in that.

The organization is delighted to see that the Tunnel will materialise and will come into operation later this year. It is believed that it will generate tremendous benefits for industry, for the transport industry, for the distribution sector, and indeed, for the local residents in terms of taking traffic off the local streets.

Mr McCabe wished to emphasise that IBEC didn't arrive at these views in any casual kind of way. It was important to emphasise that a full consultation with their membership was carried out, and it was really based on that and on a series of meetings, indeed, in Dublin Port, where the views of the members was sought and they then attempted to summarise the points in their submission.

IBEC wanted to see the Tunnel delivering its primary function, which is a quick access route for trucks to and from the Port. It is very likely that the Tunnel will end up costing the taxpayer of the order of a billion Euro. From that point of view, it is quite important that a maximum return is achieved from the investment. The focus is, in other words, that there is in place a multi-functional facility that delivers real benefits not just to a single group of users. And that is why they have emphasised the issues relating to taxis and so forth. So they would like to see a flexible regime implemented to the greatest extent possible.

It is reasonable for the NRA to say that there will be a large maintenance requirement on the Tunnel at night-time. On that basis it would be unrealistic to, as it were, permit free-flow conditions, but there is a contrary point, which is, that we now operate in the world of planned maintenance. There is a surely a large element of predictability in terms of the maintenance requirement. In that sense, while there is a need for maintenance there is also a need to maintain maximum utilisation of the Tunnel. He really believed they can be balanced against each other. It is becoming increasingly a feature that the Port is operating 24 hours a day. But if one looks at the actual truck figures, you know, over a 24-hour period, it is fair to say that during the night hours, the night hours would probably represent less than 5% of the total HGV volume. In that situation there would be fairly substantial capacity in the Tunnel, even allowing for a maintenance requirement.

The Authority could be considered as being a little bit dismissive in terms of their response to the suggestion of a taxi quota. There is possibly a means of meeting everybody's requirements. It is not known how many of the licensed taxis are actually participating on a day-to-day basis. Furthermore, it would not be difficult to get from the Airport Authority the figures for the actual taxis accessing the airport. He thought that they could get a reasonable fix on, say, the taxi flow by hour of day. And given the amount of planning and management expertise and so forth that is going into the Port Tunnel facility, it would not be beyond the wit of men, given that there is a taxi regulator function here in the city, and indeed, nationally, it would not be too difficult to come up with a scheme whereby a limited number of companies who are controlled by a central radio arrangement would be authorised to use the Tunnel in a particular 12 or 24-hour period. It would not necessarily be desirable that the taxis would have free access. It may be appropriate to have a toll on the taxis, even those who are authorised. It is a little bit simplistic simply to say that "Well, we would like to entertain taxis, but, you know, it is just simply too complicated to go that way." He would ask that they not be dismissed out of hand so that if, say after six months, it was felt that they could be accommodated then such an exemption could be readily implemented.

The Tunnel does not come free for trucks, particularly those with a destination south of the river. They will still have to pay the East Link toll. Perhaps some compensatory measures are required.

(Mr Creegan, for the Authority, replied that, in relation to the taxis, it still went back to what is the capacity of the Tunnel to cater for vehicles. If a decision is taken that all taxis go free then toll charges have to be increased again to balance the traffic

throughput. If one is going to be selective about a limited number of taxis being exempted, then one is heading back as it were to re-regulation).

Irish Continental Group and Irish Ferries

Mr Alec Colvin wished to make a number of points in addition to the Group's written submission to the Authority.

He stated that there is a situation now in the last couple of years where ferry terminals are opening earlier. They are now opening at 6 am. The ferries are arriving first for discharge. It actually quite well timed. How it operates at the moment is that the ferries are actually discharging before the terminals start discharging. It is peak traffic, it is periodic traffic. If they are adding to the flow through the Tunnel when they are actually entering the Port, then it won't be cutting across those going towards the East Link, which means that there is a free flow into the Port at the other end to their end, not causing the crossover effect for traffic exiting the Port. It is not the Group's position that they are trying to attract other traffic into the Port. They are trying to use the Port Tunnel for its primary use, which is getting traffic into the Port and out of the Port. If they have a situation where they have Port traffic using the Port Tunnel coming in the morning times, it won't have to cross the exiting traffic. It is not bound for the East Link, it is bound for use in the Port itself.

In relation to the taxi issue, a lot of the companies in the Port area are starting work before public transport hours. People are actually being delivered in taxis down to the Port at 5 am and 5:30. An awful lot of this is done on account, so it is with specific companies delivering specific people to do a specific job in the Port area.

It was stated earlier that Dublin Port works round the clock – 24 hours. In actual fact it is only 24 hours from an operational *land to sea* (my emphasis) viewpoint. The traffic going through Dublin Port is extremely peaked. The situation is that the ferries come in early morning and depart in the evening time. The last ferry is gone by 22:00 hours. After that the traffic flow through Dublin is practically non-existent. All container terminals on the north-side are closed by 19:00 hours. There is a limited service available on the south-side to 22:00 hours also. Containerised traffic, therefore, is virtually closed down from 19:00 hours onwards. In the morning the traffic coming in for Ro-Ro services arrive somewhere between 4.00 and 5.00.

In terms of morning traffic, one is looking at 5.45 to 7.00 hours. On the container side there will be a heavy peak from 6.00 to 8.00 hours. Those trucks will not be back into the Port again until about 11.00 hours. There will then be a third peaking sometime in the afternoon "around 14.00 to 16.00 hours". It is critical that Dublin Port Tunnel is open and fully operational. It is greatly appreciated that the Tunnel will take a lot of the HGV traffic away from the Port. It is also critical that no further unnecessary traffic is attracted back into the Port area. Obviously the tolling is very important. The whole area is extremely congested at the moment, and even a slight increase in cars to use the Tunnel may cause a grinding effect and a stoppage in the area. Evening peak traffic should also not be attracted into the Port area.

HGVs will travel free; ferry traffic to and from ferry operators should also travel free.

Dublin Chamber of Commerce

Cian Connaughton representing the Chamber, stated that the Chamber represented about 1,800 businesses, predominantly in the city centre, but also throughout the greater Dublin area. The Chamber spanned retail, as well as those involved in transport. They would be concerned that the tolling for the Port Tunnel is divorced from consideration of the tolls for the West Link and the East Link Bridge. They really have to be looked at in tandem, in terms of incentivising the HGV use of the Tunnel and of the M50, i.e. maximising the Port Tunnel dividend.

Inspector's Questions (to NRA)

I asked whether traffic entering and within the tunnel can be controlled “every step of the way”? Traffic can be controlled entering the Tunnel such that congestion would (if necessary) occur outside the Tunnel. If, however, there is gridlock at the southern end one had to identify and/or deal with the traffic already in the 4.5 km tunnel. While one is watching the traffic on a constant basis, it does not make any sense to operate it where you have to intervene on a minute to minute basis to close it down. The charges are being set so that that type of intervention is not going to be required.

As to the existence of a “problem” at the southern end, the fact is that there will be a motorway network discharging into a non-motorway network. That will always have its own tensions. There are clearly capacity constraints there that have to be recognised and allowed for.

In relation to the possibility of like problems at night, there is no doubt that during the night-time hours traffic flows are much lighter, but equally, Dublin Port is effectively a 24-hour operation. There are a considerable number of users day and night that will be travelling through the Port, particularly, in the commercial vehicle category. When you ally that to the fact that maintenance work will be carried out during night-time hours, which will require lane closures and occasionally tube closures, the idea of having an unregulated regime in place at the same time that there is a considerable volume of traffic wishing to use the Tunnel, is clearly not desirable. They are in fact incompatible.

As to the suggestion that a € toll at night-time being a deterrent and thereby not optimising the spare capacity in the Tunnel at the expense of other streets in the city network, the reality is that, to try and do reduced charges at night, the administrative toll charge of any type within the Tunnel, there is a choice between pretty clear alternative surface routes. One would expect that people would stay on the alternative surface routes, no doubt about that. It is doubtful that anyone would be supporting a case that during night-time hours there is a major traffic problem on any of the streets in the north-side of Dublin. Certainly, one would still want the trucks to continue underground. It will be possible to maintain that with one lane, while maintenance is carried out, but starting to add traffic streams that they are not in control of becomes problematic.

The level of charges proposed are the *maximum* (my emphasis) charges that can be set. If experience proves that the level of ‘interference’ with the maintenance is

manageable, the company is in a position to lower the charges. As well as that, there is a separate statutory procedure whereby the draft by-laws, including the toll charges, are then published and there is a period of a month in relation to which people have an opportunity to make representations in relation to the charges that are proposed in the bye-laws.

As to whether there is any provision for opening the barriers in the event of congestion occurring at the toll plaza, it is not envisaged that such an eventuality will arise. Nevertheless, the operator of this Tunnel will be operating under a service contract directly to the NRA who will be in full control of the contract. The concessionaire will be under directions that should congestion occur at the toll plaza, that has to be dealt with, if needs be, by lifting the barriers and letting people through free.

I questioned the extent of the pm peak toll in that I wanted the Authority to be satisfied that the evening peak required, as proposed, a similar deterrent-type toll to the morning peak. Mr Creegan stated that in Mr. Spiers's evidence, he gave a table there detailing the analysis that came out of the work that he did. The DTO model, which is the strategic traffic model for the greater Dublin area is essentially a very good model in the morning a.m. peak, because it has a separate model for that. It is a very good model in the off-peak hours, because it has set up a model for it, but what it does not have, it does *not* (my emphasis) have its own pm peak model. So there is a certain amount of interpolation work and conversion work required to do the pm peak hours in any work that is used using the DTO model. Accordingly, *there is a greater degree of uncertainty about the p.m. peak*, (my emphasis) and when it came to the NRA to propose toll charges, in view of that greater uncertainty, they believed that the right approach was to invert the am peak hour and apply that to the pm peak hour as well. They were also conscious of the flexibility spoken about earlier to lower charges in the future, without reconvening a hearing like this. So, to deal with the greater uncertainty about the pm peak hour, that is the approach adopted in that particular place. It has happened before, for example, in the case of the West Link scheme where the maximum charged allowed for, was in excess of that charged.

In reply to a question as to what effect adherence to the EU Directive imposed on the Tunnel, Mr Creegan replied that there was no significant design changes at all required for the Tunnel. In operation, one of the things was the item being dealt with at the Hearing i.e. the toll charges and preventing congestion and various other parameters that actually flow on into the operational stage.

I asked Mr Spiers to elaborate by reference to the map displayed at the Hearing the traffic constraints in the adjoining road network at the southern end of the tunnel. He stated that one of the key things is that the whole traffic network right down to the North Wall Quay operates as a system, such that what happens in one direction affects what happens in the other direction, because you have right-turning traffic from the Tunnel, coming out of the Tunnel into East Wall Road. You have the roundabout, which is a critical factor, at North Wall Quay. What happens is, if there is too much traffic coming north and there is a traffic congestion, that blocks back, and actually because it is a roundabout, it actually blocks the southbound tunnel as well. One, therefore, has to actually balance the north and southbound traffic such that this works as a traffic system, because if there is a problem with the northbound, then that can

block the southbound right-turning traffic which can block back into the Tunnel. The way that the analysis has been done was to make sure that this works, with the tolls as set, so that traffic does not block up back into the Tunnel. Because although one can stop northbound traffic at the toll plaza entering the Tunnel what you can't do, is stop the traffic (southbound) in the Tunnel because it will block all the way back if there is a congestion down at the southern end. The traffic, therefore, has to be balanced in the two directions such that neither northbound nor southbound cause congestion back into the Tunnel. There cannot be traffic queuing in the Tunnel, because in the event of an incident in the Tunnel which causes a fire, the ventilation system pushes the flames forward, so that if there is any traffic pushed forward, it is, in fact, pushing the flames in front.

Closing Statement on behalf of the Authority

Mr McGuinness stated that the Draft toll scheme has been seized upon in such a way as to call for the tolls to be removed, as it were. The function is not to review the 1998 scheme. The function is to inquire into the objections to this (amendment) scheme.

The environmental impact of a toll scheme viz. a viz. an un-tolled scenario has already been dealt and decided back in 1999. What is now under consideration is an amendment to the 1998 toll scheme to provide for an increase in the charges in the way specified in the Schedule and a restriction of the categories of road users that would be exempt.

Drumcondra 2005 are concerned that the application of the tolls should be subject to the control of public authorities to ensure that it meets DTI objectives. In that connection the DTI objectives are achieved in that it provides for a fast, efficient and safe means of access for heavy goods vehicles to the Port.

In relation to concerns expressed regarding adherence to EU Safety Directive, that Directive identifies traffic management measures as one of the instruments that must be had regard to by everyone at the stage of the planning, design, execution and operation of the Tunnel. The measures are identified as one of the ways in which, where you have a Tunnel such as this and it is ventilated by a longitudinal ventilation system, you have to ensure that if there is any sort of an incident in the Tunnel, that you are able to discharge the traffic from the Tunnel at a speed which exceeds that at which smoke and fire will travel at. That means the Tunnel traffic has to be managed.

The amendments proposed are by way of an upward lift of the tolls, and a restriction of the categories. They are really the issues that must be focused on.

If the tolls and the exemptions were to remain at the 1998 limit, it would, in the Authority's submission, undermine the effectiveness of the tolls in terms of regulating the composition of the traffic that would go into the Tunnel.

Closing Observations on behalf of Drumcondra 2005

Mr O'Brolchain stated that his association always knew that the tunnel was going to be tolled. They don't object to the principle of tolling. They objected to the fact that "the tolling was not what (they) understood to be a congesting pricing basis". The whole aim of the DTI was to improve the city centre. In order to attract cars into the city centre during the evening time they felt that there should be no tolls outside at that time, and there should be no tolls for people leaving the city in private cars.

He didn't see anything in the Directive that would have led him to believe that the design of the Tunnel would have been unsafe, and he didn't mean to imply that.

They will not get the benefits which they expected from the Tunnel because of other Government decisions. No decision should be made on this until the implication of the Government policy on Transport 21 for public transport access and LUAS lines and such issues are made clear.

The new proposed Toll Scheme will not help to achieve the group's aims. They don't believe that the traffic projections have any validity anymore. They can't be based on the 'Platform for Change,' which is no longer Government policy.

I closed the Hearing.

Inspector's Assessment

The power of the NRA to make a toll scheme or amend a toll scheme as is proposed here, is clearly laid down in law. In my view, the Authority has fully complied with the requirements of the legislation.

Before turning to and dealing in detail with the objections/submissions made, I propose to set out the purpose of the Scheme and then look at the objections by reference to it.

This toll scheme, or amended toll scheme as it actually is, is unique for a number of reasons. A conventional toll scheme is usually in respect of a stretch of open road or bridge where, while the primary purpose would likely be to facilitate the passage of traffic from one destination to another, the toll scheme is usually imposed to finance the scheme whether to make a profit for the developer or, in the case of a Government venture, to pay for the cost of construction.

The objective of constructing this road/tunnel in this instance is to facilitate the passage of a particular class of traffic i.e. to provide a high quality access route for Heavy Goods Vehicles (HGVs) to and from Dublin Port. Another unique feature is that the route in question is a tunnel for most of its length and there is a necessity, in the interests of safety, to limit the potential for traffic congestion. The primary purpose, therefore, of the amended toll scheme is stated to be one of traffic management with the twin aims of facilitating HGV traffic to the Port while at the same time limiting the potential for traffic congestion in the Tunnel. The traffic management element also has the secondary purpose of ensuring that the Tunnel will not cause an increase in car based commuter trips into the city centre.

To this end it is proposed that HGVs (including 25 seater+ buses and coaches) and some public service vehicles would travel toll free while all others could pay maximum tolls of €12 at peak hours (depending on direction of travel) and €6 at all other times. In contrast the 1998 scheme also exempted taxis and hackneys, had a peak hour toll inward only and had much more modest levels of tolls, a maximum of €4.82 which equates to less than €6 at 2005 prices.

Unlike, therefore, what I shall refer to as a ‘conventional’ toll, which seeks to balance the advantage of paying a toll against the disadvantage of travelling a more circuitous route, the tolls are imposed in this instance to, at least at peak hour, positively discourage other than HGVs from utilising the tunnel and at other times, to balance the traffic flows if somewhat in an apparently less draconian fashion. This is the scenario now before the Authority for decision.

In relation to the submissions received, it is rather difficult to say much that will go towards meeting the concerns of Drumcondra 2005. Nevertheless, there is no gainsaying but that the re-routing of the HGV traffic will be a major boon for those residents, whatever about the alleged lack of complementary measures. I do not agree that the traffic projections are simplistic and at the end of the day it is the capacity/safety of the tunnel that will decide what will be the residual traffic on the rest of the network. I can empathise with the residents’ group that the appropriate authority to decide on tolling schemes (as they affect) inner suburb roads would not in the normal course of events be the NRA. The circumstances in this case, however, are different.

IBEC have made a number of points mostly in support of the Scheme. They have concerns, however, as do others, in relation to the decision to de-exempt taxis and to tolling at night-time. I shall deal with the latter point later when I go on to discuss the magnitude and periods of tolling.

The de-regulation of the taxi industry, as already adverted to and which has taken place since the publication of the 1998 scheme, has resulted in a fourfold increase in the numbers of taxis. There is no reason to suppose that the increase has levelled out and they do represent a significant traffic generator in their own right. I do not consider that it is so much a question of how many would use the tunnel but, as the Authority stated, how many could use it. Both the Port and the airport are major destinations. I do not see a taxi quota or indeed the other specific traffic streams adverted to by other objectors, as in any way workable and to agree to their inclusion would require a complete re-appraisal of the toll scheme.

The submission of Irish Continental Group provided useful insight into the workings of the Port, traffic and otherwise. What it did bring home was the fact that there are a number of peaks throughout the day and that, in traffic terms, it is not really a 24 hour operation. I consider that it perhaps provides some scope for a diminution in the night-time tolls. Unlike the taxi traffic which is city wide, the ferry traffic to and from ferry operators is directly Port related traffic. Non-HGV ferry traffic leaving the port, however, distributes widely. It is not an objective, either, that such traffic be taken directly out of the city and I don’t consider that any traffic management scheme for the city is going to exclude non-HGV port traffic from the city. There is no reason

why it should be treated differently. I do not see either how one could 'legislate' for these or other groups making similar pleas! . The proposed toll levels set out have been established with a view to maximising the use of the Tunnel while ensuring that it operates safely and effectively. Adding additional traffic streams such as taxis, port employees and ferry traffic is incompatible with the delivery of this objective.

Tolling Charges

I consider that, in relation to the morning peak, the triple objectives of good access to the Port for HGVs, limiting congestion in the tunnel and discouraging additional commuting traffic into the city centre are mutually complementary and I would endorse them. The Authority have demonstrated in detail how they arrived at the actual level of toll for that period, having as well established the desirable maximum capacity of the tunnel and its interactions with the surrounding road network.

The evening peak is somewhat more problematic. In this case while the objectives of maintaining good access for HGVs and limiting congestion still obtain, one could argue that there should be encouragement to get evening traffic out of town as expeditiously as possible. Unfortunately, however, unlimited increase in the evening peak also carries a risk itself of congestion in the tunnel for reasons outlined in detail at the Hearing. A basic fact is that there will be a motorway network discharging into a non-motorway network. That, according to Mr Creegan, will always have its own tensions. There are clearly capacity constraints there that have to be recognised and allowed for. Repeating what I have already recorded above, Mr Spiers, for the Authority, further elaborated as follows:

He stated that one of the key things is that the whole traffic system right down to the North Wall Quay operates as a system, such that what happens in one direction affects what happens in the other direction, because you have right-turning traffic from the Tunnel, coming out of the Tunnel into East Wall Road. You have the roundabout, which is a critical factor, at the North Wall Quay. What happens is, if there is too much traffic coming north and there is a traffic congestion, that blocks back, and actually because it is a roundabout, it actually blocks the traffic emerging from the southbound tunnel as well. So, one has to actually balance the north and southbound traffic such that this works as a traffic system. Essentially, if there is a problem with the northbound, then that can block the southbound right-turning traffic which can block back into the Tunnel.

I am attaching herewith overleaf, for the convenience of the Authority, copy of plan of the Northport Area Road Layout Arrangements, as displayed at the Hearing.

Furthermore, and at the risk of further repetition, Mr Creegan stated that while the DTO model is a very good model in the off-peak hours, it does *not* (my emphasis) have its own pm peak model. Accordingly, *there is a greater degree of uncertainty about the p.m. peak*, (my emphasis). The NRA believed, in view of that greater uncertainty, the right approach was to invert the am peak hour and apply that to the pm peak hour as well. They also spoke of the possibility of being able to reduce the charge, without reconvening the hearing, if the projected traffic levels did not materialise.

While I agree in principle with this approach, there is, however, a significant difference in Table 3 (see page 12 of this report) between the identified toll levels in the am and pm peak, at least in the shorter term, one is roughly double the other. I, therefore, strongly urge the Authority when it comes to setting the actual as distinct from the maximum charges to review the pm charge. It may well be that following the consultation process that initially a lesser charge will obtain.

The hours of operation catered for at these two times are 6 am to 10 am inward (southbound) and 4 pm to 7 pm outward (northbound).

In relation to night-time tolling, I feel that the case made by the other parties has validity. It is reasonable for the NRA to say that there will be a large maintenance requirement on the Tunnel at night-time. There is, however, as was pointed out, a large element of predictability in terms of the maintenance requirement. The tunnel will now be part of the city network and there is a desirability/need to maintain maximum utilisation of the Tunnel and take through traffic off the local network. Again it was pointed out that the night hours would probably represent less than 5% of the total HGV volume. In that situation there would be fairly substantial capacity in the Tunnel, even allowing for a maintenance requirement. Dublin city council, in its written submission, suggested that there be a separate night-time toll between the hours of 20.00 and 6.00. Other parties have suggested somewhat similar periods. While the evidence is that the Port would start up about 4.00 hours and close about 22.00, non-port traffic will be very light at these times *I would recommend* a separate night-time toll for the 7 nights of the week between those hours..

Outside of the (proposed) morning peak, 6.00 to 10.00 hours in the case of traffic inward, the (proposed) evening peak 4.00 to 7.00 hours for traffic outward and my recommended night-time tolling of 20.00 to 6.00, on weekdays there would be a further 10 hours inward traffic and 11 hours outward. If that scenario was adopted then the original proposal is that there would be a € toll outside of those times. Submissions to the Hearing demonstrated that there are in fact a number of peaks in the Port traffic during the day. That reinforces the need to balance traffic throughout the day in the tunnel.

Inspector's Conclusion:

I consider the case for an amended scheme is well founded and basically is set out in the explanatory memorandum accompanying the draft document. The emphasis of the tolling has changed significantly and that was conceded by the Authority. The significant growth in traffic not only at peak hours but throughout the day, the increased emphasis in tunnel safety with the overriding need to avoid congestion in the tunnel and the (primary) necessity to ensure that the tunnel remains capable of fulfilling its primary objective of providing an access route to the Port for heavy goods vehicles more that justifies the preparation of this amendment. The tolls being imposed are not justified on the basis of recouping the cost of the project. They are to a greater or lesser degree depending on the time of day, positive deterrents to attracting excessive traffic to use of the tunnel.

Given my reservations in relation to the tolling charge for the afternoon peak, I agree with that part of the Draft as stated.

I consider that there should be a night-time toll every night. While it would clearly be pitched at a lower level than the (other) off-peak hours, I don't agree that it should be nominal. The tunnel is an expensive facility and it is reasonable that users should contribute to the cost of it. There is clearly an advantage to the city network to have traffic using a purpose built facility like a motorway for such journeys instead of filtering through city streets with attendant dis-amenities and traffic hazard. The toll should seek to achieve a balance between recouping the cost of operating the tunnel and those considerations while at the same time attracting drivers to utilise it. I suggest a maximum charge of €4 for night-time use.

I feel that the case for a maximum off-peak charge of €6 as proposed is well made. It should operate outside of the peak and night-time hours.

I understand the desirability of not having a too complicated tolling system. I therefore suggest that the evening peak would now run from 4.00 hours to 8.00 hours and the night-time tolling would then "kick in". It may constitute a temporary congestion situation at that time but it is late enough not to create a particular problem.

I have not attempted to cost the effect of the changes I am recommending. Given the opinion of the Authority, however, in relation to the low level of night-time traffic, the effect should not be too significant.

Recommendation (overleaf)

I recommend that the (amended) draft toll scheme be adopted subject (only) to amendments to Schedule D as follows:

Class of Vehicle	Direction of Travel	Days of Week	Time Period	Estimated Toll
All mechanically propelled vehicles not exempted	Southbound	Monday - Friday	06.00 – 10.00 hrs	€12
ditto	Southbound	Monday - Friday	10.00 – 20.00 hrs	€
ditto	Northbound	Monday - Friday	16.00 – 20.00 hrs	€12*
ditto	Northbound	Monday - Friday	06.00 – 16.00 hrs	€
ditto	Northbound & Southbound	Saturday & Sunday	06.00 – 20.00 hrs	€
ditto	Northbound & Southbound	Every Night	20.00 – 06.00 hrs	€4

*As I have already stated I recommend that the afternoon charge be re-examined before the actual charge at day of opening is decided on.

H D Hegarty
15 February 06

Appendix

List of attached copies of Submissions to Oral Hearing (overleaf)

Copies of Submissions to Oral Hearing

- 1 Inspector's Opening Statement**
- 2 Submission (1) of Hugh Creegan, Head of Programme Management NRA**
- 3 Submission of John Spiers, Hyder Consulting Limited (for NRA)**
- 4 Submission (2) of Hugh Creegan, "Responses to Submissions"**
- 5 Submission of objector, Drumcondra 2005**
- 6 Initial submission (10.10.2005) of IBEC**

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