

**Text of Oral Presentation**

**Given  
By**

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**To**

**Cherrywood Public Inquiry, Luas Line B1**

**Tuesday 7th 2006**

Thank you Mr Inspector,

Good afternoon my name is Mark Gleeson I am one of two technical officers with Platform 11 Irelands nation rail users organisation, which in turn is a member of the European Passengers Federation a European level, recognised organization. I am an engineer by qualification.

This presentation, text of my oral presentation and the written submission made 17th January 2006 will be available online from the Platform 11 website [www.platform.org](http://www.platform.org) by the end of today I also have small number of printed copies with me.

I'm here today to talk about the passenger, the people who will end up travelling on this line if it is built. There has been and there will be a lot more minute technical discussion before this inquiry and quite correctly so but the passenger is not represented. I'm also going to talk about some design and engineering issues, which again will have a effect on the passenger experience, reliability and deliverability of the proposed works

The line when built must provide a high quality public transport experience. It must provide a boringly reliable service, that is to say you show up at the stop a tram arrives and takes you where you want to go without delay. It should be seamless and no longer be a matter of stress or concern. The Green Line, Line B has delivered this whereas the Red Line has been somewhat less successful

Our submission is intended as a set of observations and as a constructive input highlighting areas which we feel could be handled better or where care will be required.

I am wish to discuss a number of issues this afternoon

Firstly, capacity, does the proposal offer sufficient capacity and what impact if any will the extension have on existing passengers, noting that demand is significantly ahead of projections

Design, I will discuss various issues with the design in particular with respect to road crossings and stop locations.

And finally the route choice

### **Capacity 1**

Existing Line B is classic Dublin low density despite this It has been noted that passenger numbers on the existing line have exceeded all expectations. It is clear the addition of a further 6 stations, many adjacent to large housing developments, will increase peak demand beyond the systems current capacity. The two line sections contrast considerably one has a relatively static population whereas the other is focused on numerous higher density developments at Glencairn, Ballyogan and Cherrywood

Currently many passengers, particularly those boarding close to the city, are experiencing delays and overcrowding in the morning rush hour. If Line B1 is built it may place intolerable pressure on the existing Line B section leaving many current passengers unable to board. The applicant has been very slow to acknowledge the overcrowding on other sections of the Luas system, e.g. Heuston Connolly a repeat of this set of affairs is not acceptable to the passenger and must be avoided.

### **Capacity 2**

RPA approach is to increase frequency from every 5 minutes to every 3 minutes gives 67% increase this does refocus the issue of reliability with level crossings?

A move from 40m to 50m trams will require platform extensions on the existing line as they may by 50m long they have two 5m ramps making the usable length only 40m, a move from 40m to 50m gives 34% but only if the platforms on the existing line are upgraded accordingly. There is a possible impact on performance unless the existing power to weight ratio is maintained. RPA have indicated a desire to get journey times down to 20 minutes on existing line thus this is a critical concern. Combined that gives 123% (by our ) over the current level is that enough Is there sufficient capacity for the next 10 years? Line B already ahead of forecasts. Can this extra capacity be delivered in advance of the demand being realised?

### **Design - Clonlea house**

Platform 11 are concerned that the proposed demolition of the property known as Clonlea House being that it is a protected structure may delay construction on this routing due to potential legal challenges that have become all too common in recent years. The moving of the entrance gates of Glencairn the British ambassadors residence could also prove problematic.

This may prove to be provocative to the heritage movement, which could lead to an undue delay in the delivery of this project, with resultant impact on costs. In light of the ambitious targets laid down by Transport 21 this is of particular importance. Deliverability is a key concern

In addition, we note a potential issue with access through the gates of Glencairn House with a proposed at-grade crossing in very close proximity. This would have safety ramifications and possible sightline issues.

Vertical alignment of the line at this point suggests the possibility of cut and cover arrangement. Glencairn stop is on a significant hill

With reference to the longitudinal section drawings for areas 13 and 14, the proposed line crosses the M50 and at the west side of the M50 crossing at chainage 1360,000 the line is 103,606 above datum by Glencairn Stop/Clonlea House chainage 1640,000 the height above datum is given as 111,251 the line having climbed up approximately 7.4 m since its crossing of the M50 at an average gradient of 1 in 36 which is considered steep, beyond Glencairn the line drops again to 106,597 at chainage 2120,000 where the line becomes parallel to the Ballyogan Rd. The line could run in a cut and cover fashion with a very brief tunnelled section under Clonlea House then running in a cutting with retaining wall from Glencairn Rd roundabout till the level of the track becomes equal to that of the surroundings. This results in a relatively flat track alignment

While clearly expensive it might be technically possible to place the Luas line underneath this location with the added benefit of removal of three at grade crossings much easier gradients and reduced noise impacts. Increased segregation has positive passenger impacts. Through complex structural engineering it may be possible to retain Clonlea House however it would be subject to some vibration

Glencairn stop could then be placed in the aforementioned cutting in a similar fashion to Balally at the Glencairn Rd roundabout

### **Design - Depot Connection**

Area B1 – RO 13 O – A (Sandyford Stop and Depot)

The provided plans show the Sandyford Depot to have only one single-track connection to the line, that is the status quo. Since Line B opened there have been 2 separate incidents in which a tram has derailed between Sandyford stop and Sandyford Depot, forcing a partial closure on one occasion, thankfully a Saturday, (services terminated at Balally) and total service suspension on the other which occurred early on a week day morning one entire morning rush hour. This single connection is the most critical piece of track on the entire Luas network.

It should be noted that the Red Cow depot has two independent connections each consisting of two tracks, both Fairview and Inchicore heavy rail depots have 2 connections Sandyford depot has only one single track section and the applicant has not sought to rectify this deficiency despite service experience which indicates a second connection should be provided.

Consideration should be given to provision of a connection also, such that trams approaching from Line B1 can access the depot directly without having to reverse at the Sandyford station stop this would be similar to the arrangements at Red Cow.

## **Design - Road Crossings**

There are numerous at-grade road crossings on the proposed Line B1. The majority of these crossings are adjacent to 'T junctions' thus creating a significant possibility of accidents as road traffic turning left onto the minor road are hindered by poor sightlines and thus may not see oncoming trams until they have completed their turn.

These are major traffic management issues as a result, traffic queuing off local roads could block the tram line its the classic yellow box problem. T junctions are the most tricky of all level crossings

The presence of numerous road crossings will have a negative effect on reliability, a fact demonstrated by the Red Luas line, which failed to meet its journey time targets. Complex and extremely well planned traffic signalling and signage will be required.

## **Design - Racecourse**

The name of this stop is ambiguous, which racecourse, note the confusion of hospital on the red Luas line James or Tallaght ?? This may be trivial but accuracy is important to ensure the passenger is not confused

Location of stop named Racecourse Stop (Occasional) is of concern. No provision is made to provide access to this stop. Note similar lack of access at Central Park, Cherrywood and Brides Glen

The question must be asked would a passenger from the city centre not reach the public areas of Leopardstown Racecourse quicker (and cheaper) by disembarking at Sandyford and walking. In light of the use of the term 'occasional' this stop adds nothing to the local area.

Stop should be removed from plans, noting local area adequately served by proposed Carrickmines and Ballyogan Wood stops. Alternatively applicant should consider a redesign to incorporate local access, rename station to a more accurate title, provide a normal service level and consider moving the stop closer to the M50 bridge

## **Design - Emergency Crossovers**

We note no emergency crossovers on the proposed 7.6km alignment. We note two emergency crossovers are provided on Line B, which is of similar length to the proposed extension. We propose that an emergency crossover be provided at the stop referred to as Racecourse, planning reference Area B1 - RO 15 A – B.

This may appear to be easily added later however we understand addition of a crossover requires permission of the Department of Transport.

Note ability to maintain services

## **Route Choice**

When I refer to Harcourt Street I am referring to the Sandyford to Carrickmines section as the proposed route by the applicant shares the Carrickmines Brides Glen section. In a very simple analysis the Harcourt Street route offers a simpler solution it is more direct has fewer at grade crossings, minimal disruption during construction. However it has smaller catchment area without much possibility of densification. The Glencairn route has a significant and growing catchment and demand but suffers from archaeological issues and a much increased compulsory purchase requirement

In light of the recent news that the metro is now nothing more than a tram with longer coaches and that limited at grade crossings are deemed acceptable we now accept that the Glencairn route presents the best option of the provision of improved public transport in south Dublin. This represents a change from our position outlined in our written submission, which at the time of its submission was based on a fully segregated metro as per the aims of DTO Platform for Change document which was clearly not compatible with the 13 at grade crossings.

## **Route - Sandyford - Central Park**

On the selected alignment an alternative was offered and rejected, this is the Brewery Rd option Continue on the Harcourt street alignment in parallel to the current depot to Brewery Road turn left and continue towards the Leopardstown roundabout by bridge

This route substantially reduces the number and scale of many of the concerns we have It provides significant benefits in terms of reduced land acquisition. It provides full segregation by eliminating the crossings at Burton Hall Rd and at the Luas depot entrance. It also avoids land take at the FAAC electronics site and minimises disruption to existing Luas services during construction phase as the work is focused at the south end of the depot site. A key factor is it provides access to depot from both north and south sides and maximises use of existing Harcourt Line.