

Construction and operation

I am Miles Friedman, a resident of West Terrace within the railway estate and a member of the residents association.

As part of our submission to ABP in response to the Dart Underground Railway Order, we raised our concerns regarding the construction and operation of the proposed scheme in the Inchicore area (section 5).

We have been following CIE's evidence with a growing sense of unease and disappointment. We are particularly concerned that CIE has not attempted to discuss with residents any means by which solutions can be found, particularly in light of some of the serious impacts that CIE itself admits will affect the Railway Estate and its residents. By stating that they will respond to our submission and any additional issues at the Oral Hearing (letter dated 19th November 2010), it would appear to us that:

- CIE are unable or unwilling to negotiate as they do not know actually what they want;
- And that they are seeking direction from a third party (the Board)
- And therefore are not competent to promote or to put in place such a complex scheme.

Mark Conroy in his evidence at the start of the Oral Hearing, stated that the issues raised will be addressed by individual experts, by topic. We have trawled through reams and reams of evidence, much of it complex, all at our own time and expense and have endeavoured to capture all the responses (where they exist) to our concerns.

We are not particularly comforted to discover that in all instances, the responses say that CIE are right and that we (and everyone else for that matter, who made a submission) must therefore be wrong, mistaken, or perhaps in CIE's view simply not capable of understanding the issues.

Despite CIE's assertions, it is quite clear that their oral evidence (like their written EIS) is deficient in many aspects as laid out here.

Tunnel Alignment (Construction)

We note that the EIS has been written, and all the evidence given, with the assumption that there will be no tunnelling from the west (Inchicore) portal. We insist that this is made a condition on the Railway Order.

Our concern regarding mixed face ground conditions as the tunnels enter the railway estate have been acknowledged by Kevin McManus, Sean Mason and Simon Fricker in their evidence. However, we note that no in place extensometers or inclinometers are proposed for the mixed face conditions in Inchicore. Can CIE comment on how they expect the *Shift Review Group* to make critical decisions on the operation of the TBM as the tunnels become shallower and encounter more adverse ground conditions?

As regards groundborne noise and vibration from TBM operation, we have been left a little confused from the evidence, and unsure of CIE's position. Richard Greer in his evidence has stated that fourteen properties, which equates to 29 homes in the Inchicore area will suffer a very high impact from groundborne noise. We said in our submission that there should be no night time working, and in his evidence, Mr Greer agrees with us (para 7.6). However, this is contrary to his own later evidence (para 9.22) and that of Kevin McManus (Section 17.2). We also note that Mr Greer states that the Contractor will be obliged to provide temporary accommodation as an alternative to stopping tunnelling at night. So what is CIE's actual position here? We reiterate our demand in our submission, that there be no tunnelling at night in the Inchicore area, and request that this be made a condition on the Railway Order.

It should be noted that there has been very little consultation with residents regarding this matter; issues that were raised by us on 18th November 2010 were responded to by CIE's letter the following day, in effect saying that the Board will address them. This has been discussed by Ned McLoughlin earlier.

Groundborne noise from tunnel supply trains has been addressed by Mr Greer, and he lists (7.9.1 to 7.9.4) mitigation measures that he envisages will be carried out by the Contractor. We insist that these measures be made a condition on the Railway Order.

Construction induced settlement for the project as a whole has been covered in some detail by Simon Fricker, however it appears that our concerns regarding homes and buildings in the Inchicore area have not been acknowledged. We note that a fairly comprehensive monitoring and action plan has been described by Mr Fricker, but this was still a general project overview. It is not clear whether all homes and houses will have total stations, tiltmeters and crack gauges or will these “lesser” buildings be left unmonitored? Will there be any precise levelling to confirm the automated results?

Temporary Land Take

As pointed out in our submission and confirmed by Aidan Ruane in his evidence, there are substantial tracts of land within the railway estate that CIE wish to acquire temporarily. Our concerns as for what reason, and how long these lands are required for have not been addressed. We fear that CIE themselves have bigger concerns than they are letting on about tunnelling in this area of mixed face, and require the land to enable remedial measures such as grouting from the surface or shafts to compensate for excessive settlements from the tunnelling to be carried out.

Property Protection Scheme

With regards the Property Protection Scheme (PPS) we welcome it in principle, but are concerned that the proposed operation of it is flawed. As many others have stated, the sum of €30,000 may not be adequate to fully repair properties affected by the works. We are further concerned that the scheme is being left to the PPP Contractor to manage, administer and fund. As the proposer of the railway CIE, should be ultimately responsible for all damage by the PPP Contractor carrying out the works on its behalf. It is our contention that CIE be solely responsible for the operation and funding of the PPS.

Tunnel Alignment (Operation)

Richard Greer in his evidence states that “slab track with highly resilient rail support “and “floating track slab” can be used to limit the effects of groundborne noise and vibration during operation of the railway (7.16). It still seems up to the Contactor where this mitigation is placed (7.17). We continue to insist that the whole of the Inchicore area has these measures put in place as a condition on the Railway Order.

We also fail to be reassured regarding electromagnetic interference. Mr Chris Marshman in his evidence admits that for homes near the tunnel portal there is a “*likelihood of EMI being experienced*”, and he goes on to state that the Contractor will have to “*take remedial measures if unacceptable EMI issues are detected*”. It is not clear to us what these remedial measures are, and why can’t these measures be put in place anyhow?

Sarsfield Road Retaining Walls

Our concerns regarding these historic walls have been completely overlooked. We note that the bolt heads to the anchors are to be in keeping with the existing wall from the DCC-CIE agreement. But our concerns that the anchor design is inadequate (5.2.1 of our submission) and that it is not clear whether CIE have the sub-stratum rights for where the anchors are to be installed have been ignored. If the anchor design is inadequate, then there is still the risk of collapse of the walls. Can CIE confirm that a third category design check of their wall reinforcement proposals has been carried out? Can CIE further confirm that they have the permanent sub-stratum rights for the anchors?

Inchicore Playing Fields Intervention Shaft

Conor Lavery and Peter Muldoon in their joint evidence correctly state the Rail Safety Commission guidelines indicate that intervention points should be in the order of 1km apart. We wonder if CIE has obtained guidance as to an acceptable intervention point spacing in the case of Inchicore where the tunnel portal is only a few hundred metres from the proposed intervention shaft location?

In relation to our suggestion to have the shaft offset to one side of the running tunnels to preserve more of the playing fields, Messrs Lavery and Muldoon lay the reasoning for rejecting the proposal entirely on Dublin Fire Brigade. When we wrote to DFB asking them

to confirm this we were told that all matters would be resolved at the Oral Hearing. We would like Dublin Fire Brigade to give evidence to confirm or otherwise that:

- they have indeed been consulted on such matters,
- and why their position stands contrary to Fire Services in other European countries?

Can CIE confirm what are the emergency access routes to the shaft? Is it to be from Kylemore Road via the station and through the works? Or via Inchicore Terrace South? Have DBF and other emergency services have been consulted regarding these routes

Is there a difference in emergency response times from the nearest fire station in Dolphins Barn between going via Kylemore Road or Inchicore Terrace South?

If Inchicore Terrace South is a viable option for access, how will CIE guarantee a minimum road width for emergency vehicles as per EU regulations?

It appears to us that the current proposed shaft location has not been adequately thought through as regards access by emergency vehicles. However it does appear that it is in a convenient location to increase the throughput of trains with the installation of ventilation fans at a later date.

We note that there has been no recognition of our request to reduce the size of the work compound, and we urge the Board to now make this a condition on the Railway Order.

With regard to construction noise we note that there is some confusion over working hours and vagueness over noise limits. According to various people's evidence, the proposed working hours and associated noise limits are:

Day	07:00 to 19:00; 65 to 75dB L_{Aeq}
Evening	19:00 to 23:00; 55 to 68dB L_{Aeq} and
Night	23:00 to 07:00; 45 to 55dB L_{Aeq}

However Dr Hogan in his evidence states that “*night time noise between 22:00 and 08:00, in excess of 48 dB LAeq are considered significant insofar as there is a potential effect on sleep*” (section 4.4).

We ask the Board to impose the lower of these noise limits during the following working hours, namely:

Monday to Friday

Day	08:00 to 18:00	65dB
-----	----------------	------

These times are adapted from the CIE letter, dated 27th August 2009, outlining their proposed working hours. We strongly object to any weekend or bank holiday working.

During operation, regarding the noise generated by the ventilation fans in the shaft we note in Jennifer Harman’s evidence that there is a range of mitigation measures that could be applied, but again it is left to the Contractor to choose what, if any he wishes to undertake. We ask the board to make it a condition on the Railway Order that all the mitigation measures are put in place by CIE.

With regard to dust and particulates emitted from the vents, Sinead Whyte in her evidence states that during normal operations “*the level and duration of each emission event is not considered significant and is not expected to result in an exceedance of PM₁₀ air quality standards...*”. We would like to be reassured of Ms Whyte’s confidence by regular monitoring of the air quality adjacent to the shaft throughout its operation and ask the Board to make this a condition on the Railway Order.

Dr Hogan discusses Aspergillus spores, but only in the context of construction. Is there not a possibility of these spores being concentrated by the tunnel ventilation systems? Again we feel there should be regular monitoring and if results are found to be in excess of prescribed levels, then as a minimum there should be medical checks for all residents, again as a condition on the Railway Order.

In the event of a serious incident and noxious combustion gases are emitted, it appears from Ms Whyte’s evidence that as all the vents are above head height, then no-one will be

able to breathe in the fumes. For a shaft situated in the middle of a housing estate, this appears to be at best, a simplistic position to take. We note that Dr Hogan fails to address the effect of such noxious fumes on human health. Can CIE confirm that they have carried out risk assessments as to the possibility of smoke and fume inhalation by local people and the medical effects this might have?

Alternative tunnel and intervention shaft location

Despite all the difficulties listed above, Messrs Lavery and Muldoon in their evidence indicate that CIE have looked at just two locations for the shaft, one inside the portal area, and its currently proposed location in the playing field.

Our experts, OTB Ltd put forward an alternative alignment and shaft location that could be considered by CIE. We were encouraged to see such a lengthy response by Messrs Lavery and Muldoon. This was clearly an option that had not been considered previously by CIE, and it reinforces our view that everything about the extension to Inchicore has been rushed and ill thought out.

However it was also disappointing to see that so much effort and time had been put into dismissing the proposal, whereas if the time had been spent more productively considering this as a real alternative (with tweaks here and there), we would probably be at this hearing giving our full endorsement to the scheme.

We do not wish to go into the minutiae of CIE's response, but would ask if DFB had been consulted on the arrival time in an emergency to a shaft located just off the main N4, and compared this with the time to get to the shaft in its current proposed location within a compact housing estate with narrow roads and on street parking?

The station, portal and cut and cover excavation and construction

The construction of these elements of the proposed scheme gives rise to similar concerns regards noise and working hours, together with a greater concern regarding dust, and particularly contaminated dust.

Sean Mason in his evidence only briefly mentions the presence of contaminated ground hot spots, and while Joyanne Manning does state that there is contamination at Inchicore she only responds to East Wall submissions.

The EIS described the presence of heavy metals and PCBs within the works found with only limited ground investigation. Sinead Whyte covers the problem of contaminated dust by saying if contaminated ground is encountered, it will be immediately excavated on to covered wagons. But will there not be dust generated during excavation?

And prevailing winds could cause the dust to be deposited within the estate and potentially ingested by residents. Dr Hogan in his evidence states *“As part of the soil and geology baseline evaluation soil sampling was undertaken. This indicates that high levels of pollutants such as heavy metal will not be expected as the soil is moved”*. We would ask Dr Hogan to back up this statement. Is this why he has not adequately covered the effects on human health of the ingestion of contaminated dust?

Simon Fricker discusses dust monitoring in his evidence, and from what we can gather, monitoring for dust and particulates will be carried out at locations subject to local conditions. Dust will be collected for 30 days (there is no frequency given for particulates) and a dust fall per day can then be calculated.

There are several obvious deficiencies in this method, including the time lag and the fact that residents' gardens, washing, windows etc, could be covered in dust from just one event, but from the procedure proposed by CIE this will be averaged over 30 days and could potentially fall below what ever limits they have.

We also note that the collected dust is not going to be analysed for contaminants despite the potential described above.

With regard to any exceedances in dust levels, there seems to be a complete lack of urgency. CIE proposes to carry out an investigation as to the cause, then if it is something to do with the company, a review of the control measures will be undertaken.

Dust is likely to be a problem, contaminated or not, throughout the construction phase. Leaving it to the Contractor to produce a dust minimisation plan which is then reviewed a month or so after exceedances have occurred is simply not good enough. We ask the Board to make it a condition on the Railway Order that CIE states categorically what dust limitation measures the Contractor must undertake in the Inchicore area, and that it is adequately monitored on a day to day basis. Furthermore if a serious dust event occurs, that peoples homes be cleaned, and medical checks made available.

Inchicore Sub-station.

Residents have very real concerns regarding the very close proximity of the sub-station to their homes. And as such, we are disappointed that these have not been addressed in the evidence. Instead, Messrs Lavery and Muldoon have sought to justify its positioning as being the better of two options, which on the whole are for CIE's benefit, not residents. We ask the board to make it a condition on the Railway Order that the substation be moved a minimum of 100m away from any residential home in the Inchicore area.

Inchicore Station

We have a great many concerns regarding the station, notwithstanding any future development, and they all revolve around access.

Donald McDaid in his evidence appears to treat Inchicore Station as a through station, when it is clearly a terminus. Thus his assertions on parking and station usage have to be treated with caution. To our mind, a terminus station is likely to attract long term on street parking in the mode of park and ride. Can CIE confirm that they have considered Inchicore station as a terminus in their traffic and passenger footfall studies?

We also do not understand why there should be any vehicular access to the works through Inchicore Parade when there will be a perfectly adequate access via Kylemore Way.

The very real problem of nuisance along the pedestrian access routes to the station, and in particular the laneway behind Abercorn Terrace is addressed by Jennifer Harmon in section 9.1.3 of her evidence, where she states that "*Passing pedestrians, by their very nature*

are not a significant source of noise". We feel at best this is an ill conceived statement, and would ask her to reconsider say, in the case of groups of football supporters attending St Patricks Athletic home games; or of groups of youths.

Other problems associated with additional footfall through the estate, such as litter, the potential for vandalism and threatening behaviour do not seem to have been addressed in any of the evidence.

We urge the Board to put a condition on the Railway Order that CIE fully consider the operation of Inchicore Station as a terminus, and that local residents' wellbeing is properly taken into account.

Validity of the EIS and Railway Order

The Railway Order application is for a railway that terminates at Inchicore. The western connection into the Dart and mainline network (Inchicore to Hazelhatch) is rather strangely subject to a separate Railway Order with a tentative application date of 2012, but may not happen for a number of years.

It appears to us that the majority of the EIS has been written on the basis of the Dart "*programme*" as described by Michael Reidy in his evidence, where everything connects up, rather than the Dart Underground, which is just one element of the programme, and the subject of this Railway Order. The most basic "*do nothing, do something*" scenarios seem only to be relevant written for the wished for "*programme*", and not for this particular Railway Order application.

As the current proposal stands, passengers from the south and west, including the commuter lines from Kildare, will not be able to join the proposed new line until alighting at Heuston, where they will then have to make their way to the new Dart Underground station to connect to the Northern Line. Alternatively they could carry on as they do now and hop on the Luas to Connolly Station and connect from there.

Without the link from Inchicore to the Kildare Dart network, the whole Dart Underground scheme becomes less robust on economic and strategic grounds. The EIS has

been mostly written on the basis that the missing link will be built. It does not address the reality that the Railway Order before us is for a terminus at Inchicore.

As such, we feel that the EIS as a whole is flawed.

Conclusion

CIE by their own admission will not have funding to take the project forward for a considerable number of years, during which many circumstances may have changed, new designers may have been appointed and new priorities for the scheme identified. For residents in the Inchicore area (and throughout the route for that matter), it is not fair for us to suffer worry, blight and indecision regarding an utterly intrusive, hurried, and badly thought out scheme that may or may not be built.

Thus whilst we support the idea of a scheme with the ambition of Dart Underground, it is quite plain that CIE has not shown in this application that they are able to deliver it.

We urge the Board to throw out or heavily condition the Railway Order as it stands.