



**METRO NORTH
ORAL HEARING
PROOF OF EVIDENCE
David Slattery
Conservation Architect
Wednesday 15th April 2009**

Railway Procurement Agency

Title: Metro North Oral Hearing – Proof Of Evidence, Architectural Heritage



Metro North Oral Hearing

Proof of Evidence

Architectural Heritage

David Slattery

1. Credentials

I am David Slattery. I am an architect in private practice. My practice specialises exclusively in conservation and repair to historic buildings and protected structures. The practice advises on a variety of differing issues relating to conservation and repair.

I was elected a Fellow of the R.I.A.I. in 1993 in recognition of my work in architectural conservation. I am a former member of Council of the R.I.A.I. and a Former Member of the Heritage Council. Recent projects have included the conservation and repair of the Maritime Museum, Dun Laoghaire and the Rutland Memorial in Merrion Square, Dublin 2. As a Historic Buildings Consultant I have also acted for the Dublin Airport Authority on the Terminal 2 Planning Application and to Arnott & Co on their recent planning permission for premises at Henry Street/Middle Abbey Street.

2. Scope of Evidence

I have been appointed as Conservation Architect to the Metro North Project. My role is to take the mitigation measures outlined in the EIS and to develop and implement these measures in order to minimise the impact on architectural heritage through the project. My role involves devising methodologies in line with legal requirements and based on best conservation practice to protect and restore items of architectural heritage along the proposed route and to assist in methodologies for the monitoring of the works as they progress through the design and construction stage. A substantial amount of the conservation works on Metro North will be carried out in advance of the main contract rather than as part of the main contract.

3. The EIS Review

I have reviewed the E.I.S. and I consider it to be a thorough and appropriate document and that it has provided a comprehensive review and assessment of the potential impacts arising and on the mitigating measures recommended.

4. Mitigation Measures Proposed in E.I.S.

4.1 Survey Works

4.1.1 Measured Surveys of Monuments

Following a review of the EIS, a full assessment of the structures and monuments has been made. This includes a full photographic record together with measured drawings to appropriate scales of the various structures and monuments as follows.

1. The Fusiliers Arch
2. Lord Ardilaun Statue
3. Robert Emmet Statue
4. Lady Grattan Memorial
5. The African Rose Bowl
6. The O'Donovan Rossa Memorial
7. The Blind Garden
8. Pullham Island/Rock
9. The O'Connell Monument
10. Sir John Gray Statue

11. William Smith O'Brien Statue
12. Jim Larkin Statue

These surveys and evaluations provide a level of detail which allows for the recording of each individual stone on structures proposed for dismantling, removal and reinstatement.

4.1.2 Basement Surveys

A programme of basement surveys is currently ongoing on Metro North. The surveys are being carried out so as to inform the construction design in particular for utility diversions but also to ensure that a full record of basements which will be impacted upon by the construction of Metro North is carried out. The Conservation Architects liaised with the basement surveyors and joint inspections were made on basements. The final survey results will also require further review. The following information and detail has been acquired during the basement surveys

- General building details
- A photographic Record
- Location details
- Information on Age of structure
- Associated utility Information and services
- A dimensional survey
- Commentary on condition, use, access
- Basement Structural details
- Basement overlying details
- Historical Records

- Foundations
- Record of comments from discussion with owner representative/occupier

The extent of the resulting impact on basements is not absolutely definitive but is approximate. The effect of the works will be the loss and removal of up to 25% of the existing basements. In view of the Protected Structure Status of these buildings the loss of portions of their basements must be viewed as a significant impact. However the loss of these basements must be balanced and would appear justifiable by the potential gain. The loss of these basement areas will not result in any adverse visual impact within the A.C.A. or on the individual buildings. The space lost at basement level is in many instances substandard and not utilised. As a result of concerns with the potential impacts of these works the Basements in Parnell Square have been further considered and the route of the proposed sewer on the east side of the square has been relocated, thus resulting in no impact on the basements in this area.

4.1.3 Surveys of Houses in Parnell Square, Etc.

Vibration and Settlement Issues

Further to the review of the EIS, the following buildings were highlighted as being potentially sensitive to vibration during the construction works. These issues specifically related to the following areas:-

1. Parnell Square East – The Gate Theatre and Former Assembly Rooms, Findlater's Church
2. North Fredrick Street
3. Eccles Street
4. The Mater Hospital

5. St. Stephens Green South
6. The Fusiliers Arch

Proofs of Evidence on Settlement has been prepared by professor John Burland and Proof of Evidence on Noise and Vibration by Rupert Taylor. These have been reviewed and it is considered that the proposed approach is comprehensive and should be adopted.

The properties highlighted below were examined for sensitivity of movement as part of the inspections.

- Presbyterian Church
- 13-15 Parnell Square
- 11 Parnell Square
- 8 Parnell Square
- 5-6 Parnell Square
- 4 Parnell Square
- 9-10 Cavendish Row
- Gate Theatre & Ambassador (Rotunda)
- 62-63 Eccles Street
- 64 Eccles Street
- 65 Eccles Street
- 66 Eccles Street
- 67 Eccles Street
- 68-69 Eccles Street
- 70 Eccles Street

Visual inspections of the selected accessible buildings focused on the following information, to allow assessment of the susceptibility of each building to tunnelling related movements:

- General structural description, principal dimensions, age and use;
- Photographs'/written records of general condition and existing defects;
- Observation and details of cracks;
- Nature and condition of foundations (where known);
- Location and type of existing strengthening measures; and
- Identification of building components or areas that may be susceptible to movement.

Sketches produced from the inspections and details should be treated as indicative and for information only, due to the nature of the access to the buildings and limited timescale available to conduct the inspections.

4.1.4 Surveys of Other Buildings and Structures that will be Impacted upon by the Proposal and which were identified in the EIS

A series of buildings and structures require measured survey and photographic recording prior to the works of alteration, removal or demolition. These buildings have no listed status under Dublin City Council's Record of Protected Structure. In the event of the Railway Order being issued these items will be fully surveyed and recorded.

The removal of 17 structures necessary for the construction of the Stop Boxes at Ballymun, Drumcondra and Mater.

- Ballymun Road (HC#390 - Westfield House), St Alphonsus Road (HC# 391-395 - Nos. 12, 14, 16, 18 & 20), St Alphonsus Avenue (HC#396-400 - Nos. 2-6), Leo Street (HC#402-404 - Nos. 24-26), North Circular Road (HC#405-406 - Nos. 398 & 400) and Drumcondra Road Lower (HC# 419 – No. 40). These structures will be removed in their entirety. Full photographic and measured surveys will be carried out prior to demolition.

4.1.5 Street Furniture Survey

This survey is a particular requirement of Dublin City Council. The survey will allow for the appropriate identification and salvage of all existing items of street furniture. It will also ensure that all items are tracked and monitored and reinstated appropriately. The methodology and approach have been discussed and agreed with Dublin City Council. The survey has been subject to tender and is awaiting sanction from the Department of Finance regarding issuing of new Contracts. It is envisaged that the survey will be underway in May 2009.

The scope for digital recording, capture and mapping of all heritage items and non-heritage items including but not limited to:-

Lamp Standards	Basement Lights
Granite & Concrete Paving	Street Art Features (plaques etc)
Paving Surfaces	Railings
Granite/Concrete Kerbs	Utility Cabinets
Sets/Cobbles	Bicycle Stands
Stone/Cast/Iron Metal Bollards	Street Signage

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Manholes

Bus Stops

Coal Hole Covers

Bins

Post Boxes

Benches/Seats

Information Panels

Street gullies

Fountains

The survey area is concentrated at the following locations:-

1. St. Stephen's Green
2. College Green/Westmoreland Street/D'Olier Street/College Street
3. O'Connell Bridge/North & South Quays
4. O'Connell Street
5. Parnell Square
6. DCU
7. Ballymun

5. The Heritage Works

5.1. Summary of Conservation Features and Other Structures

5.1.1 St. Stephen's Green

St. Stephen's Green and everything within the curtilage of the park is a National Monument.

Disused Public Toilet Building: Structure for demolition

Pulham Rock: For removal and reinstatement

Fusiliers Arch: Protect and Retain, dismantle and remove railings, gates and stone piers to storage for later reinstatement.

Lord Ardilaun Statue/Figure: Dismantle, remove to temporary location and reinstate

Robert Emmet Statue: Dismantle, remove to temporary location and reinstate

Statue plinths: Record, dismantle, store and reinstate

Railings, bollards, lamp standards and signage: Dismantle, store and reinstate

Garden for the Blind: Dismantle ,store and reinstate

O'Donovan Rossa Memorial: Dismantle, remove to temporary location and reinstate

African Rose Bowl: To be removed by RPA and relocated by Dublin City Council

Grattan Memorial and Two Horse Troughs: Dismantle,store and reinstate

5.1.2 O'Connell Street

- O'Connell Street – Architectural Conservation Area including paving, lighting and street furniture.
- O'Connell Monument/Figures: Dismantle, remove to temporary location and reinstate
- Sir John Gray Statue/Figure: Dismantle, remove to temporary location and reinstate
- William Smith O'Brien Statue/Figure: Dismantle, remove to temporary location and reinstate
- Jim Larkin Statue/Figure: Dismantle, remove to temporary location and reinstate
- Statue plinths: Record, dismantle, store and reinstate
- Quay Wall (At Eden Quay and Burgh Quay): Record, dismantle, store and reinstate
- Lamp standards at O'Connell Bridge: Record, dismantle, store and reinstate
- Decorative Paving at junction of Westmoreland Street and O'Connell Bridge: Record, dismantle, store and reinstate

5.1.3 Dismantling Procedures - Method Statements and Specifications

Consultation with OPW, DoEHLG, DCC is and the RPA is ongoing regarding the exact mitigation for the dismantling, removal and storage of the monuments. Detailed Method Statements are being prepared setting out the methodology for demounting and reconstruction. The works on the O'Connell Monument, the William Smith O'Brien Monument and at St Stephens Green are subject to Ministerial Consent. There are particular benefits in allowing the mounts to go on public display at Collins Barracks.

5.1.4 Reconstruction of Monuments

It is proposed to restore the National Monuments to their original location using original materials once construction is completed. These procedures will be specified in detail.

5.1.5 St. Stephen's Green Agreement

There is ongoing discussions with the OPW, DoEHLG, DCC and the RPA detailing exact mitigation for St Stephen's Green Park. This includes proposals for the temporary relocation within the Green of Statuary and the temporary storage prior to reinstatement of the Pulham Rock and Island, the railings on the north west of the park and various items of paving, bollards, etc. It also includes for the demolition and removal of the former toilet block.

6. Further Mitigation Measures Proposed Since the E.I.S.

6.1 The Retention of The Fusiliers Arch

The Fusiliers Arch is a significant Monument located on the north west corner of St. Stephens Green and addressing Grafton Street to the north and St. Stephens Green to the south. The Fusiliers Arch was constructed as recently as 1907 to the designs of J. Howard, Pentland Architect, Office of Public Works. The external finishes are in granite ashlar and limestone and both materials have weathered well. The Arch was constructed as a War Memorial and one of its most significant features is the Rolecall of those who died during the Boer War and sees the names of many Dublin Fusiliers inscribed on the soffit of the main Arch.

The initial brief proposed that the Fusiliers Arch should be taken down on a stone by stone basis subsequent to a detailed survey being completed and measured drawings and records being prepared. The proposal included for the careful packaging of these individual stones and for their removal on a

temporary basis prior to the reconstruction of the Arch following the completion of the underground works. Investigations and evaluations were carried out on the Arch and copies of the original design drawings were obtained from the Office of Public Works.

It has become clear from these assessments and from the evaluation of the documentation obtained that the Fusiliers Arch as an early 20th century structure contains construction and building methodologies which are of 20th century origin and include the use of concrete and cementitious mixes. The Fusiliers Arch underwent substantial level of remedial works in the 1980's which included the raking out and repointing of stonework. Evaluations of the surface stonework and pointing indicate that the mixes used at that time were cementitious based as in all probability were the original mixes. These dense mixes would create considerable issues in attempting to free up individual stones prior to removal and would result in damage and loss of original fabric.

The Office of Public Works original drawings show that the construction methodology for the Arch includes a brick core clad in stone and supported on concrete foundations with further elements of concrete located to reinforce the Arch and the chamber above. The form and extent of concrete (possibly reinforced) would make it almost impossible to free up the individual stones with their inscriptions within the Arch itself. On the basis of these evaluations it has become clear that any attempt to demount the Fusiliers Arch either on a stone by stone basis or in some sectional form it is likely to result in severe and unacceptable levels of damage to the Fusiliers Arch. This damage would occur to the arrises of individual stones which would be lost through the removal process and probably to the engraved stones commemorating the Dublin Fusiliers within the Arch. Because of the nature of the stonework in the Arch and its weathering process the matching of new grafts or indents for repairs would be extremely limited and any areas requiring repair would be clearly visible subsequent to the reconstruction.

The structural consultants have considered options which retain the Arch in situ. One such method supports the Arch by a series of ground beams spanning onto temporary piles and involves top down construction being used to construct underground station. This option minimises risks of damage to the Monument and thus would be more favourable to other approaches.

Summary

On the basis that the demounting of the Fuseliers Arch is likely to result in severe levels of damage which are impossible to assess at this point in time it is clear that the demounting of the Arch is an unwise and unsafe proposition that is likely to result in permanent and lasting unacceptable levels of damage to a significant Protected Structure and Memorial.

Whilst the alternative options for retention in situ contain major structural variations and risks, the option to protect the arch in situ through the provision of temporary supports and the transfer of the Arch to the roof slab of the station box (using top down construction) provides the lowest level of risk to the Monument and will be utilised in retaining the Arch in situ. This is without doubt the most appropriate course of actions.

6.2 The Retention of Basements in Nos. 4 – 14 Parnell Square

The demolition (infilling and partial removal) of basements from protected structures on O'Connell Street Lower and Westmoreland Street will be necessary for the construction of the stop boxes and the diversion of utilities around the boxes.

- O'Connell Street Lower (HC#178-179, 183-186, 190 & 196 - Nos. 1-8, 10-11, 45-46 & 56). The impact will result in the partial loss of the basements of the structures.
- Westmoreland Street (HC#228-241 - Nos. 8-16, 26-29 & 32). The impact will result in the partial loss of the basements of the structures.

The demolition of Basements in Parnell Square is no longer necessary due to the relocation of the new sewer.

6.3 Garden of Remembrance

The latest proposal as presented to the Bord, outlined on Drawing L MN 0000 MU S082 L01 Parnell Square - Street level Plan Option 1A3, shows a relocation of emergency exhaust vents to within the entrance piers of the Garden of Remembrance.

The two existing stone clad piers enclose an area of some 37 sq m and are part of the original design of Daithi Hanly, completed in 1966.

The mitigation for the use of these piers would involve a complete and accurate survey of the piers and their surrounding curtilage, detailed methodology for the careful dismantling of the stone, proper storage as well as specification for the full reinstatement of the piers back to their current location.

This approach, subject to all statutory consultations and approvals, is suitable from a heritage point of view given that it reuses and maintains the existing elements of the structures and retains their special interest in signifying the entrance to the Garden of Remembrance.

7. Impacts Created by Metro North within the Architectural Conservation Areas and on Protected Structures. Review of Visual Impacts Illustrated within the Photomontages

The installation of a major new transportation system running directly through the historic core of Dublin would be expected to have a significant and highly detrimental impact on the city and on its Architectural and Historic features. The fact that the proposal is for an underground transport system is a major positive dimension and the consequential impacts on the historic fabric of the City are significantly reduced. The proposed Metro route runs from St. Stephens Green under Westmoreland Street, O'Connell Street and Parnell Square. The new transportation system frees up and liberates the Architectural Conservation Areas by providing access and egress through a new unobtrusive transportation system with a new and major north south axis. In doing so it provides further opportunities to reclaim the historic core of Dublin as an increasingly pedestrianised area.

The former Dublin City Architect Jim Barrett has stated that the introduction of the Luas into Dublin was one of the most significant architectural events of the 20th century. The introduction of the Metro must be seen as a further liberation from the intrusiveness of traffic and buses on the historic quarters. Even public transport systems can be highly intrusive. The appalling visual impacts created by long term parking of double decker buses in College Green, Parnell Square, etc., is a major intrusion on the enjoyment of these areas regardless of the public transport benefits provided by the buses.

In the short term the installation of the Metro will be highly intrusive. The potential disruption to St. Stephens Green and to the Park will be significant as will the intrusion and disruption in O'Connell Street and elsewhere. These impacts are short term and in the case of St. Stephens Green Park the impact is on a manmade landscape which will be fully reinstated. The E.I.S. has recommended a range of mitigating measures which are being implemented. Further mitigation has been achieved during the finalisation of the design process and prior to the Railway Order Hearing. This further mitigation includes the retention of the Fusiliers Arch in situ rather than its demounting and removal. The decision to retain the Fusiliers Arch in situ followed on further investigations on site and into the background historic of the construction of the Arch in 1907. Following these assessments the Conservation

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Architect recommended retention and the RPA Design Team have produced a solution which safeguards and retains the Fusiliers Arch in situ.

In addition to this further mitigation the impact of the installation of the new sewer on the East Side of Parnell Square has also been reviewed and the sewer has been relocated west of its original position thus avoiding any impact with the cellars and areas of the houses along Parnell Square East and removes any physical impact on the Protected Structures.

The E.I.S. has reviewed the visual impacts both short term and permanent. It has recommended sensitive design in both short term and permanent structures and landscaping. The R.P.A. Design Team have taken these measures on board and their designs have undergone further refinement in the interests of reduced mitigation. These will be illustrated in the photomontages.

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