



**METRO NORTH
ORAL HEARING
PROOF OF EVIDENCE
John Flannery
Landscape and Visual
Wednesday 15th April 2009**



Metro North Oral Hearing

Proof of Evidence

Landscape and Visual

John Flannery

1.0 NAME, QUALIFICATIONS AND ROLE IN PROJECT

- 1.1 My name is John Flannery.
- 1.2 I hold a Degree and Post Graduate Diploma in Landscape Architecture and am a Chartered Member of the UK Landscape Institute. I have worked in the field of landscape architecture for over 20 years specialising in landscape and visual impact assessment. I am a Supervisor and Examiner for the Pathway to Chartership which is the examination system used in the UK to assess if landscape architects are suitable for Chartership.
- 1.3 I am Head of the UK and Ireland Landscape Team with Environmental Resources Management (ERM). It is my responsibility to manage and maintain the high quality of landscape and visual impact assessment reports produced by my team.
- 1.4 My role on the Metro North has been to prepare the landscape and visual impact assessment of the project and to advise the RPA on appropriate mitigation measures.

2.0 EXPERIENCE

- 2.1 I have assessed landscape and visual impact and provided landscape mitigation advice for many developments in the UK and in Ireland. These include the Cross River Tram scheme for London, the Cork Dockland Bridges and the Waverley Scottish Borders railway scheme. I have given evidence at Hearings in Ireland and at Inquiries in Scotland. In addition, I have addressed landscape and visual impacts from other types of development including; residential and commercial, hotel and leisure, bridges, golf courses, power stations, chemical works, pipelines, onshore and off shore wind farms in the UK and Ireland.
- 2.2 I also have considerable experience in Landscape Architecture including masterplanning, streetscape improvements and planting design.

3.0 GENERAL INTRODUCTION

Scope

- 3.1 My evidence concerns impacts on:

- Landscape character and resources including effects on the aesthetic values of the landscape, that may be caused by changes in the elements, characteristics, character and qualities of the landscape as a result of the scheme
 - Visual amenity, including effects upon potential viewers and viewing groups caused by change in the appearance of the landscape as a result of a proposed scheme. My evidence addresses landscape and visual impact during construction and operation of the railway. For the construction phase, I have assessed landscape and visual impacts from the construction works along the whole route. The assessment was carried out taking into consideration the relevant Environmental Protection Agency guidance and also the Guidelines for Landscape and Visual Impact Assessment produced by the Landscape Institute and the Institute of Environmental Management and Assessment
- 3.2 The study area corresponds to the potential zone of visual influence of the scheme and includes tunnelled sections. The dimensions of the study area vary in width depending on the local landscape /townscape. In built up areas, the study area typically extends to the edges of the buildings whereas in open spaces or farmland the study area is wider.
- 3.3 The baseline is categorised into 25 landscape and townscape character areas and the sensitivity of each area has been determined with reference to its value, its quality and its condition. It also takes into consideration the specific nature of the proposed development. The sensitivity is defined as the extent to which a landscape/townscape can accept change of a particular type and scale without unacceptable adverse effects on its character. Landscapes and townscapes with national designations, conservation protection and with low capacity to accommodate change are deemed of high landscape/townscape sensitivity.
- 3.4 For the baseline categorisation of visual amenity, principal representative viewpoints are determined and their sensitivity assessed primarily on their occupation. Viewers with a proprietary interest and prolonged viewing opportunity such as residents and also recreational users with an interest in their surroundings are deemed of high visual sensitivity.

- 3.5 Of particular relevance to the degree of landscape and visual impact during operation are the three methods of transferring the Metro scheme across the study area. The northern section is primarily in the form of a track laid generally at grade, on embankments, in cuttings or on elevated viaducts; with the exception of the section which tunnels below the airport. Further south, the alignment is contained within a tunnel which is constructed using a cut and cover method of construction. Whilst being of considerable merit for reducing visual impact from the Metro during its operation, the cut and cover method results in landscape impact arising from vegetation loss, affecting landscape character and opening up views during construction. Further south, the method of tunnel construction is by boring, which results in no operational or construction landscape or visual impact, except where certain elements are above ground such as ventilation shafts, stop rooflights, entrances and exits.
- 3.6 For the operational phase, my evidence concerns impacts from above ground stops, the depot site, viaducts and the overhead infrastructure. It also concerns impacts arising from that part of the proposed railway that remain above ground for the underground sections of the railway for example ventilation shafts and stops.

4.0 RECEIVING ENVIRONMENT

- 4.1 For the landscape/townscape baseline, the study area has been divided into 25 landscape/townscape areas (LLCAs) commencing at the far north of the scheme at Lissenhall and finishing in the centre of Dublin at St. Stephen's Green. Each LLCA has been studied, both in the field and using desktop data, and assigned a landscape/townscape sensitivity. This sensitivity relates to the scheme and is not just a general sensitivity. In addition within most LLCA, principal representative viewpoints have been chosen and assigned a sensitivity.
- 4.2 Twelve LLCAs have been judged as of high sensitivity, four as medium sensitivity and nine as low sensitivity. The distribution of the higher sensitivities is primarily within the more rural areas and the northern residential areas. They are also associated with key urban open spaces such as Albert College Park and St. Stephen's Green, as well as public areas and

streets. The lower sensitivities are primarily associated with undesignated areas, the airport and the land adjacent to the airport. In addition, where the proposed alignment in a particular area is below ground and within a bored tunnel, the sensitivity will also be considered low.

- 4.3 In terms of visual sensitivity, 26 viewpoints have been judged as of high sensitivity, seven as medium sensitivity and five of low sensitivity. The visual receptors with high sensitivity are generally associated with residential properties in the Fingal countryside and in the suburbs. They are also located within important public streets and spaces and are often users of important parks and their facilities. The lower sensitivities are associated with views from roads and those where existing screening is effective.

5.0 CHARACTERISTICS OF THE PROPOSAL WITH RESPECT TO LANDSCAPE AND VISUAL IMPACTS

- 5.1 Sources of impact on landscape and visual amenity include the following:

- All above ground structures including track sections, rolling stock, overhead infrastructure, viaducts, bridge crossings, roads and road realignments, buildings, earthworks, park and ride facilities, the depot, stops and associated furniture, stairs, escalator and lift entrances and lighting

- 5.2 These sources of impact will result in the following impact types:

Direct Impacts

- Loss of landscape elements, including permanent land loss, vegetation losses, severance of watercourses, loss of built elements (which are part of the existing landscape or townscape fabric)
- Changes in physical topography as a result of the introduction of earthworks embankments or cuttings
- Physical changes arising from the introduction of new structures into the receiving landscape or townscape

Indirect Effects

- Change to the character of a local landscape arising as a result of the visibility of the scheme

5.3 Landscape and visual impacts may be:

- Positive: a change, which improves the quality of the environment (for example, improving landscape diversity, removal of an existing negative aspect etc.)
- Neutral: a change, which does not affect the quality of the environment
- Negative: a change, which reduces the quality of the environment (for example, impact on mature trees or obstructing an existing important view)

6.0 POTENTIAL IMPACTS OF THE PROPOSAL

Project Scenario: Construction Phase

- 6.1 The most significant landscape and visual impacts reported in the EIS during the construction phase are related to the presence of construction compounds including hoarding and lighting and removal of significant landscape features including trees and monuments. It is considered that there will be visual and amenity construction impacts of very high significance at the depot site at Belinstown, Albert College Park and St. Stephen's Green. High and medium construction impacts are likely in the Swords and Seatown residential area, and in the Crowcastle, Nevinstown and Collins Avenue residential areas.

7.0 REMEDIAL OR MITIGATION MEASURES

Construction Impacts

- 7.1 Mitigation of construction Landscape and Visual Impacts will include the following measures:
- Fencing will be erected around all short-term work sites; At a number of sensitive townscape locations where practicable, hoardings may be erected which enable the display of artwork. Hoarding may also be painted appropriate colours depending on their location

- In areas of high commercial activity where visibility to business is important, open mesh types such as Heras will be used along the alignment where appropriate and practicable
- Post and wire fencing will be used along the alignment in Greenfield areas to minimise visual impacts
- Materials and machinery will be stored tidily during the works
- Portable machinery will be stored behind fencing in compounds when not in use
- Roads providing access to site compounds and work areas will be maintained free of excessive dust and mud as far as is reasonably practical
- Lighting of compounds and work sites will ensure that glare and nuisance is avoided by the use of hoods and the directing of light away from sensitive receptors
- Temporary fencing, barriers, traffic management and signage will be removed when no longer required
- All existing trees to be retained will be protected prior to the commencement of construction in accordance with BS 5837 (or an equivalent standard)
- On completion of construction, all remaining spoil and construction material will be removed
- Work sites and other land occupied temporarily will be reinstated

Operational Impacts

- 7.2 There are a number of neutral and positive impacts associated with the Metro scheme. The fact that approximately 10.5km of the overall 18km is underground means that, there will be little evidence of the scheme's presence and therefore no landscape and visual impact. The only visible

manifestation of the scheme will be the carefully designed and considered above ground elements.

- 7.3 The implementation of the Metro scheme should, on the evidence of the traffic expert, result in less queuing traffic and a general reduction in traffic movement along the alignment route. There will be less visual impact therefore from such traffic as a consequence of the Metro. This positive visual impact will also be seen on some minor roads adjacent the main routes. The Metro scheme will provide a benefit in providing a much needed North South link of urban spaces and connection with the northern suburbs and countryside. It is acknowledged that in certain areas near the new park and ride locations, there will be an increase in visible traffic.
- 7.4 Along the alignment where the Metro is visible, the vehicle design will be such to make a positive design contribution. In a similar style to the LUAS vehicle, the Metro will have much less impact as a means of transporting passengers than the highway equivalent also assisted by its narrow alignment corridor.
- 7.5 In addition to the aesthetic qualities of the Metro vehicle, the above surface stops will be of a simple and clear design utilising durable natural materials. Many of the stops will create new public spaces and become the focus of an area.
- 7.6 It is also important that the overhead infrastructure is carefully considered to minimise visual impact. This will include the choice of materials, colour and simple design of the supports and situating the posts at 45 metre centres on straights. In addition there will be a single post between the tracks also to minimise visual impacts.
- 7.7 The viaducts will be designed to be as slim, unobtrusive and as aesthetically pleasing as possible. Planting will be included at the base of the viaducts to provide a setting and minimise their scale.
- 7.8 The Metro scheme includes the planting of a considerable amount of native plant material along its alignment, as well as the introduction of new or replacement amenity planting in various locations. This will have a positive affect on the biodiversity of the more rural parts of Fingal County introducing new wildlife corridors and ensuring the continuity of existing hedgerows, tree

lines and scrub. This will also be beneficial to fauna as well as flora. It will also form a new green linear feature which will bring visual interest to a number of viewpoints.

7.9 In addition, the routes considered during the alternative selection process will have included minimizing landscape and visual impacts as one of the criteria.

7.10 Taking the above positive effects into consideration and also the fact that there are a number of significant landscape/townscape and visual impacts at various locations along the alignment, I consider that the overall high level impact of the Metro scheme is one of minor negative.

7.11 The mitigation measures that apply to the scheme and are illustrated in the Landscape Insertion Plans include the following:

- Ecologically sensitive integration of the scheme into the receiving environment. The proposed landscape treatments will complement the surrounding ecological network and will counter the potential barrier and fragmentation effect of the proposed scheme as well as compensate for the loss of habitat
- Consideration of the landscape character and context of the scheme in the preparation of the landscape design which will also consider the road user. The scheme will aim to retain and reinforce regional identity where possible
- Use of landscape planting treatments that require minimal long term maintenance and whose species content match or enhance the character of the surrounding area
- A range of different habitats will be created to enhance local biodiversity including grasslands, scrub, woodland planting and hedgerows
- In certain locations, for example through Belinstown and along the R132, the track will sit within grass reducing its visual impact

7.12 The Landscape Insertion plans demonstrate a commitment to integrate the scheme into the landscape and townscape baseline. As well as following the alignment of the Metro, they also show how relocated and widened roads and new bridges will be mitigated and eventually absorbed into the landscape.

They also show how severed hedgerows and tree belts will be reinstated and any wildlife corridor where possible maintained. Although not detailed at this stage, they serve as reference plans for the next stage of detailed design where actual widths of tree belts, lengths of hedgerows and numbers of plants will be specified.

8.0 PREDICTED, RESIDUAL IMPACTS

- 8.1 The residual impacts on landscape and visual amenity are assessed based on the assumption that all mitigation planting will be established successfully and good growth and development will have taken place over a 15 year period from implementation of the planting. The planting is therefore assumed to be effective in providing visual screening of the scheme which will be most effective during the summer months and hence the impact of the scheme is expected to be significantly reduced over time.
- 8.2 The significance of landscape and visual impacts is determined by considering the sensitivity of the landscape/townscape or visual receptor and the magnitude of change expected as a result of the proposed scheme. Each case is assessed on its own merits as significance is not absolute and factors unique to each circumstance need to be considered.
- 8.3 The magnitude of change affecting landscape/townscape or visual receptors depends on the nature, scale and duration of the particular change that is envisaged, the location in which it is proposed, and the overall effect on a particular view. This may be very small if the scheme is at some distance. In a landscape or townscape, the magnitude of change will depend on the loss or change in any important feature or change in the backdrop to, or outlook from, a landscape or townscape. The angle of view, duration of view, distance from the scheme, degree of contrast with the existing view and the extent of visibility all influence the magnitude of the change in view.
- 8.4 The general principles underpinning the evaluation of significance are set out in the following table:

Table 8.1 Criteria for assessment of impact significance

		Magnitude of Change				
		Very low (I)	Low (II)	Medium (III)	High (IV)	Very high (V)
Sensitivity of landscape / viewpoint (Functional value)	Low	Not significant	Low significance	Low significance	Medium significance	Medium or High significance
	Medium	Not significant	Low significance	Medium significance	High significance	High or Very High significance
	High	Not significant	Low significance	Medium or High significance	High or Very High significance	Very High significance

8.5 The LLCAs and visual receptors which are judged to receive landscape / townscape impacts and/or visual impacts of a high significance are listed as follows:

LLCA 1 Lissenhall Farmland; (MN 101)

Viewpoint 1c – Group of Dwellings in Belinstown (MN 101)

Viewpoint 1e – Dwelling at Lissenhall Little (MN 101)

8.6 For Lissenhall Farmland, a high magnitude of change is predicted on this area of high sensitivity resulting in a judgment of high significance of landscape impact. However, the Fingal County Council, County Development Plan Variation No 29, dated July 2008, indicates that the whole area north of Swords is proposed for zoning as a sustainable mixed-use urban environment. In addition, the Fingal County Development Plan 2005 to 2011 does not identify the area as a sensitive landscape nor is it within a Landscape Group which is considered sensitive. The net effect of this is, in my opinion, to reduce the sensitivity of this landscape to the proposed development. However, it is relevant to note, that the land still remains Greenbelt until the proposed change is adopted.

8.7 Impacts in this area include the loss of an area of farmland, loss of hedgerows and hedgerow trees due to road realignment and widening and the introduction of embankments and cuttings into the landscape. In addition there is the construction of a multi storey car park, a maintenance depot, other associated buildings, and areas for sidings and the stacking of Metro

vehicles. There will also be visual impacts arising from the lighting of the depot and the car park.

- 8.8 Landscape mitigation measures for this area are shown on the Landscape Insertion Plans and consist of earthwork bunds and extensive woodland planting to screen the proposed depot and park and ride. Tree planting is also proposed generally on mounding to help screen views from sensitive receptors. Planting proposals are designed to integrate embankments or cuttings into the landscape and provide wildlife corridors.
- 8.9 Following feedback from Fingal County Council, a number of further mitigation measures were incorporated into the design of the Depot site. An additional row of trees has been included along the northern edge of the boundary to help screen views from the Batter Lane Bridge. The vehicular access from Batter Lane has been relocated 20m north from the position on the Order Plans so it is not opposite the private entrance of the nearby property. The fact that the depot area is being filled to a level of 10.5m, which is approximately 3m higher than Batter Lane, will minimise long views from the lane across the depot site. The slopes along Batter Lane will be planted to further screen views and the proposed pedestrian access from the lane is to be relocated in order to provide an uninterrupted planted mound.
- 8.10 Further feedback from the Council encouraged the choice of muted colours for the maintenance buildings to minimise their visual impact.
- 8.11 The multi storey car park has some storage underground in order to reduce its overall height and visual impact. In addition, planting is proposed at roof level to break up the extent of visible roofscape and provide high level interest.
- 8.12 Where roads such as Batter Lane are being widened, any loss of existing hedgerow or trees will be fully reinstated. In many cases this will be an enhancement to the existing baseline situation.

LLCA 2 Broad Meadow River Corridor; (MN 101)

- 8.13 For LLCA 2 Broad Meadow River Corridor, a high magnitude of change is predicted on this area of high sensitivity. This results in an impact of high significance to the landscape. The sensitivity is based on the fact that the

river eventually feeds into the Broad Meadow / Swords Malahide Estuary and the Estuary pNHA and cSAC. In addition, the bridges over the river are protected structures and the area has a High Amenity zoning.

- 8.14 Impacts in this area arise from the removal of vegetation for the construction compound and the presence of the Metro track and its components travelling through the area. In addition, a new bridge is proposed and the existing protected structure will be modified to take one track of the new scheme.
- 8.15 Landscape Mitigation measures for this area are illustrated on the Landscape Insertion Plans and show as much existing vegetation retained as possible. They also show how the replanting of trees will compensate for vegetation loss and reinstate local landscape character. The careful, simple and robust detailing of the works to the existing protected bridges and the new bridge in the vicinity will also ensure the high landscape quality of the river corridor is maintained.

Viewpoint 4b - Seatown Terrace (Swords and Seatown LLCA) (MN 101)

- 8.16 From the properties along Seatown Terrace, the Metro viaduct structure will be visible. Due to intervening broadleaf vegetation, the structure will be more visible in winter than in summer.
- 8.17 The Metro vehicles and the viaduct will be designed to be as slim, unobtrusive and as aesthetically pleasing as possible. As much existing vegetation as possible will be retained and protected adjacent to the works. New planting will be carried out along the eastern boundary of the R132 between the Malahide and the Pinnock Hill roundabout to replace vegetation lost due to road widening activities. This will eventually form a new backdrop to the Metro viaduct and assist its integration. In addition, planting will be included at the base of the viaducts to provide a setting and minimise their apparent scale.

*Viewpoint 5b – Entrance to Ceim Dearg (Crowcastle Semi Urban Farmland)
(MN 102)*

- 8.18 The view is from the existing footpath adjacent the R132 just at the entrance to the dwelling. As part of the scheme, the footpath will be relocated to the west of the proposed Metro viaduct and the actual viaduct will occupy the

approximate location of the existing footpath. New views will consist of the overhead viaduct in close proximity and the Fostertown footbridge in the middle distance. The Metro vehicles and the elevated structure will be designed to be as slim, unobtrusive and as aesthetically pleasing as possible.

LLCA 10 Balcurris & Santry Demesne (MN 104)

8.19 For LLCA 10, a medium magnitude of impact is predicted on a landscape of high sensitivity resulting in a high significant landscape impact. Impacts in this area consist of loss of woodland, mature tree groups, and other landscape features as a consequence of the scheme alignment and the realignment of roads. In addition, the track is positioned on an embankment throughout the character area and the Northwood stop is located within the area.

8.20 The Landscape Insertion Plans illustrate a considerable amount of planting in this area to compensate for vegetation loss and the reinstatement of the landscape character. Realigned roads are accompanied by roadside hedgerow and tree planting proposals.

Viewpoint 10c – Within curtilage of dwelling on Ballymun Road (Balcurris & Santry Demense) (MN 104)

8.21 This viewpoint is located within the grounds of the dwelling house and the view, across the garden towards the entrance, will be changed into a view towards the embankments supporting the Metro alignment. Planting is proposed for the embankment which will assist integrating the structure however, the embankment will remain a dominant feature in the view.

LLCA 12 Collins Avenue Residential Area (MN 105)

8.22 For LLCA 12 Collins Avenue Residential Area, a high magnitude of impact is predicted on a landscape of high sensitivity resulting in a high significant landscape impact. The impacts arise from the removal of trees of varying ages along the alignment within this area. Two of the trees form part of a significant tree line such as those at the entrance to the DCU. There are also tree losses in the open space between Albert College Drive and Albert College Lawn, as well as the loss of a number of buildings and boundary

walls. Smaller trees and shrubs are affected at the frontage of Our Ladies of Victories Church. The new DCU stop is located within this area.

- 8.23 The landscape mitigation proposals are shown in the Landscape Insertion Plans and show the replacement of trees lost along the middle of Ballymun Road as well as the planting of trees to provide a landscaped setting for the DCU stop. Larger specimen trees will be planted at the entrance to DCU to replace the large trees lost due to the construction of the tunnel.

Viewpoint 12b – Corner of Pappin’s Road and Ballymun Road (Collins Avenue Residential Area) (MN 105)

- 8.24 The view represents similar views obtained by the properties aligning Ballymun Road looking east across the road. The existing view is one of a grassed open space lined with mature trees at the edge of a residential area. The chosen view will comprise the new DCU stop with planting at its periphery to assist in its integration. It will take several years for the new planting to take effect.

LLCA 13 Griffith Avenue Parkland (MN 106)

- 8.25 For LLCA 13, Griffith Avenue Parkland, a high magnitude of impact is predicted on a landscape of high sensitivity resulting in a high significant landscape impact. Impacts on this area generally relate to the loss of a number of mature trees, mainly on the street boundary which will open up views into the park from properties on the other side of Ballymun Road. Further in the park, other groups of trees are lost also as a consequence of the cut and cover method of construction.

- 8.26 Griffith Avenue Stop is located at the very edge of the character area and is not actually within the parkland itself but located within the neighbouring farmland. There will be the loss of the farmland and groups of evergreen and deciduous trees adjacent to Griffith Avenue boundary. It is worth noting that the avenue trees along Griffith Avenue are not affected.

- 8.27 The Landscape Insertion plans illustrate a commitment to fully reinstate the parkland setting following the construction of the works. Tree planting is proposed along the boundary of the park and within, to replace losses and recreate the parkland setting. In the area around Griffith Avenue stop, the

land will be grassed and trees will be formally planted around the periphery of the stop.

Viewpoint 13b - Rear of Elmhurst convalescent home (Griffith Avenue Parkland) (MN 106)

8.28 The existing view is representative of views obtained by residents of the adjacent Elmhurst convalescent home and comprises views across a field towards groups of evergreen and deciduous trees close to and aligning Griffith Avenue. The new view will comprise mainly Griffith Avenue stop with trees formally planted around the periphery of the Stop. This is illustrated on the Landscape Insertion plans.

Viewpoint 14b – St. Patrick’s Boys National School (Griffith Avenue Residential) (MN 106)

8.29 The existing view is one obtained from the playground and from some of the windows of the school building. The view includes trees, grass embankments, abutting the playing fields to the north, and properties on the site boundary. The proposed view will include a new retaining wall finished to a high quality which will retain the existing playing field. The ventilation shaft building will be a dominant new feature in the view.

8.30 Landscape mitigation measures include cladding the proposed building with stainless mesh and cabling which will enable the growth of climbers on each façade. This will assist in reducing the apparent scale of the building.

Viewpoints 19a and 19b – Parnell Square (MN 107)

8.31 Viewpoint 19a is an existing view taken across Parnell Square East looking towards the entrance to the Garden of Remembrance. The view includes stone feature walls and railings with trees and shrubs visible in the background. There is a clutter of street signs and poles also in the view. The chosen view, includes the widening of the pavement and the provision of two separate escalator entrance placed in alignment within the new streetscape. Most other features remain, except for the removal of the clutter of signage poles.

- 8.32 Mitigation includes the low key detailing of the escalator entrance, which has been maintained at a low elevation and without any obvious canopy. Quality stone materials are proposed which will be reflected in the pavement detailing. Glass will be used as barriers for the escalators to allow visual permeability. Street tree planting is also proposed to the rear of the widened footpath and the formality of this will be appropriate for the character of the townscape. Ventilation shafts have been cleverly concealed within the existing stone pillars.
- 8.33 Viewpoint 19b is a view from outside the entrance to the Garden of Remembrance and includes the distinctive red brick buildings on the other side of the road. The proposed view will include the elements previously described for view 19a. Mitigation measures are as described for viewpoint 19b and in addition the escape hatches which may be visible in this view are slim and in the same alignment as the escalators providing a simple symmetrical arrangement.

Viewpoint 24a – Grafton St. looking towards St. Stephen’s Green (Grafton Street) (MN 107)

- 8.34 The entire alignment is below ground in LLCA 24 Grafton Street Area and therefore there is no direct landscape impact from the alignment. No other features of the scheme appear above ground level within this LLCA, therefore there are also no visual impacts. However, changes located within the adjacent LLCA 25, St. Stephen’s Green, will be visible from this LLCA. Viewpoint 24a looks towards the Fusiliers Arch from Grafton Street and the existing view includes the Arch, stone pillars and railings, and extensive greenery situated within St. Stephen’s Green. The chosen view will be similar as the previously described features will remain or will be returned following their removal. As part of the construction works a number of trees will be removed near this particular entrance and this will be quite noticeable from this viewpoint for a period of time depending on the size and age of replacement planting.
- 8.35 Mitigation measure at this location include minimising any new features at the entrance to the Green allowing uninterrupted views towards the Fusiliers Arch from adjacent important streets. It is important that this streetscape is

maintained uncluttered. In addition, the existing boundary treatment of railings and pillars will be fully reinstated after the completion of the works. Replacement tree planting will be carried out within the park as shown on the Landscape Insertion plans. The time taken before the replacement trees reach the stature of a number of the larger specimens being removed will depend on the size and age of the replacement material. It is recommended therefore that large semi mature trees are used to minimise that period.

LLCA 25 St. Stephen's Green (MN 107)

- 8.36 For LLCA 25 St. Stephen's Green, a very high magnitude of impact is predicted on a landscape of high sensitivity resulting in a very high significant landscape impact.
- 8.37 Within this clearly defined LLCA, the alignment is completely underground and is within a tunnel. The scheme requires the removal of a large number of trees of various species and sizes, a proportion of which are large, mature and very significant trees. The loss of each tree is significant in itself however the loss of so many closely grouped trees has a significant impact on the parkland character of the park. It is worth noting, that the OPW are carrying out a review of the trees within the Park and have identified a large number of over mature trees which will be removed as part of their own ongoing maintenance programme. This is independent of the Metro scheme.
- 8.38 The trees proposed for removal are located in close proximity to the existing northern lake. These trees are part of the unique setting of the lake, framing views and screening other parts of the park. This gives the impression that the park is larger than it is in reality.
- 8.39 The lake is a very significant feature and is proposed for temporary use as part of the construction compound. Although proposed for replacement, the existing mature and scenic appearance of the lake and its associated mature vegetation will take time to recreate depending on the size and age of replacement nursery stock.
- 8.40 There are a number of external structures proposed for location within the actual park and a number of vents and roof lights are to be placed the middle of the reinstated island in the lake. Other structures are located where buildings already exist at present such as the toilet block.

Viewpoints 25a and 25b – Views within St. Stephen’s Green (MN 107)

- 8.41 Viewpoints 25a and 25b are located within the park and both are located adjacent to the lake. Viewpoint 25a is a view across the lake located near the entrance to Yeat’s Memorial. It includes the heavily vegetated island, the Pulham rock feature and in the distance the Fusiliers Arch and trees at the boundary to the park. The chosen view will very similar to the features just described, returned or, in the case of the Arch, will be retained insitu. The new island feature will be different as there will be a restriction on the size of trees that can be placed in this particular location due to available soil depths. However, it will be possibly to densely plant the island with smaller tree species and shrubs of appropriate species and scale.
- 8.42 Viewpoint 25b is located close to the footpath associated with the Lime walk. The view is towards the Fusiliers Arch and includes a number of single mature statuesque trees. In addition, dense evergreen shrubbery aligns the park boundary along St. Stephen’s Green North. The proposed view will include a new element in the form of a fireman’s lift and a ventilation structure. The structure will sit within a landscaped area and will be appropriately finished to ensure it is in character with its setting. This may involve the use of green roofs and certainly high quality finishes. Extensive new tree and shrub planting will ensure the parkland character and enclosure is maintained. Emergency exit arrangements from the underground stop have been reconfigured and hatches now have a much smaller footprint, are elongated and will be easier to conceal.
- 8.43 Mitigation measures illustrated on the Landscape Insertion Plan for St. Stephen’s Green include the retention and protection of as much of the existing trees as possible, the reinstatement of the existing historic and cultural fabric of the park, replanting of semi-mature trees and shrubbery and the reinstatement of the existing pond, monuments, walls and railings. Careful architectural consideration will be given to new features proposed for the park to respect its designated status and popularity within the City. Glazing will be used for a number of features to maintain views. The reinstatement of the park will be carried out in full consultation with the OPW with regard to layout issues, size and species of replacement nursery stock.

8.44 It is difficult to state how long it will take for the full impact of the tree removal to be mitigated as this will depend on the size, age, type and density of replacement stock. However, with the use of very large replacement stock, the impact will be mitigated more quickly than by using smaller standard sized trees. It is the desire of the OPW to introduce more appropriate tree species to the Park which will be of benefit in terms of amenity and biodiversity.

8.45 I consider that whilst there are a number of significant impacts arising from the construction and operation of the Metro scheme, the mitigation measures will be effective in many locations in reducing the significance of the landscape, townscape and visual impacts in the long term.

9.0 RESPONSE TO SUBMISSIONS MADE

Submissions MN 101

- 9.1 Various submissions within this area contain content relating to the Depot site and raise concerns regarding the scale of development, proximity of the multi storey car park to properties, urbanisation, scale of mounding and light pollution.
- 9.2 The location of the depot and multi storey car parks is driven by site constraints and the need for the car parks to be placed either side of the rail line. Mounding and tree planting is proposed as mitigation. Lighting will be mainly low level bollard type approx 1m high. Any higher lighting will be designed to minimise pollution and will be directed downwards. The proposals for the multi storey car parks is to include some planting on the structure to assist its integration. In addition, there is a basement level to the car park to reduce its above ground massing. Solid hoardings are proposed along Batter Lane to provide some visual screening of the compound to residential properties. Generally in greenfield sites, chain link fencing will be used around construction compounds which is visually unobtrusive.
- 9.3 With regard to submissions received by Fingal County Council, all landscape and visual issues which were raised by the Council are shown on the Landscape Insertion Plans.

Submissions MN 102

- 9.4 One submission within this area requests that the scheme does not screen the Retail Park by the planting of trees.
- 9.5 The RPA will ensure that by the careful design, detailing and positioning of trees at this location, the minimum amount of screening to the Retail Park will occur subject to agreement with Fingal County Council.
- 9.6 Another submission refers to the viaduct at Pinnock Hill roundabout and makes comment regarding the views towards the viaduct.
- 9.7 The alignment rises along the R132 before becoming a viaduct on the approach to Pinnock Hill Roundabout. There are existing trees along this

road between the properties and the alignment. At the corner where the viaduct crosses the roundabout there is a dense tree belt between the end properties and the viaduct.. These factors were taken into account when assessing the significance of the visual impact from a representative viewpoint at ground level within the Court. It is acknowledged that the elevated viaduct will be more visible in the winter than the summer.

- 9.8 One submission refers to the direct impacts occurring to garden ground at Nevinston including the removal of a large part of the garden including mature shrubs and garden plants.
- 9.9 The area of garden affected by the works will be fully reinstated to a high garden standard using large nursery stock and under the guidance of a landscape architect in full consultation with the owner.

Submissions MN 105

- 9.10 The above submission requests confirmation that the two large sycamore trees to the front of the Silver Stream Nursing Home/St. Papin's Youth Club are to be retained and not removed as a consequence of the scheme
- 9.11 The two trees will not be removed as a consequence of the scheme. They will be protected including their root zone for the duration of the adjacent works.

Submissions MN 106

- 9.12 All of these submissions include content relating to the Griffith Avenue Stop and raise concerns regarding the station design, loss of trees, damage to or loss of the double avenue of trees and visual impact of hoardings.
- 9.13 Reference plans for Griffith Avenue station are available as part of the Railway Order Structures Details. These include plans, elevations and cross sections and indicate the scale and form of the station and illustrate which elements appear above ground. The station designs are covered in the Architectural evidence by John Smith however the Landscape Insertion plans include trees around the perimeter of the site which will help integrate the station into the adjacent park. The size of these trees at the time of planting

has not been determined however in order to match the scale of the structures they should be at least semi mature trees.

- 9.14 The intention is not to remove any of the double row trees aligning Griffith Avenue. The entrance to the station is carefully aligned to fit between adjacent trees. Protective fencing and root protection measures will be implemented to ensure that existing trees to be retained are adequately protected. The RPA are appointing an arboriculturalist for the duration of the works, with responsibility for advising on the protection and replacement of existing trees.
- 9.15 At a number of sensitive townscape locations, hoardings will be erected which enable the display of artwork. Hoardings may be coloured green where appropriate such as adjacent Albert College Park and be seasonably adjusted.
- 9.16 Several submissions contain content relating to Albert College Park and the DCU Stop and raise concerns regarding the impact of the Stop, loss of playing fields, visual impact of barriers, light pollution and ensuring the maximum amount of park remains available. There is also a request for a tree survey of the park.
- 9.17 Hoardings and barriers enclosing the site at Albert College Park will be designed to be visually appealing and to sit comfortably within a parkland setting. All facilities will be returned to use as soon as practical taking seasonal restrictions and establishment into account. Light levels will be appropriate for construction work but will be directional to prevent light pollution towards residential properties.
- 9.18 The DCU Stop will be designed to have minimal visual impact using glazing and high quality materials. In addition, planting is proposed to the rear of the Stop which will provide some screening and provide a green backdrop to the structure. There will be the loss of trees within Albert College Park as a consequence of constructing the Griffith Avenue Stop. New replacement trees are proposed. The Landscape Insertion Plans show the commitment to replace planting lost as a consequence of constructing the scheme in Albert College Park.

- 9.19 One submission refers to St. Patricks College and contains a number of suggested adjustments to the scheme in this area. These include changes to the alignment of the building, the boundary proposals, extent of walling and extent of land take. The submission is also critical of the finish to the proposed building.
- 9.20 The RPA will take into consideration these comments and carry on a dialogue with the college to minimise impacts on the operation of the College. With regard to the finish to the building and its appropriateness to the area, this will be covered by the architectural evidence of John Smith. However, the residual visual impact of the building has been judged as high within the EIS.
- 9.21 Various submissions contain content relating to Drumcondra Stop and raise concerns regarding the appearance of the proposal.
- 9.22 This stop is the subject of an architectural review by RPA taking into account the feedback received. Further consideration is being given to circulation, retail layout, the setting of the stop and adjacent architectural styles and detailing. In addition, finishes and materials are being reconsidered with more emphasise on the use of brick and less reliance on stainless steel and glazing.

Submissions MN 107

- 9.23 Several submissions contain content relating to St. Stephen's Green and raise concerns regarding stakeholders involvement in the restoration of the park, the visual impact resulting from works in the Park, the works detracting from its setting and the impact from new elements appearing in the park.
- 9.24 It has been reported in the EIS that significant landscape and visual impacts will result from the implementation of the works in St. Stephen's Green. Mitigation measures at St. Stephen's Green include; the reinstatement of the existing historic and cultural fabric of the park, replanting of semi-mature trees and shrubbery and the reinstatement of the existing pond, monuments, walls and railings and the retention of the Fusilier's Arch insitu. Careful architectural consideration will be given to new features proposed for the park to respect its designated status and popularity within the City. The

reinstatement of the park will be carried out in full consultation with the Office of Public Works with regard to layout issues and size and species of replacement nursery stock.

9.25 Relevant stakeholders will be involved in the design of the reinstatement of the Park to ensure that the status of this monument is not compromised. Evidence regarding the reinstatement of actual statues and other protected features within the Park and along its boundary is covered in evidence by David O'Connor and David Slattery.

9.26 A tree survey has already been carried out for the entire alignment of the Metro which includes Albert College Park.

9.27 The submission from Dublin City Council requires the use of High Quality materials such as stone, stainless steel and glass in O'Connell Street and Parnell Square respecting the high standards of detailing already carried out in the centre.

9.28 The detailing of above ground structures and elements will be a primary consideration where such items are located in highly sensitive historic, cultural and prominent locations within Dublin City. Palettes of material will reflect those of high quality already present such as stone, stainless steel and glass. New paving will match existing paving in material, size of slab and orientation.

9.29 Tree management plans are being prepared by RPA for several of the areas through which the alignment passes and this includes Albert College Park.

Other Relevant Submissions (MN 101 to MN 107)

9.30 Several submissions contain content relating to light pollution at various locations but primarily at the Depot site and at Albert College Park.

9.31 Lighting will be designed to minimise light pollution and will be directed downwards. Lighting at the depot will be mainly low level bollard type approx 1m high. Careful consideration will be given to compound lighting to ensure that there is no light spillage directly towards nearby residential properties

9.32 I have considered all of the submissions which are relevant to my subject and conclude that the majority of the issues have been addressed in the EIS and that in most cases all that has been required is further clarification of the mitigation measures and confirmation of RPA's commitment to minimise landscape, townscape and visual impacts.

10.0 PROPOSED CHANGES TO THE DRAFT RAILWAY ORDER

10.1 Since the publication of the EIS, the RPA has made a number of changes to the Railway Order further to discussion and agreement with third parties. I have considered all of those that are relevant to my subject and consider that the majority have no significant additional impact. Where additional impacts are predicted, these can be reduced by the use of appropriate mitigation measures similar to those proposed for the remainder of the Metro scheme.

Railway Procurement Agency
Ghníomhaireacht um Fháil Iamróid
Parkgate Business Centre,
Parkgate Street, Dublin 8, Ireland
Phone +353 1 646 3400
Fax +353 1 646 3401
www.rpa.ie

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