

9.0 TRANSPORTATION ANALYSIS

9.1 TRANSPORTATION CONSIDERATIONS

There are a variety of transportation matters to be considered in relation to this development. They can be grouped under the following topics:

- The adequacy of the overall existing and planned region-wide transportation infrastructure serving this central part of Dublin and the docklands, and its office employment base;
- The existing and planned rail operation of Tara Street DART station itself;
- The accommodation of heavy pedestrian movements associated with the station;
- The relationship of the station to other public transport facilities in the immediate area;
- The impact of the proposed office building on the surrounding major roads; and
- The transportation elements of the office building itself : car parking, bicycle parking, service access, taxi drop offs etc.

A DETAILED TRANSPORTATION ANALYSIS IS AVAILABLE IN THE EIS (VOLUME 5) AND SHOULD BE REFERRED TO; THE HIGHLIGHTS ONLY ARE SUMMARISED BELOW.

9.2 REGION-WIDE TRANSPORTATION INFRASTRUCTURE

Dublin's economic growth continues apace, and the transportation infrastructure for the City has benefited from significant investment in recent years, most notably:

- LUAS Green Line – light rail line from St Stephen's Green to Sandyford;
- LUAS Red Line – light rail line from Connolly to Tallaght; and
- The Dublin Port Tunnel – opened in December 2006 and is responsible for the removal of the majority of heavy goods vehicles from the City Centre streets.

These enhancements to the transportation infrastructure of Dublin are only the first steps to providing a network for Dublin and the wider region that can meet the transport demands of the 21st Century, as set out in "Transport 21", the capital investment framework through which the transport system in Ireland will be developed. The Tara Street Station site, and its associated office development will be positively affected by many of these initiatives, which include:

- DART Underground – provides connectivity from the lines north of Connolly to the lines running west out of Heuston, which will relieve capacity constraints on the Loop Line between Pearse and Connolly Stations, on which Tara Street sits, as well as offering greater flexibility for through-services (2015).
- Metro North – procurement underway for a part-underground Metro route between St Stephen's Green and Lissenhall, via the Airport (scheduled for completion 2013);
- Metro West – route broadly paralleling the M50 between Tallaght and Metropark (interchange with Metro North) (2014).
- LUAS Extensions – City West Extension (A1 - 2010), Sandyford to Cherrywood (B1 - 2010), Cherrywood to Bray (B2 - 2015), St Stephen's Green to Cathal Brugha Street to Liffey Junction (BX – linking Green and Red lines and D - 2012), Connolly to The Point (C1 - 2009), Lucan to City Centre (F - 2013);
- City Centre Re-signalling – this will serve to increase the number of available train paths through Tara Street to 16 trains per hour (2011).
- Traffic Management and Development of Bus Services – will benefit Dublin City Centre as a whole, and increased bus provision will improve public transport penetration of the developing South Docklands area, to which Tara Street is a rail gateway.

The one factor common to all these initiatives is that they will take time to come to fruition, in particular the essential metro system. Other world cities have taken decades to construct good public transportation systems, and Dublin will be no exception. However, if the political will and the financial resources remain in place over the long term, the immense transportation challenges of today will eventually be met. The success of the existing LUAS lines, the advanced phase of development of Metro North and LUAS extensions A1, B1 and C1 and the phased enhancement of the DART system, of which this Tara Street Proposal is a key part, augur well for the substantial completion of the transportation infrastructure proposals highlighted here for the Greater Dublin region.

9.3 DART RAIL STATION CAPACITY MOVEMENTS

At am and pm peak periods, Tara Street Station presently serves 8-11 trains per hour in both a northerly (Howth) and southerly (Bray) direction. The trains are now 8 cars in length, following recent platform lengthening works. Improved city centre signalling and track adjustments will allow for increased Train Throughputs per hour. This will allow for capacity to be almost doubled to 16 trains per hour. It is anticipated that the flow of passengers boarding and alighting at Tara Street could increase to 14,500 per hour at peak times.

This doubling of commuter rail capacity will be a significant contribution towards improving public transportation in the area, to serve the growing number of office workers in the immediate area.

The concourse has been designed to achieve a balance between public space and rail specific infrastructure, to ensure that the new facility makes best possible use of the compact site in which it is to be located. The spacious feel of the facility will be achieved through the triple floor height given over to the station concourse. The passenger number predictions stated above have been used to appropriately size vertical circulation features and concourse space through the use of a pedestrian modelling exercise. The concourse design incorporates 17 No. ticket gates, to provide sufficient revenue protection for current and future demands, two-way passenger movements and sufficient redundancy in the system for routine and emergency maintenance. The performance of the revenue protection line, both in its final form and interim setups during construction, has been tested through the pedestrian modelling exercise.

9.4 PEDESTRIAN MOVEMENT

Although there are no specific pedestrian counts for central Dublin, transportation analysis observations confirm that the pavements approaching the present Tara Street Station, and the controlled intersections at Tara Street and George's Quay, are seriously congested for pedestrians. The pavement along George's Quay is particularly narrow and inadequate.

Transportation recommendations relating to the proposed redevelopment of Tara Street Station include:

Widening the Tara Street pavement adjacent to a new station entrance to a minimum of 6.0 metres (from a present 3.5 metres). This increases the public realm area from 224m² prior to development to 530m².

Providing large amounts of space around all station concourse areas assigned as queuing or movement areas (ticket areas, staircases and escalator approaches). Widening the station platforms to eliminate present uncomfortable passenger congestion at peak hours. This increases the concourse area from 374m² to 1550m² following development.

9.5 OTHER PUBLIC TRANSPORT FACILITIES

DART Underground is a proposed underground link between the Loop Line just north of Connolly and the lines heading west out of Heuston. The proposed route of DART Underground passes east-west in the vicinity of Pearse Street, and as such is sufficiently remote from the Tara Street site as to not impact in any way on the design of the proposed development.

Although not specifically reflected in the proposed new station design, other than perhaps in clear signage policies, it should be noted that Tara Street Station is within a very short walk of most of the local Dublin buses which serve the central core. The streets around the station, such as Fleet Street, Poolbeg Street, and Hawkins Street are used as bus termini and waiting areas. Both the northern and southern quays of the River Liffey are also heavily used by local buses. Passenger movements between local rail and local bus are thus easily made.

Long distance and regional buses are based at the Busaras Central Bus Station behind the Custom House, which is a 5 minute walk away. Similarly, rail connections between Tara Street Station and the main line Connolly Station, one stop to the north, are easily made.

The proposed partially underground 'metro' will be an important addition to Dublin's public transportation system, and will carry high volumes of commuter traffic (with a capacity of more than 40,000 passengers per hour on the North Line). The preferred locations of city centre routes have been determined, and there are no planned Metro stations at Tara Street. The nearest station will be located underground at O'Connell Bridge as part of the North Line, a short walk away from Tara Street. The introduction of a metro in any core area location will greatly ease transportation congestion throughout the core, thus relieving pressure on other transportation facilities.

9.6 IMPACT OF THE OFFICE BUILDING

Transportation analysis has reviewed the impact which the proposed office building will have on the adjacent road system.

The roads immediately adjacent to the site are Tara Street (one-way northbound between Townsend Street and George's Quay), George's Quay (one-way westbound), Luke Street (two way between George's Quay and Townsend Street), Luke Street (two-way between Townsend Street and Georges Quay),

Poolbeg Street (one-way west-bound between Luke Street and Tara Street), Townsend Street (one-way eastbound between Tara Street and Lombard Street East). There are also specific no-turning movements, such as the right turn from Luke Street to Poolbeg Street, a prohibition which is often ignored.

The basic conclusion of the transportation analysis was quite straightforward. All major intersections adjacent to the site are already operating at capacity. Traffic on Tara Street and George's Quay is already at congestion point. However, it was assumed that there would be relatively little car usage associated with the office development, and thus that increased levels of congestion on these roads would be only in the order of 1% or 2%. Luke Street, Townsend Street and Poolbeg Street are presently less congested and could handle any additional traffic, although queuing times at junctions with Tara Street would be worsened.

It should be emphasised that in order to provide a non-circuitous access to the entrance of the proposed office underground car park on Poolbeg Street, the prohibited no right turn from Luke Street (north) to Poolbeg Street should be eliminated.

ON-SITE TRANSPORTATION ELEMENTS

In addition to the greatly enhanced commuter rail station itself, an examination has been made of other provided transportation elements that would work towards achieving the objectives of the Dublin Transportation Initiative. A prime objective of the Initiative is to minimise private car usage in the core, and encourage other modes of transportation. This is demonstrated in the proposal by providing fewer office car parking spaces than are permitted in planning regulations. There is a proposal to create a dedicated bicycle way along the entire length of the Liffey Quays, and along Townsend Street, and cycle parking provision for 150 cycles is provided for the office building as part of the proposal. High use of the DART system for the journey to work is anticipated. There are no bicycle facilities associated with the DART station itself.

Service access for the office building would be from a dedicated off-road service bay provided off Poolbeg Street. This service bay is also the means of access to the basement, which is achieved via a car lift.

Transport Policy Context and Global Proposed Public Transport Improvements

The Dublin City Development Plan 2005-2011 and the Dublin Transportation Office's Platform for Change, 2000-2016 outline the future transportation strategy

for Dublin's metropolitan areas and Hinterland. These two documents recommend an integrated approach to transportation in Dublin.

The integrated strategy seeks to reduce the reliance on the private car for commuting to work by improving and promoting public transport. Implementation of the strategy will involve the following:

- Provision of Quality Bus Corridors (QBC's).
- Proposed DART underground route linking Heuston Station to Spencer Dock
- Signal Improvements on DART .
- Extension of Light Rail (LUAS)
- Construction of the Metro System.
- Provision of Park and Ride facilities on the outskirts of the city to encourage an increase in public transport usage.
- Provision of additional Road Capacity, under National Roads Programme.
- Traffic management and Parking.
- Provision of City Centre Cycle Routes

Modal shift will be achieved by encouraging public transport operators to maximise the service provided on the existing infrastructure. The proposed development of the Tara Street DART station is in line with the Transport 21 Strategy as the development proposes to upgrade the DART Station, increasing the pedestrian throughout capacity from its present level of 6,000 passengers to 14,500 passengers per hour.

Dublin City Council policy includes the support of road proposals outlined by the Dublin Docklands Development Authority in their 2003 Master Plan. This Plan reiterates the policy of limiting private car travel, provision for cycle-routes and cycle parking in the Docklands Area and enhancing the network of pedestrian walkways.

The Dublin City Council's Strategic Cycle Network proposes the improvement of cycle routes in the surrounding area including improvements along George's Quay, Memorial Bridge, Luke Street, Townsend Street and Moss Street. In addition, new developments are required to provide one cycle bay per 100m² of office space, as is to be provided in the Tara Street Development. The development achieves this with 150 cycle spaces.

The Dublin Port Tunnel, which was opened in December 2006, has greatly improved access to Dublin Port. The Port Tunnel has resulted in a reduction in port-related traffic especially heavy goods vehicles (currently 6000 HGV's a day use the tunnel) on the city quays, including George's Quay.

Consultation with Dublin Bus has identified the key public transport proposals in the area of the site. At present the 15, 83 and 155 routes terminate along College Wall, leading to overflow problems during peak periods resulting in traffic backing into D'Olier Street. Dublin Bus proposals concentrate on reducing the number of services terminating on College Green. It was previously hoped that some of these services could be relocated to Poolbeg Street (west), however difficulties have occurred with these plans being progressed.

As identified earlier the policy of Dublin City Council in relation to the issue of improved public transport includes the construction of Quality Bus Corridors giving road and traffic signal priority to buses in order to reduce bus journey times and variability.

The LUAS scheme, a light rail scheme designed to reduce congestion in Dublin by giving commuters from the South a viable alternative to car travel, is set for expansion. Two Lines of the LUAS scheme are currently in operation, and six more lines are in the pipeline. The current lines are the Red Line (Line A): Connolly Station to central Tallaght, and the Green Line (Line B): St. Stephen's Green to Sandyford, and it is estimated that these lines receive 80,000 users daily. The lines which are planned to extend the network are as follows:

- **Line A1, City West Extension (under construction)**
- **Line B1, Sandyford to Cherrywood (under construction)**
- **Line B2, Cherrywood to Bray Environs**
- **Line BX (Line D), St Stephens Green to Liffey Junction**
- **Line C1, Docklands Extension (under construction)**
- **Line F, Dockland to City Centre**

As part of the proposed development Iarnród Éireann plan to improve the current quality and frequency of services on the DART line. The proposed improvements will promote the use of the DART service as an alternative to the private car.

Overall the public transport initiatives should help to encourage a modal shift from private to public transport thus helping to reduce current levels of congestion experienced on the local road network.