Rail
Park & Ride
Strategy for the
Greater Dublin Area

November 2004
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Executive Summary

Background

The DTO Steering Committee established a Park and Ride Working Group to devise a rail-based Park and Ride strategy for the GDA in December 2002. This report summarises the work of the Group in devising this Strategy.

Study Objectives, Scope and Definitions

The objectives of this study were to:

- develop a Park and Ride Strategy for the GDA, recommending a set of locations where investment in the provision of additional Park and Ride spaces will contribute to the achievement of the transport objectives outlined in A Platform for Change;
- carry out and report on an assessment of existing rail-based P & R facilities;
- develop a methodology to bring forward suitable sites for approval and funding by the appropriate agency, and for implementation and operation.

For the purposes of this study, only contender Park and Ride sites on the section of the IE Suburban Rail Network that occurs within the GDA (but including Drogheda) have been considered.

Rail Park and Ride is defined as being all formal car parking for rail users at stations/stops along the suburban rail, metro and LRT networks. In recognising locational and functional differences between sites, Park and Ride sites have been grouped into either Strategic or Local types.

Characteristics of the GDA

Currently there are 37 Rail Park and Ride sites in the GDA, offering a total of c. 6,800 spaces. The majority of sites on the IE network are operating at or in excess of their nominal capacity.

No control mechanisms are in place at Park and Ride sites in the GDA to ensure that the Park and Ride car parking is used exclusively by rail passengers. With the exception of four Park and Ride sites on the IE Suburban Rail/DART network, car parking is provided free of charge to users. Car parking is charged for at all 5 Park and Ride sites on both Luas Red and Green Lines.

The Role of rail-based Park & Ride

- Elsewhere:
  - From data supplied by 9 other medium to large cities, rail Park & Ride seems to be a key characteristic of the public transport networks of many of these cities.
  - It also appears that Dublin commuters are currently relatively well catered for with rail Park and Ride in terms of numbers of parking spaces per 1000 population.
  - Generally control and/or pricing mechanisms are in place at Park and Ride sites in other cities. (free, uncontrolled parking at P & R sites in only 3 of the 9 cities)
Elsewhere central / local government generally bears the capital costs, including land acquisition of Park and Ride, and either local government or public transport operators bear the annual operating costs.

- In the GDA:
  Park and Ride offers those living outside walking/ cycling catchments of rail stations and not served by feeder bus services the opportunity to use rail for a proportion of their travel. It can therefore increase the effective catchment area of the rail network and this can result in an overall shift from car and towards public transport within the GDA.

**Rail Network Capacity in the GDA**

Rail capacity is currently generally insufficient to meet peak hour demand. Improvements/ additions to the rail network are planned, the implementation of which will result in increases in capacity (e.g. DASH Phase 1).

The timing of the development of any Park and Ride facility should match the programme of planned increases in rail service capacity.

**Site Selection Methodology**

The Working Group devised a methodology whereby all existing and proposed rail stations on the existing GDA suburban rail network and all rail stations/ stops on the committed rail network (Luas Red and Green Lines, which were under construction at the commencement of this study) were examined for the potential to provide Park and Ride facilities. In addition, a number of locations on Metro Phase 1 were identified as possible Park and Ride facilities, some of which were on Luas Line B1 (Luas Green Line extension from Sandyford to Cherrywood) and upgrade to Metro.

**Proposed Facilities**

The evaluation process indicated a requirement for additional Park and Ride at 22 sites in the GDA, 7 at sites which are strategic in nature and 15 at ‘local’ sites. Of these 22 sites, 12 are new. The exact number of spaces to be provided at each Park and Ride site will be determined during the development of the business case for each one.

*Map 1* shows the existing and proposed additions to rail-based Park and Ride facilities within the GDA following implementation of the recommendations of this report.

**Principles Guiding Implementation**

The Working Group agreed a set of policies and principles that will guide progress in implementing the rail-based Park and Ride Strategy. In summary these are:

- P & R should improve rail accessibility without disimproving road congestion.
- Rail users only should use Park and Ride spaces, and may have to pay to use them.
• Complementary parking controls in the areas around stations may be required.
• Rail fares generally should not be increased to pay for Park and Ride.
• Those who benefit from Park and Ride should contribute to the cost of it.
• Rail service must be able to serve the demand generated by P & R provision.

**Next Steps to Delivery**

The Working Group also agreed a series of next steps to be pursued. In summary, these are:
• Prioritise the list of 22 sites based on agreed criteria, including transport gain.
• Agree a Lead Agency for each location, and identify a list of partner agencies who have an interest in the development of the facility.
• Draw up a list of sites for which each Lead Agency will take responsibility.
• Agree a methodology for preparing a Business Case, which would include a Transport Impact Assessment and a Cost Benefit Analysis for each site.
• The Lead Agency will prepare the Business Case, including the TIA and CBA, in conjunction with partner agencies for each location.
• The Lead Agency will bring forward the proposal to the appropriate agency for approval and funding.
1. **Introduction**

1.1 **Study Background and Objectives**

Park and Ride is an element of the DTO transport strategy 2000 – 2016 *A Platform for Change*, and is referred to under the category of Integration in the final report presented to Government published in November 2001. There are two main types of Park and Ride, **bus-based**, where bespoke bus services operate from purpose built car parks, and **rail-based**, where parking at rail stations can effectively widen the catchment of the rail lines.

DTO recently procured consultant advice to formulate a policy on bus-based Park and Ride\(^1\). Subsequently the DTO Steering Committee established a Park and Ride Working Group in December 2002 to devise a rail-based Park and Ride strategy. This report contains the findings and recommendations of the Working Group.

*Appendix A* contains the lists of members of the Rail-based Park and Ride Working Group.

1.2 **Study Objectives**

The objectives of this study are to:

- develop a Park and Ride Strategy for the GDA, recommending a set of locations where investment in the provision of additional Park and Ride spaces will contribute to the achievement of the transport objectives outlined in *A Platform for Change*;
- carry out and report on an assessment of existing rail-based Park and Ride facilities;
- develop a methodology to bring forward suitable sites for approval and funding by the appropriate agency, and for implementation and operation.

1.3 **Policy Framework**

1.3.1 **Strategic Planning Guidelines**

The Strategic Planning Guidelines (SPGs) were published in 1999 and set out the regional spatial strategy for the Greater Dublin Area. They divided the Greater Dublin Area into two parts; the Metropolitan Area, which broadly corresponds to the built up area of Dublin, and the Hinterland Area, which is the rest of the GDA. The SPGs have recently been reviewed and were replaced in 2004 by the Regional Planning Guidelines (RPGs).

The guidelines provide an overall strategic context for the development plans of each local authority.

The SPGs/ RPGs are framed on the twin principles of:

- consolidating development in a designated Metropolitan Area to accommodate greater population than at present, together with

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• designating a series of self-sustaining development centres within the Hinterland Area, with high quality transport links from these, to points within the Metropolitan Area.

1.3.2 A Platform for Change

The DTO Strategy 2000 – 2016 A Platform for Change (APfC) was published in November 2001 and proposes a transport strategy designed to contribute to the achievement of SPG goals for the Greater Dublin Area.

APfC recommends a greatly expanded public transport network to serve the consolidated Metropolitan Area, and proposes to link sustainable development centres in the Hinterland Area to the Metropolitan Area by high quality rail and bus networks. To achieve these goals significant investment in heavy rail and metro networks is recommended.

The DTO policy on Park and Ride within APfC is included in the Integration Section of the Strategy as it facilitates the integration of the private car and public transport modes. The policy on Park and Ride states that facilities should be provided at locations where the national road network meets the public transport networks. Furthermore, the facilities should be located where cars accessing Park and Ride services do not add unduly to congestion on the road network.

1.4 Study Scope

This study examines:
• The proposed enhancements to the infrastructure and services on the GDA suburban rail network (DART and Suburban Rail), to identify the capacity of the rail service to cater for additional demand generated by the provision of Park and Ride car parks, and therefore to recommend appropriate phasing of provision of Park and Ride with additional rail capacity;
• the locations at which the development of additional / new Park and Ride may be appropriate along the existing suburban rail network, Luas Red and Green Lines and proposed extension of Luas Green Line to Cherrywood (Line B1), proposed suburban rail spur to Pace (Navan Phase 1), the proposed Metro Phase 1 and;
• the target market of the sites identified;
• the estimated scale of Park and Ride facilities to meet demand at both existing and proposed locations;
• appropriate control strategies to ensure that Park & Ride spaces are occupied by intended users; and
• a proposed methodology for preparing a business case for each proposed Park and Ride facility in the strategy, including a full Transport Impact Assessment, for application for approval and funding by an appropriate source.
**Introduction**

- Park and Ride is an element of the DTO transport strategy 2000 – 2016 *A Platform for Change*

- The DTO Steering Committee established a Park and Ride Working Group to devise a rail-based Park and Ride strategy for the GDA in December 2002

- The Strategic Planning Guidelines for the Greater Dublin Area and *A Platform for Change* are the overarching policy documents influencing this study

- The objectives of this study are to:
  - develop a Park and Ride Strategy for the GDA, recommending a set of locations where investment in the provision of additional Park and Ride spaces will contribute to the achievement of the transport objectives outlined in *A Platform for Change*;
  - carry out and report on an assessment of existing rail-based Park and Ride facilities;
  - develop a methodology to bring forward suitable sites for approval and funding by the appropriate agency, and for implementation and operation.
2. **Definitions**

2.1 **Rail Park and Ride**

For the purposes of this study, rail Park and Ride is defined as being all formal car parking for rail users at stations / stops along the suburban rail, metro and LRT networks.

To reflect geographic and functional differences between sites, it was decided to group sites into either Strategic or Local Park and Ride, defined below.

2.2 **Strategic Park and Ride**

Strategic Park and Ride is defined as the provision of rail Park and Ride facilities where the national road network meets the rail network.

As the strategic Park and Ride sites are potentially located in and serve differing geographic areas, the level of demand for parking at sites may vary. Therefore, this report intends only to specify the intended function of the sites and not the actual size, although a view is given of the preferred scale of each facility. The implementing agency will be required to demonstrate in the business case for each location that the number of spaces proposed is compatible with the intended function of the Park and Ride site as defined in the Strategy.

2.3 **Local Park and Ride**

Local Park and Ride is defined as the provision of car parking at rail stations to cater for the demand for parking from the surrounding area. The preferred function of a Local Park and Ride site would be to serve residents who live in the vicinity of the station, but who are beyond the natural walking catchment, and are not served by feeder bus services accessing the station or who are mobility impaired.

As the local Park and Ride sites are located in areas which may differ in character, the demand for parking at such sites may be very different. The pattern of use of local Park and Ride sites may also be influenced by competing demands for parking generated by nearby town centre or workplace activities. As in the case of strategic Park and Ride, a proposed Local site should have an agreed function. To prevent congestion on the local road network and to ensure the most sustainable use of land in public transport corridors, the Working Group recommends that the size of local Park and Ride sites would be kept as small as possible, and would not in normal circumstances exceed 300 spaces. (The exact size of Park and Ride at each location will be determined in the site-specific business case.)

2.4 **Extent of Rail Commuter Network: Geographical Scope of Study**

The Iarnrod Eireann Suburban Rail Network extends from Dundalk in the north (Northern Suburban) to Arklow in the south (South Eastern Suburban) and west to Mullingar (Western Suburban) and Portlaoise / Carlow (Arrow).
However, the remit of the DTO in terms of transport planning and allocation of development funds extends to the area covered by four county jurisdictions, Dublin, Meath, Kildare and Wicklow. As an 'unbounded' approach to the widening of rail catchments further afield may have serious repercussions for the ability of rail capacity to serve demand generated within the GDA, it was decided to limit recommendations for Park and Ride provision to the proportion of the IE Suburban Rail Network that occurs within the GDA (but including Drogheda).

Therefore for the purposes of taking rail-based Park and Ride investment decisions, only those stations located within the GDA were considered.

### Definitions

- Rail Park and Ride is defined as being all formal car parking for rail users at stations / stops along the suburban rail, metro and LRT networks

- In recognising locational and functional differences between sites, Park and Ride sites have been grouped into:
  - Strategic
  - Local

- For the purposes of this study, only contender Park and Ride sites on the section of the IE Suburban Rail Network that occurs within the GDA (but including Drogheda) have been considered
3. **Characteristics of the GDA**

3.1 *Population/ Employment*

The Greater Dublin Area comprises the local authority areas of Dublin City, Dun Laoghaire Rathdown, Fingal and South Dublin (the Dublin Region), Meath, Kildare and Wicklow (the Mid-East Region) and covers an area of approximately 6,987km$^2$.

The Strategic / Regional Planning Guidelines divide the Greater Dublin Area into the Metropolitan Area and the Hinterland Area.

The GDA currently has a population in excess of 1.5 million inhabitants, 1.18 million of which live in the Dublin Metropolitan Area.

**Table 3.1:** Population of local authorities within the G.D.A.

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Population$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin City</td>
<td>495,101</td>
</tr>
<tr>
<td>Dun Laoghaire Rathdown</td>
<td>191,389</td>
</tr>
<tr>
<td>Fingal</td>
<td>196,223</td>
</tr>
<tr>
<td>South Dublin</td>
<td>239,887</td>
</tr>
<tr>
<td>Meath</td>
<td>133,936</td>
</tr>
<tr>
<td>Kildare</td>
<td>163,995</td>
</tr>
<tr>
<td>Wicklow</td>
<td>114,719</td>
</tr>
<tr>
<td><strong>Total GDA</strong></td>
<td><strong>1,535,250</strong></td>
</tr>
</tbody>
</table>

**Table 3.2:** Population and employment of G.D.A. in the Hinterland Area, The Metropolitan Area and the City Centre

<table>
<thead>
<tr>
<th>Area</th>
<th>Population$^3$</th>
<th>Employment$^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinterland Area</td>
<td>355,167</td>
<td>89,906</td>
</tr>
<tr>
<td>Metropolitan Area (incl. C.C.)</td>
<td>1,180,083</td>
<td>651,094</td>
</tr>
<tr>
<td>City Centre</td>
<td>96,964</td>
<td>229,975</td>
</tr>
<tr>
<td><strong>Total GDA</strong></td>
<td><strong>1,535,250</strong></td>
<td><strong>741,000</strong></td>
</tr>
</tbody>
</table>

3.2 *Road Network*

The National Road Network is at the top level of the hierarchy of roads in Ireland and provides access via a series of radial routes from the Hinterland Area boundary to the Metropolitan Area boundary and to the M50, which provides an orbital link around the city.

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$^2$ 2002 Census of Population

$^3$ 2002 Census of Population

$^4$ DTO Trip Attraction and Generation Model, 2001 Survey of Employment
Table 3.3: National Radial Road Network in the Metropolitan Area

<table>
<thead>
<tr>
<th>Road</th>
<th>From</th>
<th>Description at Metropolitan Boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Belfast, Dundalk, Drogheda, Balbriggan</td>
<td>2 lane Motorway</td>
</tr>
<tr>
<td>N2</td>
<td>Derry, Ashbourne</td>
<td>Single carriageway</td>
</tr>
<tr>
<td>N3</td>
<td>Cavan, Navan</td>
<td>Dual carriageway with grade separated interchanges</td>
</tr>
<tr>
<td>N/ M4</td>
<td>Galway</td>
<td>2 lane Motorway</td>
</tr>
<tr>
<td>N7</td>
<td>Limerick, Cork, Waterford, Newbridge, Naas</td>
<td>2 lane Motorway</td>
</tr>
<tr>
<td>N81</td>
<td>Blessington</td>
<td>Single carriageway</td>
</tr>
<tr>
<td>N/ M11</td>
<td>Rosslare, Wicklow</td>
<td>2 lane Motorway (presently under construction)</td>
</tr>
</tbody>
</table>

Major improvements to the National Road Network in the GDA are either proposed or are under construction at present. The existing and proposed National Primary Road Network is shown in Figure 3.1.

3.3 Suburban Rail Network

Suburban rail services are provided by Iarnrod Eireann Suburban Rail Network. The existing suburban rail network within the GDA is sparse, and there are large sections of the GDA that are not served by the rail network.

Table 3.4: Suburban rail network in the GDA

<table>
<thead>
<tr>
<th>Line Name</th>
<th>Areas served</th>
</tr>
</thead>
<tbody>
<tr>
<td>DART</td>
<td>Howth/ Malahide via Connolly Station to Greystones / Bray</td>
</tr>
<tr>
<td>Northern Suburban</td>
<td>Drogheda to Pearse</td>
</tr>
<tr>
<td>South Eastern Suburban</td>
<td>Arklow to Connolly</td>
</tr>
<tr>
<td>South Western/ Arrow</td>
<td>Monasterevin, Athy &amp; Kildare to Heuston</td>
</tr>
<tr>
<td>Western Suburban</td>
<td>Enfield to Connolly</td>
</tr>
</tbody>
</table>

In addition to significant improvements planned on the existing Suburban Rail Network, *A Platform for Change* proposes a spur off the Maynooth line to Navan. Phase 1 of this line will run to Pace (north of Clonee) where it will terminate at an intersection on the proposed M3 motorway.

The existing Rail Network in the GDA and Phase 1 of the proposed Navan Rail Line which extends to Pace is shown in Figure 3.1.

3.4 Luas

Luas Red and Green Lines started passenger carrying services in Summer/Autumn 2004. Luas Red Line, runs from Tallaght to the city centre and has 30m trams operating initially at a peak headway of 5 minutes, each with a capacity of 235 people. Luas Red Line has 23 stops of which two have Park & Ride facilities.
Luas Green Line, runs from Sandyford to the city centre and has 40m trams operating initially at a peak headway of 5 minutes, each with a capacity of 310 people. Luas Green Line has 13 stops, of which three have Park & Ride facilities.

In total, there are 36 light rail stops on two Luas lines, offering a total of 2,055 car parking spaces at 5 Park and Ride sites.

The 2 existing Luas lines and proposed extensions to these lines are shown in Figure 3.1.

3.5 Metro

Metro is a light rail system similar to Luas, except that it is completely segregated from other traffic, i.e. it has no on-street sections. This means that it can have longer vehicles, operating at higher average speeds and higher frequency and therefore has the potential to provide very high passenger capacity.

A Platform for Change proposes a metro system for Dublin. The RPA has been remitted by Government to develop the business case for such a system, and to identify alignments for Phase 1 of the indicative network. Phase 1 runs from Shanganagh (just north of Bray, interchanging with DART) to the Airport, via Sandyford Industrial Estate and the city centre. A spur to Blanchardstown is also included in Metro Phase 1.

Development of Metro Phase 1 is likely to be implemented in two sections. Section 1 will run from the Airport to the city centre. Section 2 will run from the city centre to Shanganagh. Section 2 also includes a spur off Metro Section 1 to Blanchardstown.

It is proposed that Section 1 of Phase 2 would involve an extension from the Airport to Swords.

The RPA preferred alignment for Phase 1, Section 2 and indicative alignments for Phase 1, Section 2 and Phase 2, Section 1 are shown in Figure 3.1.
Figure 3.1: Rail and National Primary Road Network within the GDA
3.6 Existing Rail Park and Ride

3.6.1 Suburban Rail

The DTO carried out an assessment of existing Park and Ride facilities at all stations in the GDA in November 2003.

There are currently 62 suburban rail stations on the IE Suburban Rail/ DART network in the GDA, of which 32 locations provide a total of c. 4,750 Park and Ride spaces. The largest amount of parking serves Greystones station, with 518 spaces in total at two sites (56 spaces adjacent to the station and 462 spaces located at c. 10 minutes walk from the station).

24 of the 32 Park and Ride sites on the IE Suburban Rail/ DART network in the GDA are owned and operated by the public transport operator (Iarnród Éireann), 7 are owned and operated by local authorities. An additional Park and Ride site is located in a church car park in Raheny Village, which currently functions as an informal Park and Ride facility for Raheny DART Station, and is occasionally unavailable to rail users due to church requirements.

Parking at stations is currently not restricted solely to users of the rail station, in that there is no system in place whereby the users are required to demonstrate that they will use or have used the rail service.

At Park and Ride sites where demand exceeds capacity and no control measures are in place, the sites are generally occupied very early in the morning and are not vacated until late in the afternoon/ evening. The turnover of parking spaces at these stations is therefore very low. Occupancy rates at the station car parks vary from location to location. The assessment of Park and Ride facilities carried out in November 2003 indicated that the majority of rail car parks are operating close to or in excess of their official capacity. 26 out of 32 on the IE Suburban Rail/ DART network in the Greater Dublin Area are operating at an occupancy rate of 95% or greater and 23 are operating at an occupancy rate of 100% or greater.

Features of the Park and Ride facilities on the Suburban Rail network are presented in Table 3.5.
### Table 3.5: Assessment of existing Park and Ride Facilities (Suburban Rail), November 2003

<table>
<thead>
<tr>
<th>Station Name</th>
<th>Station Ref No.</th>
<th>Capacity</th>
<th>Use %</th>
<th>Parking Contact Mechanism</th>
<th>No. in vicinity of Station operated by Rail Station owner</th>
<th>Carpark Availability?</th>
<th>Bus No. (if applicable)</th>
<th>Day of Survey</th>
<th>State of Survey</th>
<th>Time of Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athy</td>
<td>1</td>
<td>155</td>
<td>33%</td>
<td>None</td>
<td>0</td>
<td>No</td>
<td>-</td>
<td>Tuesday</td>
<td>10/11/2003</td>
<td>16:30</td>
</tr>
<tr>
<td>Balbriggan</td>
<td>2</td>
<td>97</td>
<td>131%</td>
<td>None</td>
<td>0</td>
<td>Yes</td>
<td>-</td>
<td>Tuesday</td>
<td>10/11/2003</td>
<td>12:00</td>
</tr>
<tr>
<td>Blackrock</td>
<td>3</td>
<td>20</td>
<td>100%</td>
<td>Parking in charge for up to 3 hours and a rate of 45.03/24 hours, 45.03/3 hours and 45.03/5 day.</td>
<td>0</td>
<td>Yes</td>
<td>-</td>
<td>Tuesday</td>
<td>10/11/2003</td>
<td>14:00</td>
</tr>
<tr>
<td>Ballymote</td>
<td>4</td>
<td>114</td>
<td>117%</td>
<td>None</td>
<td>0</td>
<td>Yes, behind a locked gate</td>
<td>B</td>
<td>4 - 5 located to barrier outside paid bicycle area</td>
<td>Thursday</td>
<td>10/11/2003</td>
</tr>
<tr>
<td>Ballymenage</td>
<td>5</td>
<td>77</td>
<td>112%</td>
<td>None</td>
<td>C. 40 in paid for area round to station</td>
<td>Yes</td>
<td>134</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>16:00</td>
</tr>
<tr>
<td>Collooney Road</td>
<td>6</td>
<td>105</td>
<td>74%</td>
<td>None</td>
<td>0</td>
<td>Yes</td>
<td>20</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>08:30</td>
</tr>
<tr>
<td>Donore</td>
<td>7</td>
<td>85</td>
<td>82%</td>
<td>None</td>
<td>0</td>
<td>No</td>
<td>-</td>
<td>Wednesday</td>
<td>10/11/2003</td>
<td>10:30</td>
</tr>
<tr>
<td>Donore</td>
<td>8</td>
<td>866</td>
<td>54%</td>
<td>Parking is charged for F &amp; C at a rate of 45.03/24 hours, 45.03/3 day and 45.03/5 day (time of survey)</td>
<td>0</td>
<td>Yes</td>
<td>30</td>
<td>Wednesday</td>
<td>10/11/2003</td>
<td>12:30</td>
</tr>
<tr>
<td>Drogheda</td>
<td>9</td>
<td>287</td>
<td>195%</td>
<td>None</td>
<td>V. Few, jam</td>
<td>Yes</td>
<td>19</td>
<td>Wednesday</td>
<td>10/11/2003</td>
<td>16:30</td>
</tr>
<tr>
<td>Drogheda</td>
<td>10</td>
<td>22</td>
<td>22%</td>
<td>None</td>
<td>C. 20 unless spaces in reality of station or paid road</td>
<td>Yes</td>
<td>6</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>15:30</td>
</tr>
<tr>
<td>Drogheda</td>
<td>11</td>
<td>153</td>
<td>157%</td>
<td>None</td>
<td>Up to 30 in p. adjacent station with unattended spaces parking</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>14:15</td>
</tr>
<tr>
<td>Edenderry</td>
<td>12</td>
<td>185</td>
<td>131%</td>
<td>V. Few, jam, 1 sets of 100, 2 sets of 50 in reality of station</td>
<td>0</td>
<td>Yes</td>
<td>55</td>
<td>Wednesday</td>
<td>10/11/2003</td>
<td>09:45</td>
</tr>
<tr>
<td>Enniscorthy</td>
<td>13</td>
<td>56</td>
<td>104%</td>
<td>None</td>
<td>V. Few</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>14/11/2003</td>
<td>08:15</td>
</tr>
<tr>
<td>Enniscorthy</td>
<td>14</td>
<td>56</td>
<td>12%</td>
<td>None</td>
<td>V. Few</td>
<td>Yes</td>
<td>-</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>15:30</td>
</tr>
<tr>
<td>Enniscorthy</td>
<td>15</td>
<td>301</td>
<td>77%</td>
<td>Parking is charged for at a rate of 45.03/24 hours, 45.03/3 day and 45.03/5 day - paid road only</td>
<td>0</td>
<td>Yes</td>
<td>338</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>12:45</td>
</tr>
<tr>
<td>Killarney</td>
<td>16</td>
<td>52</td>
<td>85%</td>
<td>None</td>
<td>V. Few - 2 cars</td>
<td>Yes</td>
<td>16</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>14:30</td>
</tr>
<tr>
<td>Killarney</td>
<td>17</td>
<td>52</td>
<td>85%</td>
<td>None</td>
<td>V. Few - 2 cars</td>
<td>Yes</td>
<td>-</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>11:30</td>
</tr>
<tr>
<td>Killarney</td>
<td>18</td>
<td>93</td>
<td>155%</td>
<td>None</td>
<td>C. 3 - 4 in K &amp; R Area</td>
<td>Yes</td>
<td>8</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>14:20</td>
</tr>
<tr>
<td>Kildare</td>
<td>19</td>
<td>15</td>
<td>100%</td>
<td>None</td>
<td>V. Near - 13</td>
<td>No</td>
<td>-</td>
<td>Wednesday</td>
<td>12/11/2003</td>
<td>11:30</td>
</tr>
<tr>
<td>Kildare</td>
<td>20</td>
<td>10</td>
<td>13%</td>
<td>None</td>
<td>V. Near - 13</td>
<td>No</td>
<td>-</td>
<td>Wednesday</td>
<td>12/11/2003</td>
<td>11:30</td>
</tr>
<tr>
<td>Liffey - east of station</td>
<td>21</td>
<td>32</td>
<td>46%</td>
<td>None</td>
<td>C. 30 or exactly opposite the station</td>
<td>Yes</td>
<td>9</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>11:30</td>
</tr>
<tr>
<td>Liffey</td>
<td>22</td>
<td>16</td>
<td>102%</td>
<td>None</td>
<td>V. Few or public roads as parking control is located on site</td>
<td>No</td>
<td>-</td>
<td>Wednesday</td>
<td>10/11/2003</td>
<td>15:45</td>
</tr>
<tr>
<td>Mavoran</td>
<td>23</td>
<td>169</td>
<td>33%</td>
<td>None</td>
<td>Parking is very restrictive as large set of unattended parking in various areas (400m from agent)</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>10:15</td>
</tr>
<tr>
<td>Navan</td>
<td>24</td>
<td>83</td>
<td>19%</td>
<td>None</td>
<td>V. Few</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>15:30</td>
</tr>
<tr>
<td>Navan</td>
<td>25</td>
<td>230</td>
<td>267%</td>
<td>None</td>
<td>13 cars on public road</td>
<td>Yes</td>
<td>24</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>14:00</td>
</tr>
<tr>
<td>Navan</td>
<td>26</td>
<td>196</td>
<td>219%</td>
<td>None</td>
<td>13 cars on public road</td>
<td>Yes</td>
<td>19</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>16:30</td>
</tr>
<tr>
<td>Navan</td>
<td>27</td>
<td>83</td>
<td>94%</td>
<td>None</td>
<td>C. 10 (may park on station road in east of station)</td>
<td>Yes, behind locked gate</td>
<td>12</td>
<td>4 - 5 located to barrier outside paid bicycle area</td>
<td>Thursday</td>
<td>10/11/2003</td>
</tr>
<tr>
<td>Navan</td>
<td>28</td>
<td>152</td>
<td>314%</td>
<td>None</td>
<td>V. Near - 12</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>12:30</td>
</tr>
<tr>
<td>Navan</td>
<td>29</td>
<td>116</td>
<td>135%</td>
<td>None</td>
<td>V. Near - 12</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>12:30</td>
</tr>
<tr>
<td>Navan</td>
<td>30</td>
<td>130</td>
<td>36%</td>
<td>None</td>
<td>V. Near - 12</td>
<td>Yes</td>
<td>30</td>
<td>Thursday</td>
<td>10/11/2003</td>
<td>12:30</td>
</tr>
<tr>
<td>Navan</td>
<td>31</td>
<td>125</td>
<td>134%</td>
<td>None</td>
<td>10 - 15 mins, no access road into station</td>
<td>Yes</td>
<td>40</td>
<td>Wednesday</td>
<td>11/11/2003</td>
<td>12:30</td>
</tr>
<tr>
<td>Navan</td>
<td>32</td>
<td>99</td>
<td>119%</td>
<td>None</td>
<td>80 space s.p. at Navan N.P.C. signed private, but probably used by rail station users, C. 50% full</td>
<td>No</td>
<td>-</td>
<td>Wednesday</td>
<td>11/11/2003</td>
<td>12:00</td>
</tr>
</tbody>
</table>

| Total        |                |          |       |                          | 380                    | 457 bikes = 12 vs 1 bikes |
3.6.2 **Luas**

5 Park and Ride sites are located along Luas Red and Green Lines offering a total of 2,055 spaces.

The 3 Park and Ride sites on Luas Green Line offer a total of c. 850 parking spaces, in close proximity to one another at the Sandyford, Stillorgan (split in 2 with both sections) and Balally stops. The 2 Park and Ride sites on Luas Red Line are located at the Red Cow stop adjacent to the N7/ M50 interchange (c. 755 spaces) and at Tallaght Town Centre (450 spaces).

Planning permission has been granted for an additional Luas Park and Ride facility on Luas Red Line (at Belgard Road/ Cookstown stop (200 spaces)), which will increase Park and Ride capacity on the Luas network from 2,055 to 2,255.

The November 2003 survey of Park and Ride utilisation predated the opening of Luas Red and Green Lines and so no information is available on occupancy rates of these facilities.

3.6.3 **Costs and Controls**

In total, there are 6,803 spaces located at 37 Park and Ride sites on the Suburban Rail/ DART and Luas networks in the GDA.

There are no control mechanisms in place at Park and Ride sites on the IE Suburban Rail/ DART network in the GDA to ensure that car parking is used exclusively by rail passengers. This has resulted in a situation where the function of some Park and Ride sites is being undermined, as they are used as additional parking for the local area including local employment centres, e.g. Clontarf, Balbriggan, Booterstown.

With the exception of four Park and Ride sites on the IE Suburban Rail/ DART network located at Connolly, Heuston and Blackrock and Salthill stations, car parking is provided free of charge to users.

The 5 Park and Ride sites on the two Luas lines are owned and operated by the RPA. At the time of writing this document, the RPA were in the process of seeking tenders for the operation and management of their P & R network.

The costs associated with the existing Park and Ride parking stock are entirely related to operating (lighting, security, whether personnel or CCTV cameras, ticketing machines and barriers etc.) and maintenance of the car park.

IE/ CIE do not isolate the operating cost of the Park and Ride facility from that of the cost of operation of any station generally. However, the RPA has supplied information on operating and maintenance costs of three Park and Ride sites on the Sheffield Supertram in the UK (all of which are fully controlled Park and Ride sites)⁵. These were €421, €406 and €454/ space p.a. for sites of 200, 350 and 200 spaces respectively.

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⁵ Luas Line A/ C and B (Luas Red and Green Lines) Park and Ride Study, July 2003
The RPA assumed in their Luas Lines A/C and B (Red and Green Luas Lines) Park and Ride study that the costs associated with Park and Ride sites on these lines would be €486/ space. This figure assumes a barrier controlled system, whereas a Pay and Display controlled system would be cheaper to operate. Their cost estimate is broadly comparable with an estimate obtained by DTO from Parkrite Ltd, which estimates the annual O & M costs of a 500 space daytime surface car park to be €409/ space\(^6\).

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**Characteristics of the GDA**

- **Population/ Employment:**
  - Currently 1.535 million people in the GDA, 1.18 million of which live in the Metropolitan Area and c. 355,000 in the Hinterland Area
  - Currently C. 741,000 jobs in the GDA, c. 651,100 of which are in the Metropolitan Area and c. 89,900 in the Hinterland Area
- **Road Network:** The National Radial Road Network is at the top level of road hierarchy. Radial rotes are M1, N2, N3, N/ M4, N7 N81 and N/ M11
- **Rail Network:**
  - Heavy Rail Network: Consisting of DART, Northern Suburban, South Eastern Suburban, South Western/ Arrow, Western Suburban
  - Luas: 2 light rail lines, The Red Line from Tallaght to the city centre and The Green Line from Sandyford to the city centre
  - Metro: Proposed in APfC; Phase 1 of which will run from Shanganagh (interchanging with DART beside Bray) to the Airport, via Sandyford and the city centre
- **Rail Park and Ride:**
  - Currently 37 Rail Park and Ride sites in the GDA
  - 24 IE owned, 7 local authority owned, 5 RPA owned
  - c. 6,800 spaces at these sites
  - Majority of sites on IE network operating at or in excess of official capacity. (26 out of 32 operating at an occupancy rate at or in excess of 95% and 23 are operating at an occupancy rate at or in excess of 100%)
  - Committed plans to provide an additional 200 spaces on the Red Luas line exist
  - No control mechanisms are in place at Park and Ride sites in the GDA that ensure Park and Ride car parking is used exclusively by rail passengers
  - With the exception of four Park and Ride sites on the IE Suburban Rail/ DART network, car parking is provided free of charge to users. Car parking is charged for at all 5 Park and Ride sites on Luas Red and Green Lines

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\(^6\) The Economics of Pay Car Parks, 1998
4. The Role of rail-based Park & Ride

4.1 The role of rail Park and Ride in Other Cities

*Table 4.1* shows the level of Park and Ride provision in 9 other cities, varying in size from South Yorkshire (Sheffield), with a population of c. 1.3 million to Moscow, with a population of c. 13 million.

As the table shows, the number of Park and Ride spaces per 1,000 population varies significantly from city to city. At the moment, Dublin commuters appear to be well catered for on the basis of this indicator.

*Table 4.1:* Summary of P & R Facilities in other cities

<table>
<thead>
<tr>
<th>City Name</th>
<th>Pop (m)</th>
<th>Surface Area (km²)</th>
<th>No. of Rail Stations/ Stops</th>
<th>No. of Rail P &amp; R Sites</th>
<th>No. of Rail P &amp; R Spaces</th>
<th>No. of P &amp; R Spaces/1000 pop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockholm</td>
<td>1.85</td>
<td>6,500</td>
<td>250</td>
<td>70</td>
<td>6,000 (300 – 400 new spaces per year at rail or major bus stations)</td>
<td>3.24</td>
</tr>
<tr>
<td>Athens</td>
<td>3.7</td>
<td>1,450</td>
<td>Info Not available</td>
<td>2 (4 add. planned in short term)</td>
<td>600 (c. 2,000 extra planned in short term)</td>
<td>0.16 (0.70 in short term)</td>
</tr>
<tr>
<td>Madrid</td>
<td>5.1</td>
<td>8,028</td>
<td>255</td>
<td>64</td>
<td>17,084</td>
<td>3.34</td>
</tr>
<tr>
<td>Paris, Ile de France</td>
<td>11</td>
<td>12,000</td>
<td>860</td>
<td>422</td>
<td>107,000</td>
<td>9.73</td>
</tr>
<tr>
<td>London</td>
<td>7.3</td>
<td>4,042</td>
<td>342 (Excludes Sub Rail)</td>
<td>68 (Excludes Sub Rail)</td>
<td>Info not available</td>
<td>-</td>
</tr>
<tr>
<td>West Midlands</td>
<td>2.6</td>
<td>902</td>
<td>95</td>
<td>43</td>
<td>5,172</td>
<td>2.02</td>
</tr>
<tr>
<td>South Yorkshire</td>
<td>1.3</td>
<td>1,561</td>
<td>77</td>
<td>24</td>
<td>Info not available</td>
<td>Info not available</td>
</tr>
<tr>
<td>Moscow Region (2003)</td>
<td>13.0 (pop. is curr falling)</td>
<td>46,000</td>
<td>Info Not available</td>
<td>1</td>
<td>320</td>
<td>0.025</td>
</tr>
<tr>
<td>Moscow Region (2020)</td>
<td>Info not available</td>
<td>Info not available</td>
<td>Info not available</td>
<td>150,000</td>
<td>11.53</td>
<td></td>
</tr>
<tr>
<td>Brisbane</td>
<td>2.2</td>
<td>10,458</td>
<td>143</td>
<td>105</td>
<td>16,009</td>
<td>7.27</td>
</tr>
<tr>
<td>Greater Dublin Area</td>
<td>1.5</td>
<td>6,987</td>
<td>98</td>
<td>37</td>
<td>6,803</td>
<td>4.54</td>
</tr>
</tbody>
</table>

4.2 Control and Pricing of Park and Ride in Other Cities

*Table 4.2* lists the control and pricing strategies operated in Park and Ride sites in a number of other cities worldwide. Of the cities surveyed, only Stockholm, Athens and Brisbane offer free, uncontrolled parking at Park and Ride sites. Control and/or pricing mechanisms are in place at Park and Ride sites in the other cities. The control and pricing mechanisms vary, although most include some form of integrated public transport and parking ticket, with
the of parking charge varying by duration and user type, e.g. hourly, daily, weekly, monthly, annual, disabled, senior citizen etc.

**Table 4.2:** Control and Pricing of Park and Ride in Other Cities

<table>
<thead>
<tr>
<th>City Name</th>
<th>Control Mechanism</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockholm</td>
<td>Control provided by the city/ communities. Parking for periods in excess of 24 hours is not allowed</td>
<td>Free parking</td>
</tr>
<tr>
<td>Athens</td>
<td>None. All parking is full approx 1 hour before local businesses open, therefore in practice only rail users use parking</td>
<td>Free parking</td>
</tr>
<tr>
<td>Madrid</td>
<td>A combined P.T. and parking ticket with an additional charge for car parking.</td>
<td>Nominal charge for parking at just 6 stations At these sites rail users possessing a valid p.t. ticket of the appropriate period are charged at a cost of €1/ day, €4/ week, €9/ 2 weeks, €15/ month. These charges are for parking during a 14 hour day. An additional hourly charge of €1.15 is imposed for stays of longer duration. Parking is charged for at a maximum of €1.15/ hour or €11.5/ day for non users. Car parking is charged for on a per car basis.</td>
</tr>
<tr>
<td>Paris, Ile de France</td>
<td>At present there is no existing system of combined public transport and parking ticket</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday daily charge: €3.00 - €7.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekend daily charge: Free - €4.50</td>
</tr>
<tr>
<td>London</td>
<td>Pay and Display</td>
<td></td>
</tr>
<tr>
<td>West Midlands</td>
<td>A combined P.T. and parking ticket is used</td>
<td>Free parking to season ticket holders, disabled badge holders and senior citizens. A charge is made for customers purchasing day tickets. Free to season ticket holders</td>
</tr>
<tr>
<td>South Yorkshire</td>
<td>A combined P.T. and parking ticket is used</td>
<td>Varies between €2.25 - €6.00 per day. No hourly charges. Discounts offered to regular users</td>
</tr>
<tr>
<td>Moscow Region</td>
<td>Info not available</td>
<td>C. €1 from 8.00hrs to 20:00hrs. After that time, C. €0.3/ hr</td>
</tr>
<tr>
<td>Brisbane</td>
<td>None</td>
<td>Free parking</td>
</tr>
</tbody>
</table>

| Greater Dublin Area | Suburban Rail/ DART Network                                                      | Car parking charges vary from €0.50/ hour to €1.50/ hour and from €2.50/ day to €7.00/ day |
|                    |                                                                                  |                                             |
|                    | Luas Red and Green Lines                                                        |                                             |
|                    | Parking controlled by P & R management Co.                                     | At sites on Luas Red and Green Lines: €2.00/ half day and €4.00/ full day |
4.3 **Funding of Park and Ride in Other Cities**

*Table 4.3* describes the arrangements put in place in other cities to fund both the capital and operating costs of Park and Ride facilities.

The table shows that elsewhere central / local government generally bears the capital costs, including land acquisition of Park and Ride, and either local government or public transport operators bear the annual operating costs. While users of Park and Ride form a stakeholder group in their own right, it is not always the case that they are required to either fully bear or even to contribute to the costs of providing the service. It seems that, in common with many other elements of public transport networks, rail-based Park and Ride often requires subvention. This is not dissimilar to the current situation in Dublin in certain other areas of transport activity, where public transport initiatives receive support on the basis of benefits to society, e.g. rail investment programmes, QBC strategy, Luas.

There are some advantages to a Local Authority assuming the role of Park and Ride operator / promoter. Local Authorities are frequently responsible for the management of car parking in total in their areas. The management of the Park and Ride can therefore be organised in the context of overall Local Authority parking policy. Decisions on charging, access control, size and complementary parking controls on the road network in the vicinity of the Park and Ride may well be handled more coherently by one authority responsible for all aspects of parking in an area.

On the other hand, there are also advantages to the rail operator undertaking the role of Park and Ride operator / promoter. The rail operator can sell a single ticket used by Park and Ride patrons for both parking and travelling by train. Additional revenues to rail as a result of patronage generated by the Park and Ride will accrue to the rail operator. There may be several Park and Ride installations along the same line, and the rail operator can devise pricing strategies for each to ensure optimum occupancy rates for all. Operating surpluses at some Park and Ride facilities could be set against losses at others, achieving network efficiencies. Additional Rail staff could potentially manage both station and car park, thereby achieving cost synergies.
### Table 4.3: Funding Arrangements in Other Cities

<table>
<thead>
<tr>
<th>City Name</th>
<th>Capital Funding</th>
<th>Operating and Maintenance Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockholm</td>
<td>Land acquisition funded by the relevant local authority. P &amp; R site development costs funded by SL (the Stockholm Regional Public Transport Authority).</td>
<td>Local authority funds operating and maintenance costs</td>
</tr>
<tr>
<td>Athens</td>
<td>Funds come from the same source as those for the dev of the rail projects themselves</td>
<td>Intend to outsource the operation of the P &amp; R sites. Expect to make a profit from this</td>
</tr>
<tr>
<td>Madrid</td>
<td>Info not available</td>
<td>Metro Network: The local authority. Suburban Rail Network: The rail operator</td>
</tr>
<tr>
<td>Paris, Ile de France</td>
<td>Generally sites are owned by local authority. Only 10% of the sites are owned by the rail operator. The Region and STIF fund the capital costs of developing P &amp; R. Subsidies for capital investment by STIF come from revenues from road traffic fines awarded to STIF (€80 million every year)</td>
<td>Local Authorities subsidise the operation of P &amp; R sites, if required</td>
</tr>
<tr>
<td>London</td>
<td>Generally P &amp; R sites owned by Train Operating Companies (TOCs) (including London Underground), with a lesser number owned by local authorities. A few are privately owned. Large % of capital costs are now funded by 3rd party private sector developers, usually in return for a share of the revenue +/- or longer lease term. TfL has also contributed a certain amount to funding of new sites.</td>
<td>For London Underground all day to day operation and maintenance costs (including major refurbishment work) are covered under the operating contracts and paid for by parking charges, with profit in addition to this.</td>
</tr>
<tr>
<td>South Yorkshire</td>
<td>Info not available</td>
<td>Parking charges, which are set so as to fully cover operating costs</td>
</tr>
<tr>
<td>Moscow Region</td>
<td>Development of current P &amp; R site and operation of the site funded by the Local Authority but future ones likely to be funded by the Moscow Regional Authority</td>
<td></td>
</tr>
<tr>
<td>Brisbane</td>
<td>Queensland Rail is a State Government owned corporation. Public Transport costs are regulated &amp; subsidised by government</td>
<td></td>
</tr>
<tr>
<td>Greater Dublin Area</td>
<td>Department of Transport/ DTO through the transport operators and local authorities</td>
<td>CIE owned sites: p.t operations include P &amp; R and are subsidised by the Department of Transport, Local authority owned sites are maintained by local authorities. Luas sites are operated by RPA and users are charged</td>
</tr>
</tbody>
</table>

### 4.4 The Role of Park and Ride in Dublin – function of existing/ new Park and Ride sites

Given the nature of the GDA in terms of the spread of population and employment, there is significant movement of people from the Hinterland Area into the Metropolitan and city centre areas.

The National Radial Road Network accessing the Dublin Metropolitan and city centre areas is congested and where these areas are served by rail, the rail network offers a potential means of attracting existing car users and catering for growth into the future.

Park and Ride offers those living outside walking/ cycling catchments of rail stations and not served by feeder bus services the opportunity to use rail for a portion of that trip. It can therefore increase the effective catchment area of the rail network and this can result in an overall shift from car and towards public transport.

The population of the Greater Dublin Area is estimated to grow from 2002 levels of 1.5m to 1.81m by 2016. In compliance with the requirements of the Strategic Planning Guidelines, this growth will largely be accommodated within the Metropolitan Area of Dublin and within designated Development Centres in the Hinterland Area, which are to be linked to the Metropolitan Area by high quality transport links.
It should be possible to access rail stations / stops within the Metropolitan Area by sustainable modes i.e. by walking, cycling and / or by feeder bus services / taxi.

The same access opportunities will not always be available to those living outside the Metropolitan area, because it will not always be possible to serve some of the Hinterland Area with feeder bus services, and the distances involved frequently preclude walking or cycling. The provision of Park and Ride facilities at rail stations overcomes these access difficulties at least for those with access to a car.

<table>
<thead>
<tr>
<th>The Role of rail-based Park and Ride</th>
</tr>
</thead>
<tbody>
<tr>
<td>• From data supplied by 9 other medium to large cities, the following facts emerged:</td>
</tr>
<tr>
<td>➢ Rail Park and Ride seems to be a key characteristic of the public transport networks of many medium to large cities</td>
</tr>
<tr>
<td>➢ Dublin commuters are currently relatively well catered for with rail Park and Ride in terms of numbers of parking spaces per 1000 population</td>
</tr>
<tr>
<td>➢ Only 3 of the 9 cities offered free, uncontrolled parking at P &amp; R sites. Control and/ or pricing mechanisms are in place at Park and ride sites in other cities</td>
</tr>
<tr>
<td>➢ Elsewhere central / local government generally bears the capital costs, including land acquisition of Park and Ride, and either local government or public transport operators bear the annual operating costs.</td>
</tr>
<tr>
<td>• Park and Ride offers those living outside walking/ cycling catchments of rail stations and not served by feeder bus services the opportunity to use rail for a proportion of their travel</td>
</tr>
<tr>
<td>• Park and Ride can therefore increase the effective catchment area of the rail network and this can result in an overall shift from car and towards public transport within the GDA.</td>
</tr>
</tbody>
</table>
5. **Rail Network Capacity in the GDA**

5.1 **Rail Capacity – Existing Situation**

Rail capacity is currently insufficient to meet peak hour demands along all rail lines into Dublin City. This is why Iarnrod Eireann has undertaken a number of rail infrastructure and service enhancement projects, particularly on the Hazelhatch to Inchicore Suburban Rail line and the DART line from Malahide to Greystones. The purpose of these and future proposed projects is to increase the capacity of the rail network to cope with existing and future demand.

5.2 **Rail Capacity - Short Term Situation, i.e. Short Term Rail Investment Programme**

For the purposes of this study, short term improvements are deemed to be those for which investment has already been committed.

The major short term rail projects are:

5.2.1 **Suburban Rail/ DART Improvements**

An extensive programme of investment is planned by Iarnrod Eireann, which will increase passenger carrying capacity along each line. However, only certain projects have been approved for funding to date.

Short term capacity improvements are primarily targeted at lengthening trains rather than increasing train frequency. They focus on the lengthening of all IE Suburban trains to 8 cars (most are currently 6 car or less). Platform lengths at many stations are being lengthened to accommodate these longer trains. These increases in capacity, the impact of which is outlined in Table 5.1, below, are all programmed to be in place before the end of 2004.

**Table 5.1:** Committed peak period (2 hour) capacity increases

<table>
<thead>
<tr>
<th></th>
<th>Northern</th>
<th>South East’n</th>
<th>Western (Maynooth)</th>
<th>South West’n (Kildare)</th>
<th>DART</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Capacity increases from committed rolling stock (increasing all diesel trains to 8 cars)</td>
<td>2,490</td>
<td>210</td>
<td>810</td>
<td>1,940</td>
<td>5,400</td>
<td>10,850</td>
</tr>
</tbody>
</table>

---

As can be seen from the above table, significant additional reserve capacity is likely to become available on DART, the Northern and to a lesser extent the South Western Lines in the short term.

### 5.2.2 **Luas Red and Green Lines**

Luas Red and Green Lines commenced passenger carrying operations in Summer/Autumn of 2004.

Luas Red Line has a capacity to provide 2,820 passenger spaces/ direction past a point. Luas Green Line has a capacity to provide 3,720 passenger spaces/ direction past a point.

Luas infrastructure is designed to accommodate headways of less than 5 minutes in the peak period and longer vehicles and the implementation of either or both these measures would increase the capacity of the system. The reduction of Luas headways will be considered as demand for the system increases.

Luas provides a fast, frequent and reliable alternative to other modes operating in its catchment area.

### 5.3 **Medium/ Long Term Programme**

For the purposes of this study, medium/ long term improvements are deemed to be those for which plans are in place to complete, but for which no definite approval for funding has been received.

The major schemes include the Maynooth Line Project, the Kildare Route Project, the Northern Line Project, Suburban Rail Spur to Navan, the City Centre Interconnector, Luas extensions to both The Point and Cherrywood and the Metro.

### Rail Network Capacity in the GDA

- Rail capacity is currently insufficient to meet peak hour demands
- Improvements/ additions to the rail network are planned which will see increases in capacity. These include:
  - Short term capacity improvements on existing rail lines focus primarily targeted at lengthening trains to 8 cars (expected completion: end 2004)
  - Medium to long term capacity enhancements include Maynooth Line Project, the Kildare Route Project, the Northern Line Project, the City Centre Interconnector, Luas Red and Green Lines enhancements, extensions of Luas lines to both The Point and Cherrywood and the Metro
6. **Key Success Factors of Rail Park and Ride**

6.1 **General**

All types of Park and Ride facilities, whether local or strategic in function, share many common features. In essence, the facility should offer a space to park a car safely and securely, and within a short time, get a space on a public transport vehicle that offers a competitive journey time to the desired destination. All types of Park and Ride share the following characteristics.

6.1.1 **Compatibility with transport and land use strategy**

The location of any proposed Park and Ride should be compatible with strategic (i.e. national and regional) and local land use and transport plans governing the area and the environment where it is proposed to locate it. In particular, the location of all Park and Ride facilities should be compatible with the objectives of the RPGs for the GDA and the DTO Strategy 2000 – 2016 *A Platform for Change*.

6.1.2 **Demand Management**

The effectiveness of Park and Ride would be enhanced by the implementation of complementary demand management measures within the region, particularly those concerning the supply of and charging regime for parking at other locations nearby the proposed site or in the city centre, and area congestion charging.

6.1.3 **Control**

Control arrangements (which may include charging regimes) are required at Park and Ride car parks to ensure that users of the facilities are rail users.

6.2 **Strategic P & R**

6.2.1 **Size**

The size of the car park at a strategic Park and Ride location should be guided by the amount of suitable available land, available rail capacity and the quantum of traffic flow on the adjacent road network that could be intercepted.

6.2.2 **Location**

The Park and Ride car park should be well located relative to the National Radial Road Network, be well signed from the road (including VMS where appropriate) and require a short and easily executed deviation to access it.
6.2.3 Impact of the Park and Ride facility

The location of the car park should not result in undue congestion on the road network by cars entering or exiting it. A Transport Impact Assessment should be carried out for each proposed Park and Ride site, as part of a detailed business case.

6.2.4 Control, including Pricing

Passing traffic on the adjacent road network can be intercepted by strategic Park and Ride provision. If demand for is greater than the supply of parking, it may be necessary to charge for parking. In addition, the proposed funding arrangements to contribute towards the operation and provision of the facility may be a factor influencing the decision to charge for parking, and how much to charge.

6.3 Local P & R

6.3.1 Size

The size of the car park at a local Park and Ride location should be guided by its proximity to nearby land uses and their type, the amount of suitable land available, available rail capacity and local access road network conditions.

6.3.2 Local Impacts

The operation of the car park should not generate undue congestion on the local road network. Access and egress movements by car to and from the Park and Ride site should not conflict with walking and cycling networks providing access to the station. A Transport Impact Assessment should be carried out for each proposed local Park and Ride site, as part of a detailed feasibility study.

6.3.3 Control, including Pricing

If demand for exceeds supply of parking at a local Park and Ride facility, charging for parking will regulate its use. The charging regime may require to skew use of the parking towards off-peak short-stay users, at locations that are less well served during off-peak periods by local public transport access services. This would result in an improved turnover of cars at the car park, potentially improving revenue and widening the transport benefits to the community of its provision. If overflow parking into the area surrounding the formal car park is a problem, complementary parking management schemes will be required in the area surrounding the Park and Ride car park.

6.4 Minimum Specification for new or Expanded Park and Ride Sites

6.4.1 Design

The design of the car park should incorporate the following basic facilities:
• cycle parking. The number of spaces provided should in all cases be sufficient to cater for existing and suppressed demand for cycling at the station. The cycle parking should be secure (in a place that is visible by site management / CCTV ) and covered. The cycle parking should, in all cases meet the specification of the DTO Traffic Management Guidelines;
• pedestrian access to public transport services;
• operational requirements for public transport vehicles (taxis, buses, etc) and ticketing systems and
• car passenger drop-off and pick-up facilities (Kiss and Ride)
• Passenger facilities, including personal security measures, lighting, landscaping, litter bins, public transport information, footpaths, pedestrian crossing, directional signage, shelter while waiting.

6.4.2 Additional Features

The facility may also warrant the provision of CCTV, ticket vending machines, phones, retail outlets, toilets, etc.

A clear distinction should be made between facilities that may be provided anyway in providing well-designed rail stations / stops / interchanges and those that are additionally required as a result of a decision to provide Park and Ride facilities, when preparing costs for inclusion in the business case.

6.4.3 Rail Service

The rail service must have sufficient capacity to serve the incremental trips generated by the proposed Park and Ride car park throughout the course of the day/ week, taking into consideration existing and forecast demand for travel on the line, including other Park and Ride sites.

6.4.4 Control and Payment Arrangements

Control and payment arrangements for the Park and Ride facility should be easy to use, and should ensure that the car park spaces are occupied by the cars of rail users only. Ideally, one charge should cover access and egress to/from the car park and to/from the public transport service. The Park and Ride control and payment strategy should be compatible with the proposed Integrated Ticketing System (Smartcard for the GDA). Cycle parking should be provided free in all cases.

6.4.5 Advice Note on Public Transport Interchange

Rail Park and Ridesites not only function as interchange facilities between private car/ bicycle and public transport modes, but also as locations where other modes interchange with rail for example walk, bus, car drop off (kiss & ride), cycle, motorcycle and taxi.
All Park and Ridesites should be designed as interchange facilities, catering for the needs of users of all relevant modes of access to the station. Designs should also cater for operator requirements.

The DTO’s Advice Note on Public Transport Interchange (http://www.dto.ie/interchange.pdf) provides relevant guidance for the design of Park and Ridesites.

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### Key Success Factors of Rail Park and Ride

- The key success factors for Local and Strategic Park and Ride sites are described in terms of size, location, local impacts and control & pricing.

- The design of the car park should incorporate facilities for:
  - Cycle parking
  - Pedestrian access to public transport services
  - Operational requirements for public transport vehicles (taxis, buses, etc) and ticketing systems and
  - Car passenger drop-off and pick-up facilities (Kiss and Ride)

- Minimum Specification for new or expanded Park and Ride Sites:
  - Facility should be secure and well-designed, incorporating at a minimum lighting, personal security measures, litter bins, landscaping, public transport information, footpaths and pedestrian crossings directional signage, passenger shelters.
  - Additional features may be included, e.g. CCTV, toilets, ticket vending machines, etc.
  - The rail service must have sufficient capacity to serve the incremental trips generated by the proposed Park and Ride car park throughout the course of the day/week, taking into consideration existing and forecast demand for travel on the line.
  - Control and payment arrangements for the Park and Ride facility should be easy to use, and should ensure that the car park spaces are occupied only by rail users, and are compatible with general strategies for payment for public transport in the GDA.
  - The DTO’s Advice Note on Public Transport Interchange (http://www.dto.ie/interchange.pdf) provides relevant guidance for the design of Park and Ridesites.
7. **Site Selection Methodology**

7.1 **Site Assessment**

All existing and proposed rail stations on the 5 lines comprising the existing GDA suburban rail network - Northern Suburban, South Eastern Suburban, Western Suburban (Maynooth Line), South Western Suburban (Kildare Line), and DART, and all rail stations/ stops on the committed rail network (Luas Red and Green Lines, which were under construction at the commencement of this study) were examined for the potential to provide Park and Ride facilities.

Although the alignment for Metro Phase 1 was not finalised at the commencement of this study, a number of locations were identified as possible Park and Ride facilities, some on the Luas Line B1 extension (Luas Green Line extension from Sandyford to Cherrywood) and upgrade to Metro.

Sites were initially allocated to one of 2 categories based on their location within the GDA, as follows:

- **Inner sites** were considered to be those located inside the area bounded by the M50. Inner sites were considered only as serving a local Park and Ride function.

- **Outer sites** were all other sites in the GDA, i.e. all those sites located on or outside the M50 and inside the GDA Boundary. Sites at Leopardstown Racecourse and Carrickmines were assessed as outer sites, due to their proximity to the M50. Sites that did not qualify as strategic were then assessed as potential local Park and Ride sites, despite their location relative to the M50.

Outer sites having no strategic potential were included with the list of potential ‘Inner’ sites and re-examined for suitability as local Park and Ride sites.

*Figure 7.1* shows the evaluation process in diagrammatic form.
**Figure 7.1:** Diagramatic view of the evaluation process for Park and Ride proposed sites

1. **Potential Site**
   - Good Access to National Road Network. Outside M50, i.e. < 3 km from National Primary Road Network?
     - Y → Can separate access to Park and Ride site from access to built up areas or areas zoned for residential development?
       - Y → Sufficient existing rail capacity or short term rail capacity?
         - Y → Strategic Park and Ride Site
         - N → Don’t Build
       - N → Site Compromises future Public Transport oriented development?
         - Y → Don’t Build
         - N → Existing or planned short term rail capacity?
           - Y → Located within major town centre (or other sensitive area)?
             - Y → Local Park and Ride Site (100 space guide)
             - N → Local Park and Ride Site (300 space guide)
           - N → Don’t Build
7.2 Estimated Scale of Parking Provision

Estimates were made of the additional car parking that could be provided at each of the strategic and local sites that came successfully through the evaluation processes outlined in Figure 7.1.

The criteria used in identifying the amount of new parking which could be provided at each strategic site were:

- suitable available lands
- the function of the adjacent road
- the proximity of the site to major roads, and
- the passing flow of traffic that could potentially be intercepted.

The criteria used in estimating the amount of new parking that could be provided at the local sites were:

- suitable available sites
- the W.G. recommendation that generally local parking should be minimized, and that in normal circumstances should not exceed 300 spaces, with significantly less than that if the station is located in the heart of a town centre, due to problems with access
- the size of the population in the surrounding catchment area.

Table 7.1 outlines the list of local and strategic Park and Ride sites at which new/ additional parking spaces are proposed and the indicative number of new parking spaces at each. Figure 7.2 shows the location of the sites.

Although Table 7.1 represents all successful P & R sites following the evaluation of all stations on the existing and proposed rail network in the GDA, situations may arise in future where transport operators or local authorities would like additional sites to be considered. In this case, it is intended that the same method of evaluation as outlined in Figure 7.1 would be applied to these sites.

Exact numbers of Park and Ride spaces will be determined by a more detailed examination of each proposed Park and Ride site, which would be carried out during the preparation of the business case for the site. The scope of the feasibility study is set out in Section 8.
<table>
<thead>
<tr>
<th>Station Name</th>
<th>P &amp; R Ref No. (S = Strategic, L = Local)</th>
<th>Line</th>
<th>Mode (SR = Suburban Rail/ DART, L = Local, M = Metro)</th>
<th>Function of P &amp; R Site</th>
<th>2003 P &amp; R Provision</th>
<th>Estimate No. of new/ additional P &amp; R</th>
<th>Total No. of P &amp; R</th>
<th>Additional Requirements</th>
<th>Implementation Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drogheda</td>
<td>S1</td>
<td>SR</td>
<td>Same demand from southbound traffic on the M1 at that point &amp; Drogheda residents outside walking catchment &amp; not served by feeder bus services</td>
<td>355</td>
<td>345</td>
<td>700</td>
<td></td>
<td>Dependent on adequate road access from the M1 to the P &amp; R site</td>
<td>Group 1</td>
</tr>
<tr>
<td>Laytown</td>
<td>L1</td>
<td>SR</td>
<td>Laytown and Derry residents outside walking catchment of Laytown Rail Station</td>
<td>96</td>
<td>250</td>
<td>346</td>
<td></td>
<td></td>
<td>Group 2</td>
</tr>
<tr>
<td>Bray &amp; Lucan</td>
<td>L2</td>
<td>SR</td>
<td>Rush and Lucan residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>152</td>
<td>65</td>
<td>217</td>
<td></td>
<td></td>
<td>Group 3</td>
</tr>
<tr>
<td>Dalkey</td>
<td>L3</td>
<td>SR</td>
<td>Dalkey residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>57</td>
<td>33</td>
<td>100</td>
<td></td>
<td>Depending on the identification of a suitable site to accommodate P &amp; R in vicinity of station car park, since existing car park required for bus interchange facilities</td>
<td>Group 1</td>
</tr>
<tr>
<td>Balbriggan</td>
<td>L4</td>
<td>SR</td>
<td>Balbriggan residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td></td>
<td>Development of site conditional on termination of use of existing church car park as an internal P &amp; R site</td>
<td>Group 3</td>
</tr>
<tr>
<td>Arklow</td>
<td>L5</td>
<td>SR</td>
<td>Arklow residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>6</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td>Group 4</td>
</tr>
<tr>
<td>Wicklow</td>
<td>L6</td>
<td>SR</td>
<td>Wicklow residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td></td>
<td>Site to be examined by DTO Public Transport Interchange W.I.G.</td>
<td>Group 1</td>
</tr>
<tr>
<td>Shankill</td>
<td>L7</td>
<td>SR</td>
<td>Shankill residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td></td>
<td>Site to be examined by DTO Public Transport Interchange W.I.G.</td>
<td>Group 3</td>
</tr>
<tr>
<td>Broomstown</td>
<td>L8</td>
<td>SR</td>
<td>Broomstown residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>114</td>
<td>100</td>
<td>214</td>
<td></td>
<td>Design of site to incorporate bus turning and bus lay by facilities</td>
<td>Group 1</td>
</tr>
<tr>
<td>Maynooth</td>
<td>L9</td>
<td>SR</td>
<td>Maynooth residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>199</td>
<td>130</td>
<td>329</td>
<td></td>
<td>Additional rail capacity on Maynooth Line required</td>
<td>Group 1</td>
</tr>
<tr>
<td>Luttrelltown or Ladys Mount by DTO preference</td>
<td>L2</td>
<td>SR</td>
<td>Same demand from southbound traffic on the N2 at that point &amp; demand from residents in the Ladys Mount/Farnsfield area not served by feeder bus services</td>
<td>21</td>
<td>750</td>
<td>791</td>
<td></td>
<td></td>
<td>Group 3</td>
</tr>
<tr>
<td>Nenagh</td>
<td>L10</td>
<td>SR</td>
<td>Nenagh residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>233</td>
<td>150</td>
<td>383</td>
<td></td>
<td></td>
<td>Group 2</td>
</tr>
<tr>
<td>Galway (Nuns Island Area)</td>
<td>L11</td>
<td>SR</td>
<td>Local area residents in these areas outside walking catchment from station &amp; not served by feeder bus services</td>
<td>216</td>
<td>200</td>
<td>416</td>
<td></td>
<td>Additional rail capacity on Knocknagoney Line required</td>
<td>Group 1</td>
</tr>
<tr>
<td>Effra Rooms on Birmingham</td>
<td>L12</td>
<td>SR</td>
<td>Elfra Rooms on Birmingham residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td></td>
<td></td>
<td>Group 3</td>
</tr>
<tr>
<td>Navan Phase 1 to Dunboyne (Phase 1)</td>
<td>L13</td>
<td>M</td>
<td>Same demand from southbound traffic on the M3 at that point</td>
<td>0</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
<td></td>
<td>Group 2</td>
</tr>
<tr>
<td>Metro, Trim (North of Swords)</td>
<td>L14</td>
<td>M</td>
<td>Same demand from southbound traffic on the M1 not intercepted by the S &amp; S line on the Northern Suburban line</td>
<td>0</td>
<td>2,000</td>
<td>2,000</td>
<td></td>
<td></td>
<td>Group 4</td>
</tr>
<tr>
<td>Metro, S. of Swords</td>
<td>L15</td>
<td>M</td>
<td>Swords and surrounding area residents outside walking catchment from station &amp; not served by feeder bus services</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td></td>
<td></td>
<td>Group 5</td>
</tr>
<tr>
<td>Metro, N.D.</td>
<td>L16</td>
<td>M</td>
<td>Demand from southbound traffic on the N2 at that point</td>
<td>0</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
<td></td>
<td>Group 1</td>
</tr>
<tr>
<td>Metro, Cork</td>
<td>L17</td>
<td>M</td>
<td>The area residents in these areas outside walking catchment from station &amp; not served by feeder bus services</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td></td>
<td></td>
<td>Group 2</td>
</tr>
<tr>
<td>Metro, H.T.</td>
<td>L18</td>
<td>M</td>
<td>Same demand from southbound traffic on the N1 at that point &amp; demand from H.T. residents outside walking catchment of DART and not served by feeder bus services</td>
<td>0</td>
<td>1,500</td>
<td>1,500</td>
<td></td>
<td></td>
<td>Group 1</td>
</tr>
<tr>
<td>Luas Line 1/Metro Ph 1, 2/1, N.N.</td>
<td>L19</td>
<td>M</td>
<td>Same demand from southbound traffic on the N.N. at that point</td>
<td>0</td>
<td>480</td>
<td>480</td>
<td></td>
<td>Expanding on restricting access or agreeing to motorway tolls</td>
<td>Group 2</td>
</tr>
</tbody>
</table>
**Figure 7.2:** Stations at which new/ additional parking is recommended
### Site Selection Methodology

- Sites were initially allocated to one of 2 categories based on their location within the GDA, as follows:
  - Inner Sites (inside M50)
  - Outer Sites (outside M50)

- Sites located between the M50 and the Hinterland Area Boundary were included in the initial list of outer sites and examined for suitability as Strategic Park and Ride sites

- Sites located inside the M50 (and those sites falling out of contention above following evaluation for strategic potential) were examined for suitability as Local Park and Ride sites

- Evaluation process indicated a requirement for additional Park and Ride at 22 sites in the GDA, 7 at Strategic Sites and 15 at Local Sites

- Park and Ride recommended at 12 new sites (2 on the South Eastern Suburban, 1 on the DART Line, 1 on the Kildare Line, 1 on Navan Phase 1, 1 on Luas Line B1/ Metro Phase 1 and 6 on Metro Phase 1)

- Exact numbers of spaces to be provided at each Park and Ride site to be determined at business case stage. A summary of the information required from a business case is contained in Section 8. DTO will develop a more detailed methodology for preparing such business cases in collaboration with implementing agencies in the form of a Technical Note.
8. Next Steps

8.1 Policies and Principles

The Working Group considers that, following acceptance of the locational strategy put forward for Park and Ride development in the GDA, progress on delivering enhanced Park and Ride facilities can only be achieved by considering each individual proposal on its merits, in the context of its function within the overall Strategy on Park and Ride. The Working Group has agreed the following policies and principles that will guide in the preparation of the business case for each proposal.

The view of the Working Group is that:

- The provision of Park and Ride at any location can only be justified if the parking provided results in improved accessibility to rail services without greatly worsening levels of service on the adjacent road network. A full Transport Impact Assessment (TIA) of the proposed facility will demonstrate its appropriateness in transport planning terms. This TIA will form a core element of the business case for any proposal.

- Any control mechanisms installed at rail-based Park and Ride facilities should result in the car parking facility being used by rail users only.

- Park and Ride users may be charged for parking. Demand by rail users for well-located parking with a good rail service in the GDA will generally exceed supply. Therefore, the introduction of a charging policy for parking at rail stations may be required in order to manage this demand. This argument applies to existing facilities as well as new / enhanced ones. Over time, charging for parking, particularly at a local Park and Ride facility, will result in those users who most need it (disabled badge holders, old people, those who do not have the option to access the station by other modes such as walking, cycling or feeder bus services) benefiting from its provision. The factors influencing the structure and amount of the charge include the level of demand for the car parking, the target occupancy rate of the car park, adjacent land uses, the supply and type of adjacent local parking and the local parking management policy, the capacity of adjacent transport networks and the operating and maintenance costs of the facility.

- At rail stations / stops located in residential or commercial/ retail areas, the application of control measures to the parking adjacent to the station / stop may result in overflow parking in spaces in the surrounding areas originally intended to serve local needs. It is important that new/ enhanced facilities at rail stations are not perceived and managed as an additional supply of general parking in the area thereby counteracting local mobility management policies. It is also important to mitigate the effect of the car park on the access network for other modes. Informal parking on roads (and on footpaths) in the vicinity of the station may adversely impact on local residents and on pedestrian and cycle movements accessing the station / stop, and on the operating environment for local and longer distance bus
routes serving the rail station / stop. In such situations the Local Authorities will need to consider introducing parking control and enforcement measures in the station / stop surroundings to mitigate these effects.

- Costs of Park and Ride should not be passed onto rail users in the form of a general increase in rail fares. This would result in an inequitable situation where rail passengers who access the station by sustainable modes subsidise those who drive.

- Capital and operating costs of providing and running Park and Ride facilities should be apportioned between the Park and Ride stakeholders in a way that reflects the benefits obtained from their provision.

- Funding may be required on an annual basis to make good any shortfall that may arise between operating costs and operating revenues of the facility, having examined all potential sources of the latter. Where possible, each site should aim to cover the operating and maintenance costs of the facility through the generation of onsite revenues, including parking charges, whilst maintaining the principle objective of the scheme to achieve target occupancy rates. It may be necessary, however, to offer free parking at some new P & R sites, during an initial “loss-leader” period as a stimulus to car users to avail of the new P & R service. In all cases, the Site-Specific Business Case should indicate whether there is likely to be a shortfall at a site, the likely amount of this shortfall and who will bear this cost.

- The timing of the development of any Park and Ride facility should match the programme of planned increases in rail service capacity.

8.2 The Process of Making Progress

The Working Group recommends the following steps to progress the implementation of Park and Ride projects:

- The Working Group will prioritise and rank the locations in Table 7.1 on the basis of a set of agreed criteria, including transport gain.

- The Working Group will agree a methodology for the preparation of a business case for a generic Park and Ride, including a detailed methodology for the preparation of the Transport Impact Assessment, which will form an integral part of the Business Case, and a methodology for identifying costs and benefits of any proposal.

- A Lead Agency will be agreed for each location, and partner agencies at each location identified.

- Commencing with sites of highest priority within its portfolio, the Lead Agency will prepare a Business Case to the agreed methodology for each location, achieving the following:
Establishing the need for the Park and Ride in transport planning terms at that location
- Stating whether the proposed facility is strategic or local in function
- Setting occupancy rate targets
- Assessing the impact of the facility on the transport network
- Forecasting demand
- Designing the facility
- Costing the facility, both in capital, operating at maturity, and lead-in operating terms to all stakeholders
- Estimating the benefits of the facility
- Preparing a cost – benefit analysis
- Obtaining the agreement of all partner agencies at the particular location to the details contained in the business case

• The Lead Agency will bring forward the proposal to the appropriate agency for approval and funding

• In instances where the rail operator is the Lead Agency, and where the lands identified for Park and Ride activity are not already owned by it, the rail operator will act in partnership with the relevant Local Authority, as follows:

  - In the case of privately owned sites, it is envisaged that the rail operator would acquire ownership of the sites and progress the provision of new /expanded Park and Ride facilities.
  - In the case of sites in the ownership of Local Authorities or other public bodies, the site could be leased or sold to the rail operator. Alternatively, the rail operator could lease the site at a peppercorn rate from the current owner, who would retain ownership.

This arrangement will ensure in as far as possible that stakeholders benefiting from the provision of Park and Ride also share to some degree its costs of provision and / or operation.

• In the event of additional sites to those recommended in this report being proposed by any agency, and a positive outcome of its preliminary evaluation (in Figure 7.1), sites may be re-ranked to cater for these additions.

### 8.3 Site-Specific Business Case

A detailed Business Case, containing a Transport Impact Assessment and cost – benefit analysis, should be prepared for each proposed new and enhanced Park and Ride site. A Business Case will also be prepared for locations where it is proposed to implement control and / or charging mechanisms only, without adding parking capacity. A Business Case should demonstrate:

- That the proposal complies with transport and land use policy objectives as outlined in A Platform for Change and the associated Park and Ride strategy and the land use and planning policy objectives as set out in SPGs/ RPGs for the GDA;
• That the quantum of proposed parking meets demand throughout the proposed life of the facility, and minimises adverse impacts on local road, walking, cycling and bus networks;

• That the capacity of the rail service is sufficient to meet both the demand generated by the natural catchment of the line and the additional demand generated by the presence of the parking throughout the life of the facility, taking into consideration any plans for the area. Park and Ride at any location in a rail corridor has implications for remaining line capacity along the entire corridor. Therefore the Business Case for a site located on a line needs to take the effect of other Park and Ride sites that may be proposed elsewhere on the same line into consideration, in addition to future development in the catchment of the full rail line;

• That the costs and benefits generated by the project demonstrate the suitability of investing public monies

The proposal should include:

• A Transport Impact Assessment;

• Recommendations on proposed size of car park, taking into account adjacent land uses and whether the station at which Park and Ride is proposed is already well-served by other access modes, e.g. walking, cycling or feeder bus networks;

• Proposals for control and pricing mechanisms at each site to ensure that the Park and Ride facility is used by its intended market to a sustainable extent, i.e. the correct mix of long-stay and short-stay users to achieve target occupancy rates for the facility;

• Proposals for complementary parking controls in the areas surrounding the proposed Park and Ride site because of the interdependence of both types of parking;

• An assessment of both capital and operating costs and revenues of the facility, taking into consideration all potential sources of revenue including:
  ➢ User charges
  ➢ Incremental rail revenue generated by the provision of the car park
  ➢ Revenue from commercial initiatives on-site, e.g. retail concessions, if permitted by the planning authority,
  ➢ Planning contributions under Section 48 / 49 of the Planning Act 2000, if appropriate,
  ➢ Hypothecated revenue streams from other transport initiatives, if appropriate and
  ➢ Surpluses from other facilities within the network of that operator.
**Agreed Policies and Principles Guiding Progress**

The Working Group formed a view that:
- Park and Ride should improve rail accessibility without disimproving road congestion
- Park and Ride should be used by rail users only, who may pay for parking
- Complementary parking controls in the areas around stations may be required
- Rail fares should not be increased to pay for Park and Ride
- Those that benefit from Park and Ride should pay for it
- The rail service must be able to serve the demand generated by Park and Ride provision

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**Next Steps**

The next steps for the Working Group will be to:
- Prioritise the sites in *Table 7.1*
- Agree a methodology for preparing
  - A Transport Impact Assessment
  - A Cost Benefit Analysis and
  - A Business Case
  for each prioritised site
- Agree a Lead Agency for each location, and identify a list of agencies that have an interest in the development of the facility
- The Lead Agency will prepare the Business Case, including the TIA and CBA, and agree this with the partner agencies at each location, in order of agreed site priority
- The Lead Agency will bring forward the proposal to the appropriate agency for approval and funding
APPENDIX A:    Working Group Members

• CIE:  
  Brian Wylie, Cormac Downes, Michael Reidy, Peter Cunningham

• Dublin Bus:  
  Derry O’ Leary

• Bus Eireann:  
  Robert O’Mahony,

• RPA:  
  Tom O’Reilly

• Dun Laoghaire Rathdown Co. Co.:  
  Eamonn O’Hare

• Wicklow Co. Co.:  
  Frank Clarke

• Dublin City Co.:  
  Owen Keegan

• Fingal Co. Co.:  
  Paul Cantwell

• Meath Co. Co.:  
  Tim O’Leary

• South Dublin Co. Co.:  
  Tom O’ Grady

• Kildare Co. Co.:  
  Willie Hannigan

• DTO  
  Marian Wilson, Ciaran McKeon, Owen Shinkwin.