

National Heavy Rail Census Report 2016

Report September 2017



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1 Introduction and Background to the Rail Census

1.1 Background to the Census

Iarnród Éireann were commissioned to carry out the annual National Census of Rail patronage on behalf of the National Transport Authority. Boardings and alightings of passengers at every train station in the country are recorded on one day of the year. The 2016 Census is the fifth national Census. Prior to 2012, the census was carried out in the Greater Dublin Area (GDA) comprising the counties of Dublin, Meath, Kildare and Wicklow only.

This report provides an overview of the 2016 National Rail Census and discusses the annual change in rail journeys throughout the country. It also sets out the changes in rail usage in the GDA over the period 2015 to 2016.

The report structure is as follows:

Section 1 provides a background and also sets out the methodology of the Rail Census. An overview of the rail network in Ireland is also provided;

Section 2 analyses the trends in rail journeys in the GDA from 2003 to 2016 and also assesses how the findings of the Rail Census compare with other measurements of rail usage;

Section 3 discusses in detail the findings from the 2016 Rail Census;

Section 4 presents an analysis of journeys on individual lines; and

Section 5 discusses patterns of passenger movement in and out of Dublin on a radial corridor basis.

1.2 Methodology and Operating Conditions of the Day of the Census

The annual National Rail Census captures the number of individuals boarding and alighting at each station in the country on one day of the year. It provides a snapshot of usage and patronage across the country at all stations and on all services on this one date.

It is not intended to represent an accurate picture of overall demand for rail services, which instead is recorded in Iarnród Éireann's passenger journeys data.

While over time the census can help to illustrate trends, each individual year the census data is subject to variation based on a number of factors.

The 2016 census took place on 17th November 2016. Operating conditions on the day were normal with no severe cancellations, delays or disruptions on the network.

Overall, on census day, there were 146,948 passenger journeys across the network an increase of 4% on 2015. Daily total passenger journey numbers are now up almost 19% in the period 2012 - 2016. Meanwhile, Iarnród Éireann reported 42.82m total passenger journeys in the year 2016, up almost 8% on 2015 and 17% over the longer period 2012 - 2016.

1.3 Overview of the Rail Network

The rail network in Ireland consists of approximately 2,400km of railway track and includes 147 stations. Three distinct categories of service operate on the national rail network; Inter City, Commuter and DART. These service categories share lines at various locations along the network. Table 1 provides a description of the routes within each of the categories as defined by Iarnród Éireann and Figures 1 to 3 show maps of the network.

Table 1: Routes and Services in the Iarnród Éireann Network.

Route	Services on Each Route
Inter City	Dublin - Belfast
	Dublin - Sligo
	Dublin - Westport / Ballina
	Dublin - Galway
	Dublin - Limerick
	Dublin - Cork / Limerick Junction / Tralee
	Dublin - Waterford
	Dublin - Kilkenny
	Dublin - Rosslare
	Limerick - Galway
	Limerick - Waterford

Route	Services on Each Route
Commuter Routes	Dublin - Dundalk
	Dublin - Portlaoise
	Dublin - Longford
	Dublin - Dunboyne / M3 Parkway
	Dublin - Gorey
	Mallow - Cork - Cobh - Middleton
DART	Malahide / Howth - Dublin - Bray / Greystones

Figure 1 Inter City Network



Intercity Train Services

 Intercity  Connection  Terminus

Figure 2 Dublin Network

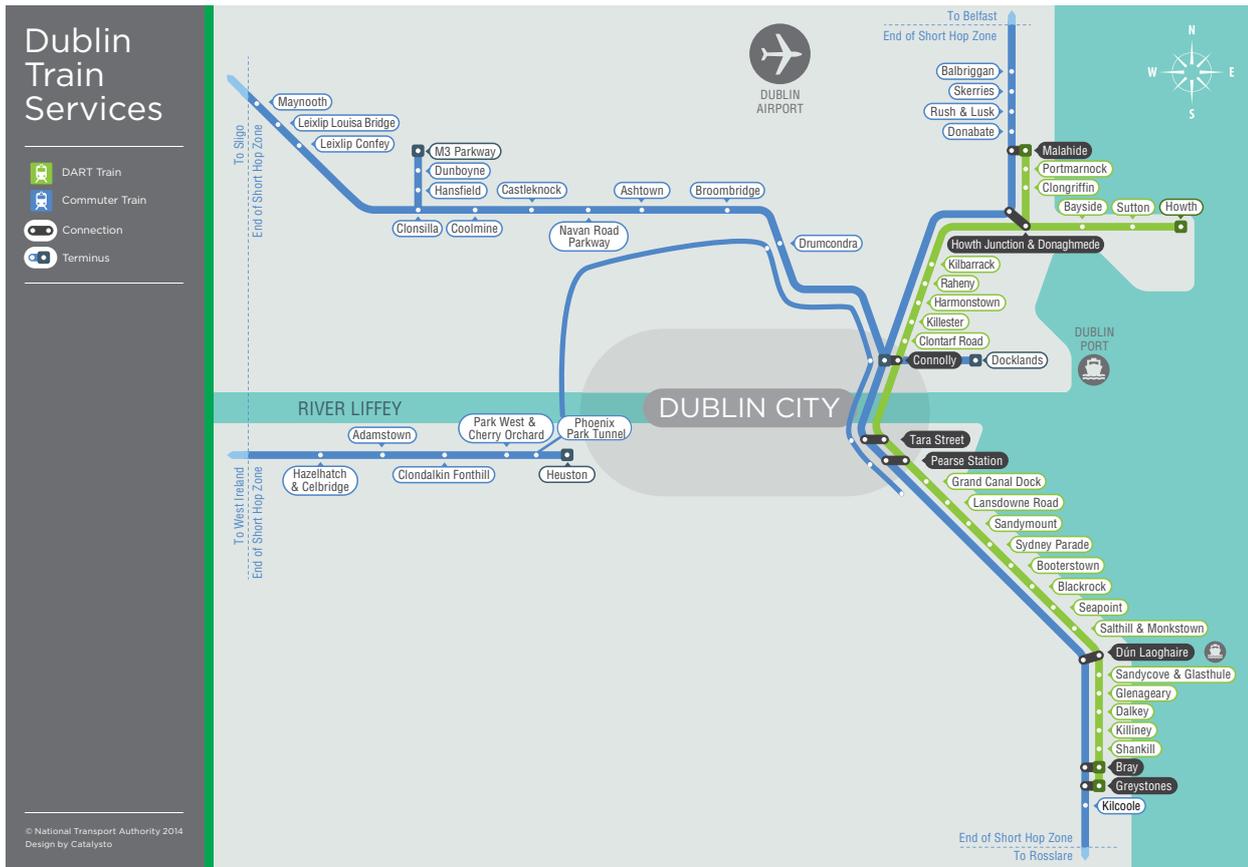
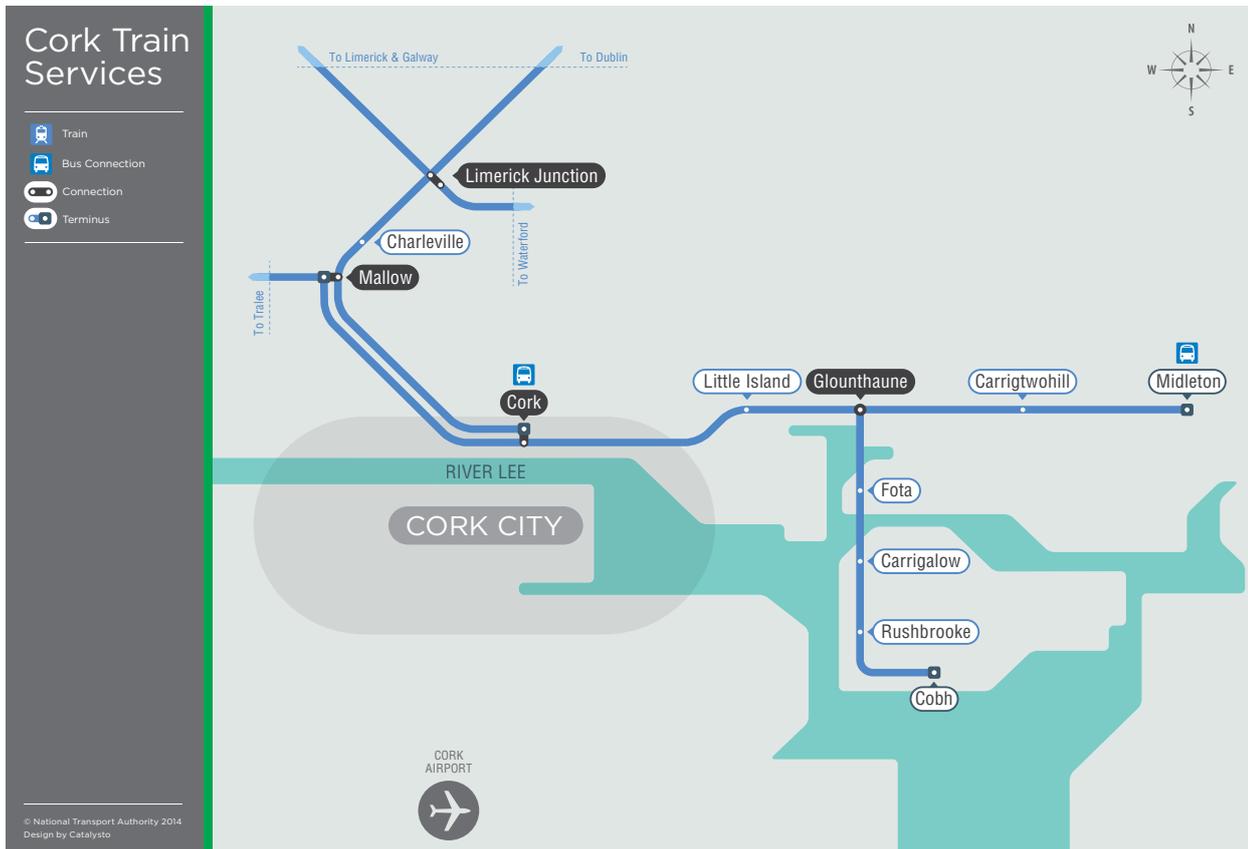


Figure 3 Cork Network



Tables 2 to 4 detail the service provision for a sample weekday for Inter City services and key Commuter and DART services. This includes the fastest journey time and the number of services available per weekday in 2016.

Table 2: Inter City Journey Times and Service Frequency 2016

Route	Fastest journey time 2016	Number of services per weekday
Dublin - Cork	2:30	31
Dublin - Belfast	2:05	16
Dublin - Galway	2:18	19
Dublin - Westport	3:10	9
Dublin - Sligo	2:58	14
Dublin - Tralee	3:42	2
Dublin - Limerick	2:04	7
Dublin - Waterford	1:51	14
Dublin - Rosslare	2:46	8

Table 3: Key Commuter Journey Times and Service Frequency 2016

Route	Fastest journey time 2016	Number of services per weekday
Dublin - Portlaoise	0:42	61
Dublin - Maynooth	0:27	80
Dublin - Drogheda	0:34	64
Dublin - Dundalk	0:55	30
Cork - Mallow	0:21	48
Cork - Midleton	0:23	44
Cork - Cobh	0:24	48

Table 4: DART Journey Times and Service Frequency 2016

Direction	Route	Fastest journey time 2016	Number of services per weekday
Southbound	Malahide/Howth - Bray/Greystones	1:20	71
Northbound	Greystones/Bray - Howth/Malahide	1:18	72

1.4 Changes to Rail Services in 2016

In early November, the Authority approved the introduction of new rail services between stations on the Kildare corridor and Grand Canal Dock via the refurbished Phoenix Park Tunnel, Connolly, Tara and Pearse. On 20 November, the new morning and evening peak services were introduced, therefore the changes in rail patronage brought about by

the new services are not reflected in the 2016 rail census. However Iarnród Éireann carried out an additional census of services in this corridor in January 2017. Appendix D presents the results of the January census showing passenger numbers on the newly introduced Phoenix Park Tunnel services. As only the Phoenix Park Tunnel services were surveyed, it is not possible to provide an analysis of the impact on other services operating to/from Heuston or the Kildare line as a whole at this time.



2 Trends in Daily Rail Patronage, 2003 – 2016

2.1 Key Events since 2003

Rail usage is a derived demand, dependent, amongst other factors, on levels of economic activity. Since 2003 trends in rail patronage have closely followed economic performance. At the start of the period, the demand for rail usage increased steadily. This increase in demand necessitated investment in the rail network and fleet and major rehabilitation works, in addition to service improvements. Between 2000 and 2010, for example, service levels on the Inter City, Commuter and DART networks were approximately doubled. Following an upgrade in 2006, capacity on the DART increased. Station improvements were carried out and platforms were lengthened in order to accommodate longer, higher capacity trains.

Investments over the past decade include the following:

- The Kildare Route Project - this involved the development of a four-track rail line between Cherry Orchard and Hazelhatch on the Heuston to Kildare line. This allowed for the separation of Inter City and Commuter services. The speed and capacity of all services on the line was improved as well as facilitating the running of more frequent services on Inter City and Commuter routes.
- The Dunboyne Rail Line - This involved the development of 7.5km of railway, branching off the Maynooth line at Clonsilla and terminating at the M3 interchange at Pace. Three new stations on the route were also developed: Hansfield, Dunboyne and Pace. The station at Pace (M3 Parkway) has a 1,200 space car park facility. A new station at Docklands was also built to accommodate some of the services on this line.
- Cork Commuter Rail - this involved the reopening of the Cork - Middleton line in 2009.

- Limerick to Galway Services – This included the reinstatement of the line from Ennis to Athenry and the construction of five new stations: Sixmilebridge, Gort, Ardrahan, Craughwell and Oranmore.
- The re-opening of the Phoenix Park Tunnel to scheduled passenger services in November 2016. This consists of 7 morning peak services from Newbridge or Hazelhatch to Grand Canal Dock and 8 evening peak services from Grand Canal Dock to Newbridge/Hazelhatch whilst maintaining the previous commuter service levels to and from Heuston¹.

2.2 Historic Trends in the Greater Dublin Area (GDA)

Prior to 2012 the rail census was undertaken for the GDA only. As such, historical trends can be examined across the following sections of the network:

- DART Line;
- Longford – Dublin – Bray (Gorey) line;
- Dundalk – Bray and
- Dublin – Carlow/Athlone/Portlaoise lines.

Table 5 shows daily rail journeys in the GDA since 2003, defined as the number of boardings. The number of rail journeys in the GDA increased year on year up to its peak of approximately 144,000 in 2007. This was followed by a period of decline in patronage from 2008 to 2010. Between 2011 and 2013 the number of daily journeys within the GDA remained relatively static. There has been a 3.6% increase in patronage in the GDA in the period 2015-2016. However between the 2 year period 2014 to 2016 there has been a 19% increase in patronage within the GDA. Overall GDA patronage is now at 86% that of its peak level in 2007.

Table 5 Daily passenger journeys by network section 2003 – 2016

Year	DART	Dundalk - Gorey	Longford – Dublin – Bray	Dublin – Carlow/ Athlone/ Portlaoise	Total
2003	68,152	19,446	11,642	8,246	107,486
2004	64,435	20,419	13,614	9,219	107,687
2006	81,560	23,305	21,966	11,349	138,180
2007	83,618	24,624	23,836	11,722	143,800
2008	75,753	22,191	22,678	11,145	131,767
2009	63,559	18,037	19,992	9,760	111,348
2010	55,929	17,446	18,770	9,042	101,187
2011	55,629	17,611	18,531	9,455	101,226
2012	56,835	17,895	17,915	8,490	101,135
2013	55,921	17,801	17,100	9,283	102,101
2014	55,003	18,780	19,097	11,371	104,251
2015	64,905	20,430	22,000	12,003	119,338
2016	67,123	21,782	22,432	12,278	123,615

¹ Whilst the 2016 rail census took place prior to the commencement of passenger services through the Phoenix Park Tunnel, a supplementary survey was carried out over two Thursdays in January 2017

There was an overall increase in patronage of almost 4% between 2015 and 2016. This represents the third consecutive year of increased patronage in the GDA. In the past year there have been increases in patronage on all service types in the GDA. There has been a 2% increase in patronage on the Longford - Dublin - Bray and the Dublin (Heuston) - Carlow/Athlone/Portlaoise lines between 2015 and 2016. Patronage on the Dublin (Heuston) - Carlow/Athlone/Portlaoise line is at its highest level since 2003 and is almost 50% greater than 2003. There was a 7% increase in patronage on the Dundalk to Gorey line (1,352 boardings) between 2015 and 2016, patronage on the line is now 11% below the peak levels of 2007. Although DART patronage showed a modest increase of 3%, this represents an additional 2,218 boardings compared to 2015 and growth of 21% since 2011. However DART patronage is still almost 20% down on its 2007 peak of almost 84,000 boardings.

Charts 1 and 2 show the proportional contribution each section of the rail network makes to daily rail patronage within the GDA. There has been a change in the contribution of each line since 2003. DART journeys, despite growth since 2014, have declined from 63% in 2003 to 54% in 2016. However this represents a decline of only 1% in patronage or just over 1,000 daily journeys over the same period. The Dublin (Heuston) - Carlow/Athlone and Portlaoise line has increased in proportional terms significantly going from 8% in 2003 to 10% in 2016, in large part due to year on year growth in patronage from 2012. Meanwhile the proportional contribution of the other lines has remained relatively stable over the same period with both lines experiencing growth.

Chart 1 Composition of daily GDA rail patronage, 2003 - 2016

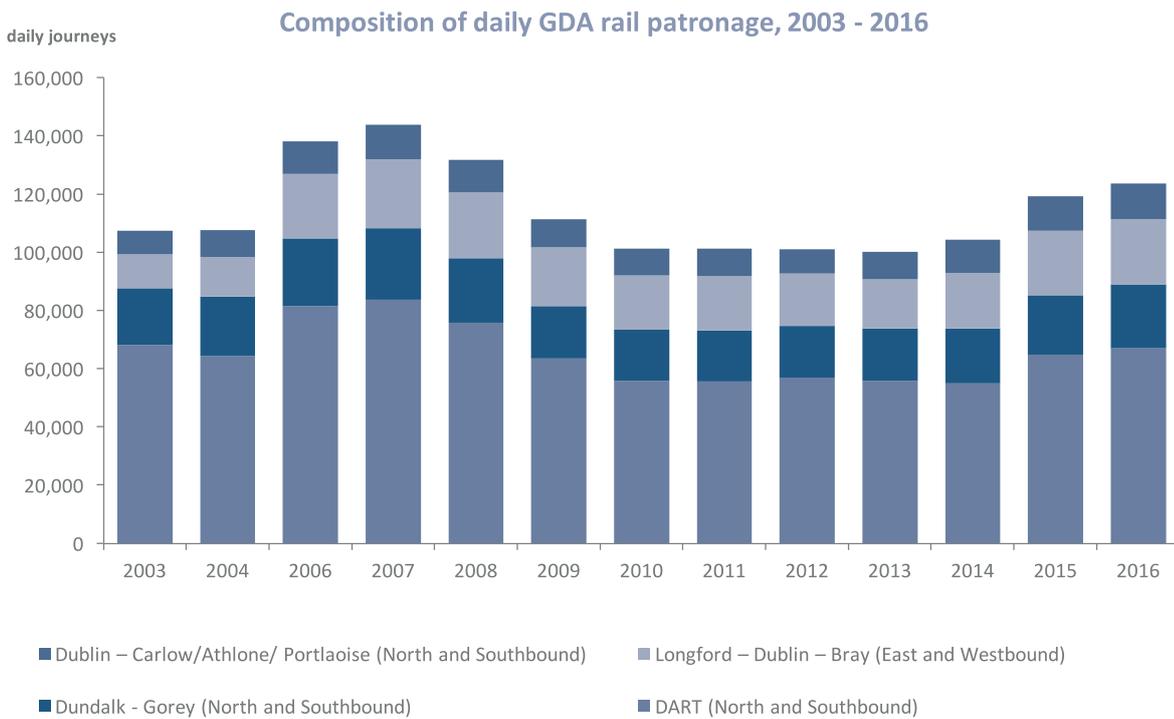
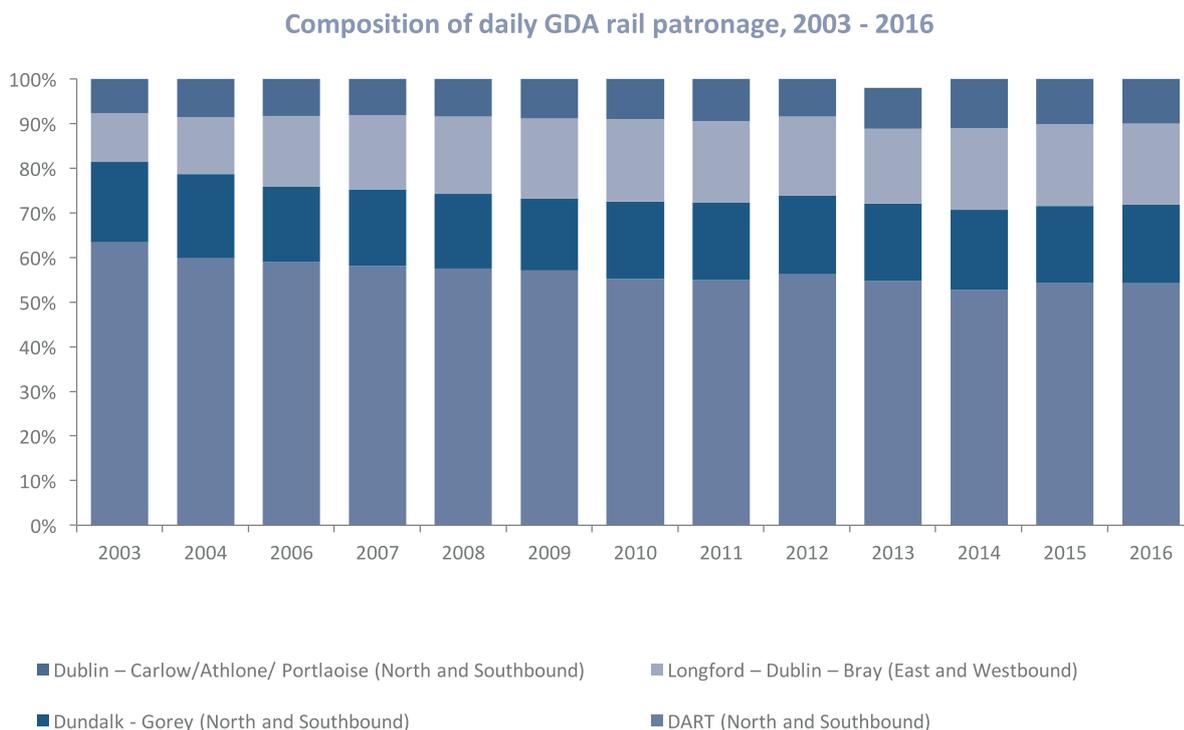


Chart 2 Composition of daily GDA rail patronage, 2003 – 2016



2.3 Analysis of Mode Share from the Canal Cordon Count

The 'Canal Cordon Count' is an annual count of people crossing the Canal Cordon (i.e. a perimeter around Dublin City Centre formed by the Royal and Grand Canals) in the morning peak between 7:00 and 10:00 averaged over two days in November each year. Figure 4 shows the location of the Canal Cordon and the 33 points on the Cordon where information on the movement of people is collated.

This count provides data on numbers of people entering Dublin city centre² by all modes of transport including rail, bus, taxi, cycling, walking, and car or goods vehicle and allows for an analysis of mode share and shift from 2006 to 2015. Table 6 details the number of people crossing the canal cordon by mode in 2015 and 2016, and Chart 3 shows the mode share of journeys in to the city centre from 2006 to 2016.

2 The counts refer to movements of people in one direction only (i.e. inbound into the city centre) across the various cordon points.

Figure 4 Canal Cordon and 33 Count Locations

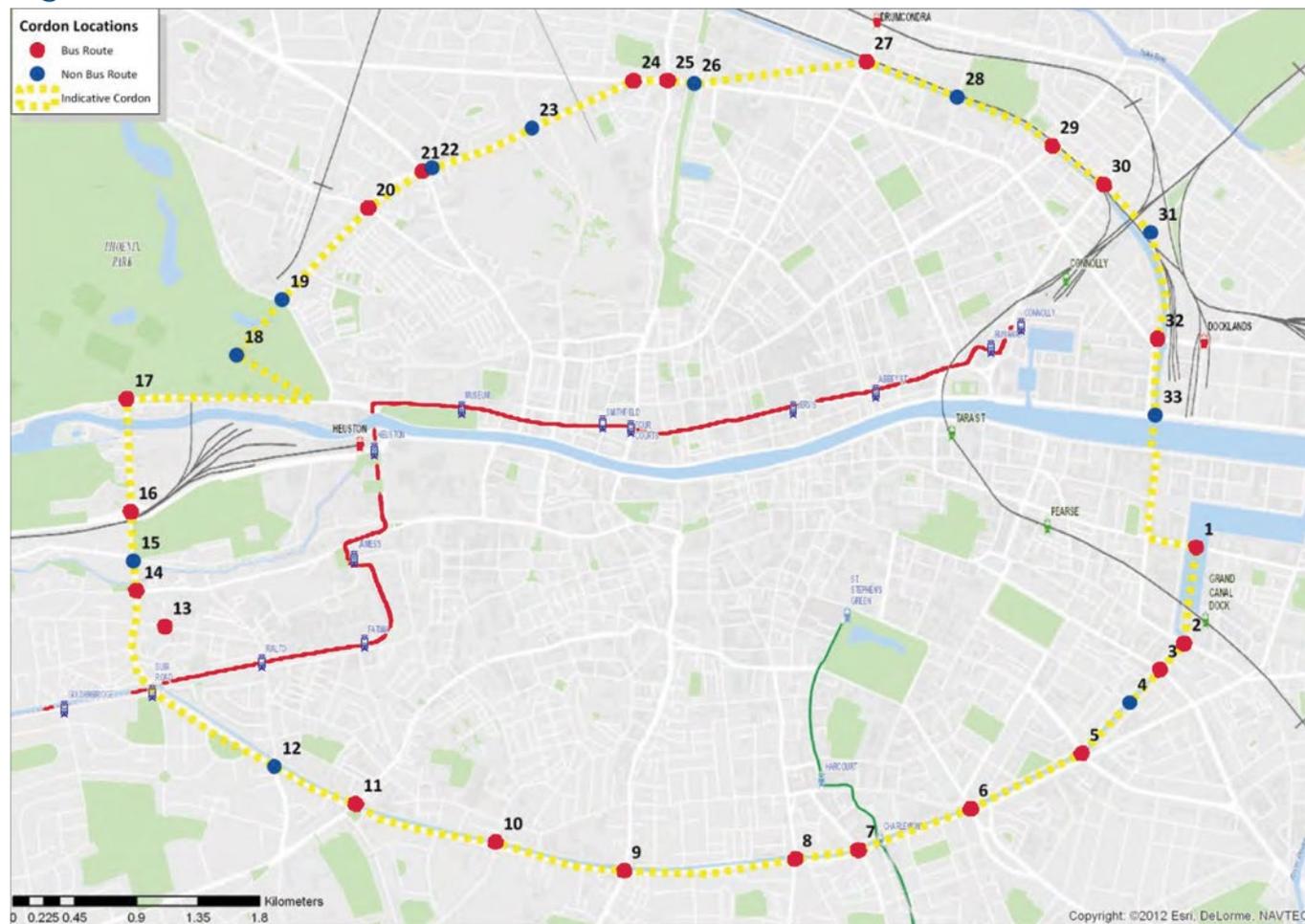
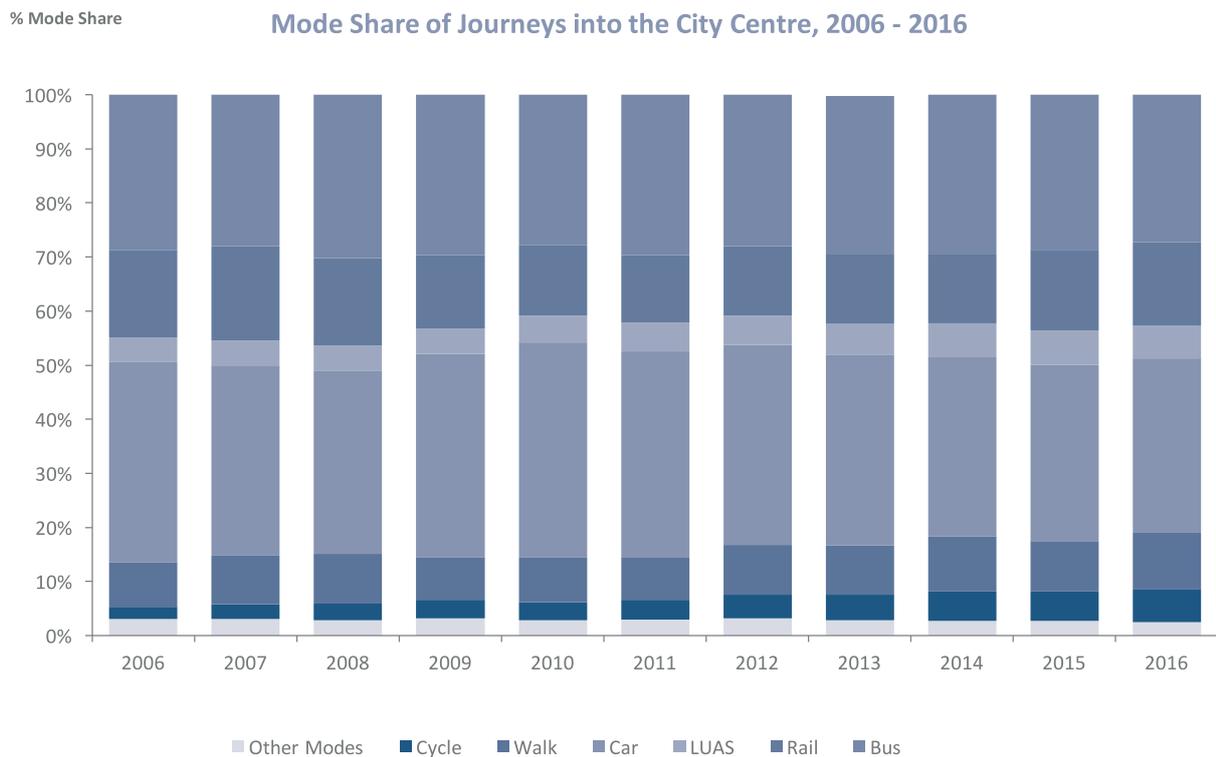


Table 6 Number of People Crossing the Canal Cordon by Mode in 2015 and 2016

Mode	2015	2016	Annual % Change
Bus	57,584	56,572	-2%
Rail	29,521	31,309	6%
LUAS	12,503	12,254	-2%
Car	65,269	64,885	-1%
Taxi	2,960	2,724	-8%
Walk	18,727	21,473	15%
Cycle	10,893	12,089	11%
Commercial Vehicle	1,096	1,093	0%
Motor Bike	1,390	1,464	5%
Total	199,943	202,001	1%

Chart 3 Mode Share of Journeys into the City Centre, 2006 – 2016



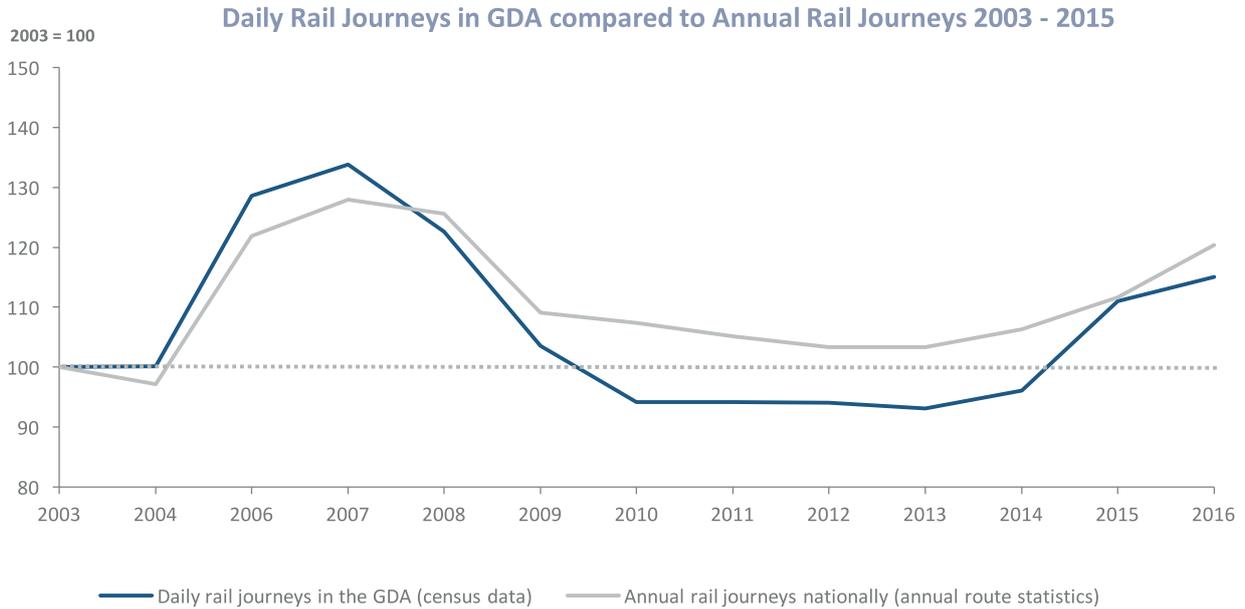
This shows a number of changes in mode share since 2006:

- The share of rail journeys into the city centre in the morning peak has fallen from a peak of over 18% in 2007 to just over 15% in 2016.
- From 2010 to 2014, the rail mode share stabilised at around 13%. 2015 saw the first significant increase in rail mode share since the period of decline and subsequent stability, this trend continued in 2016.
- There has been an increase in the proportion of journeys travelling into the city centre by bicycle from 2% to 6%.
- The mode share for bus declined almost 2% in the past year however bus is still the dominant public transport mode making up 56% of total public transport.
- The private car mode share continues to decline and is down 8% from a peak of almost 40% in 2010.
- At 49%, the mode share for public transport is now over 17% greater than that for private car. In 2010 the public transport mode share was only 6% greater than that for private car. In the same period 2010-2016 mode share for rail has increased by 3%.
- The walk mode share increased slightly between 2015 and 2016, at just under 11% it is at its highest point for the period 2006-2016.
- The remaining modes – commercial vehicle, motor bike and taxi – remain largely unchanged since 2006.

2.4 Comparison of Census Data and Annual Rail Statistics

Iarnród Éireann also produces statistics on the number of journeys taken nationally on the rail network on an annual basis. Chart 4 compares the daily rail journeys taken in the GDA (from the Rail Census) with the number of annual journeys nationally, using 2003 as a baseline.

Chart 4 Daily Rail Journeys in the GDA compared to Annual Rail Journeys 2003 - 2016 (Index: 2003= 100)



The trends in both annual and daily rail journeys have followed similar trajectories over the past 13 years. This suggests that the Rail Census could be considered representative of annual rail patronage and therefore could be considered a reasonable proxy for annual trends.

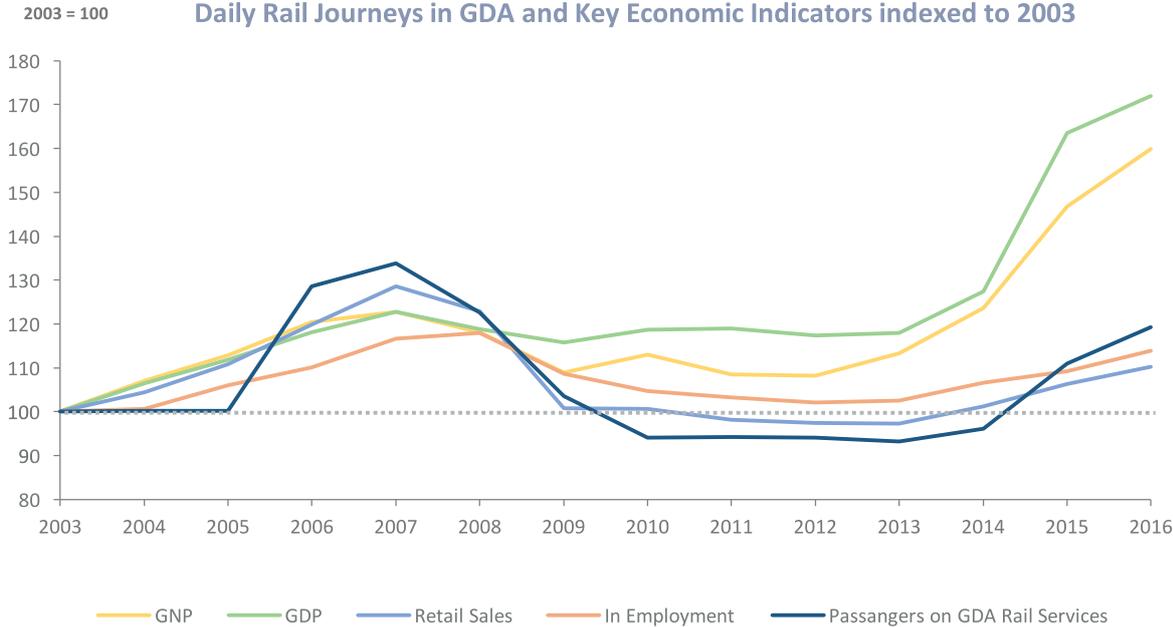
The sharper decline in GDA patronage since 2008 can be explained by differences in rail coverage in the GDA region relative to the rest of Ireland. Daily rail journeys in the GDA will also be heavily influenced by the decline in DART patronage. The reverse of these effects can be seen in the period 2014 - 2016 where the increase in patronage within the GDA is noticeably sharper than nationally.

Between 2010 and 2013 patronage trends both in the GDA region and nationally remained relatively flat. In the period 2013-2014, both national and GDA patronage showed moderate growth. However the period 2014-2016 has shown significant growth both at national and at the GDA level, with 3.12 million additional rail journeys made in 2016 relative to 2015.

2.5 Rail Usage in the GDA and Economic Trends

Given that rail usage is a derived demand, it is useful to understand the relationship between rail patronage and other indicators of economic activity. In doing so, it may assist in anticipating future trends in rail demand, and aid service planning. Chart 5 compares the evolution of rail patronage in the GDA with key national economic indicators and the numbers In-Employment in the GDA. A relationship is clearly evident, as increases and decreases in economic activity are reflected in rail passenger numbers.

Chart 5 Rail Journeys in the GDA and Key Economic Indicators Indexed to 2003





3 Rail Patronage

3.1 National and Greater Dublin Area

The total patronage on the rail network on Census day was just under 147,000. Total patronage has increased by 4% since 2015 and almost 19% since 2012 (the first national rail census). Table 7 shows the total rail patronage both within and outside the GDA, along with the relative change since 2015. The GDA comprises the counties of Dublin, Kildare, Meath and Wicklow.

Of the total number of rail journeys undertaken in 2016, 84% were within the GDA. In each of the years 2012, 2013, 2014 and 2015, 83% of journeys were made within the GDA. This slight increase is explained by increases on the DART lines and Dublin Commuter lines via Heuston. There is a similar level of growth in patronage outside of the GDA. However, this growth is not spread universally with significant % increases on both Cork Commuter and Waterford services whilst there were decreases in patronage on Cork-Limerick-Tralee and Galway/Mayo intercity services.

Table 7 Rail Patronage – GDA and National

	GDA	% Change on Previous Year	Outside GDA	% Change on Previous Year
Patronage	123,880	4%	23,068	4%

3.2 Rail Usage according to Service Categories

Table 8 shows the total number of journeys taken on the National Irish Rail network on the day of the Census, according to service category.

Table 8 Journeys taken by service category

	GDA	% Change on Previous Year
DART	67,123	3%
Commuter	46,868	-3%
Inter City	32,957	15%
Total	146,948	4%

3.3 Rail Usage on Individual Lines

Table 9 shows the number of journeys on each of the lines on Census day 2016

Table 9 Journeys by direction and by line, 2016

Line	Route	Journeys	Annual % Change
DART Northbound	Greystones/Bray – Howth/Malahide	33,595	4%
DART Southbound	Malahide/Howth – Greystones/Bray	33,528	3%
Connolly Northbound	Rosslare – Dundalk	11,480	13%
Connolly Southbound	Dundalk – Rosslare	11,808	4%
Connolly Eastbound	Sligo – Longford – Bray	12,177	5%
Connolly Westbound	Bray – Longford – Sligo	11,228	0%
Heuston North & Eastbound ³	Kildare/Newbridge/Athlone/Carlow/Portlaoise/Cork/Limerick/Galway/Westport/Waterford/Tralee – Heuston	12,891	3%

3 Includes Ballina to Manulla Junction and Galway to Athlone services

Line	Route	Journeys	Annual % Change
Heuston South & Westbound ⁴	Heuston - Kildare/Newbridge/Athlone/Carlow/Portlaoise/Cork/Limerick/Galway/Westport/Waterford/Tralee	12,161	-1%
Cork Regional Northbound	Cobh - Cork - Mallow / Cork - Mallow - Tralee	2,803	15%
Cork Regional Southbound	Cork to Cobh / Tralee - Mallow - Cork	2,788	14%
Regional Northbound	Limerick - Galway/Ballybrophy/Limerick Junction & Waterford - Limerick Junction	1,190	-7%
Regional Southbound	Galway/Ballybrophy/Limerick Junction - Limerick & Limerick Junction to Waterford	1,299	6%

3.4 Busiest Stations

Table 10 below illustrates the Top 10 busiest stations in 2016 in terms of all day boardings and alightings. A comparison with the station ranking in 2015 is also provided.

Stations in Dublin dominate the list of busiest stations for boardings and alightings throughout the rail network. This is reflected in overall trends of rail usage. Outside of Dublin, Kent station in Cork City and Bray in Wicklow also feature in the top ten busiest stations in terms of passenger traffic. There has been no change in the ranking of the top 4 stations in terms of all day boardings and alightings in the past year.

In 2016 the top ten stations for boarding represent 46% of total boardings in the country on census day, unchanged since 2015. The share of total alightings accounted for by the top ten stations in 2016 was 48%, also unchanged since 2015.

Grand Canal Dock is ranked 10th in the list of busiest stations for boardings but is ranked 5th for alightings (only surpassed by Connolly, Pearse, Heuston and Tara Street). 37% more people alighted services than boarded services at Grand Canal Dock on census day.

On census day a third of station footfall over the entire network was recorded at Dublin Connolly, Pearse, Tara Street and Heuston Stations combined.

4 Includes Manulla Junction to Ballina and Athlone to Westport/Galway services

Table 10 Top 10 stations by number of boardings and alightings, 2016 (and rank in 2015)

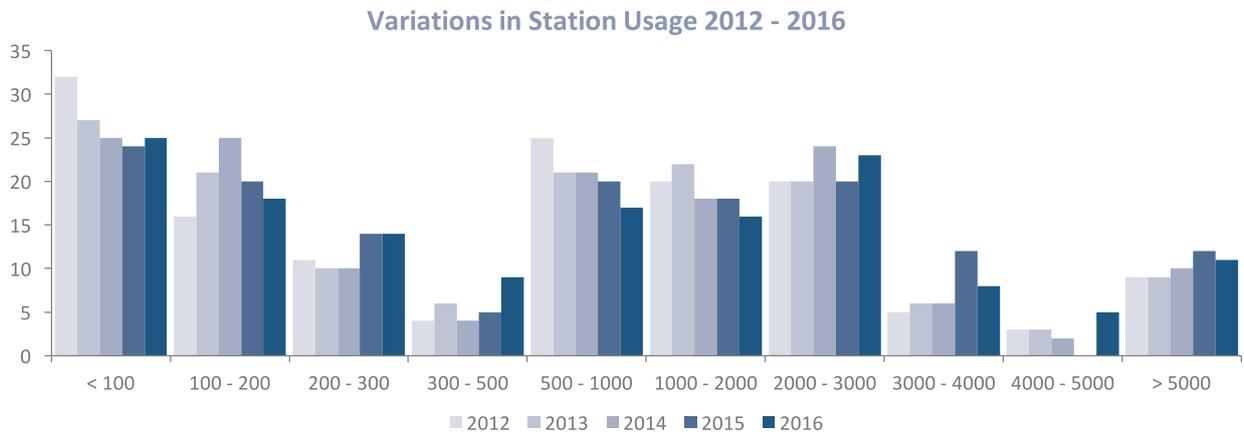
Rank	Boardings		Alightings	
1	Connolly (-)	14,857	Connolly (-)	16,109
2	Pearse (-)	14,827	Pearse (-)	14,221
3	Heuston (-)	9,537	Heuston (-)	10,007
4	Tara Street (-)	7,952	Tara Street (-)	8,461
5	Cork (-)	3,752	Grand Canal Dock (6)	3,958
6	Dún Laoghaire (7)	3,574	Lansdowne Road (5)	3,888
7	Lansdowne Road (6)	3,500	Cork (-)	3,811
8	Bray (-)	3,144	Dún Laoghaire (-)	3,492
9	Blackrock (-)	2,974	Bray (10)	3,220
10	Grand Canal Dock (11)	2,896	Blackrock (9)	2,985

3.5 Variation in Station Usage

Chart 6 shows the number of daily journeys to and from each station from 2012 to 2016. The number of daily journeys has been derived by adding the number of boardings and alightings at each station.

The number of stations in the country experiencing less than 100 journeys per day has increased slightly in 2016 relative to 2015 but is down 22% on 2012. The number of stations experiencing between 300 to 500 journeys per day has almost doubled in the past year from 5 to 9. At the opposite end of the scale 11 stations generated in excess of 5,000 journeys on a typical day, down from 12 in 2015. Although there has been some variation in the bands in 2016, 63 stations on the network experience more than 1,000 journeys per day. This is 1 more than in 2015. The number of stations generating in excess of 3,000 journeys doubled between 2014 to 2015 and has held in 2016 however in 2015 no stations generated between 4,000 – 5,000 passengers whereas in 2016, 5 did.

Chart 6 Variations in Station Usage





4 Patronage by Line

4.1 DART

4.1.1 Services Included:

Malahide / Howth - Bray / Greystones

The number of total daily journeys on the DART line in 2016 was just over 67,000 up over 2,200 journeys or 3% on 2015 levels. This growth in patronage accounts for over half (52%) of the overall increase in patronage for the entire GDA between 2015 and 2016. In spite of growing patronage on the DART since 2014, 2016 patronage levels are 80% of the peak patronage level of 2007.

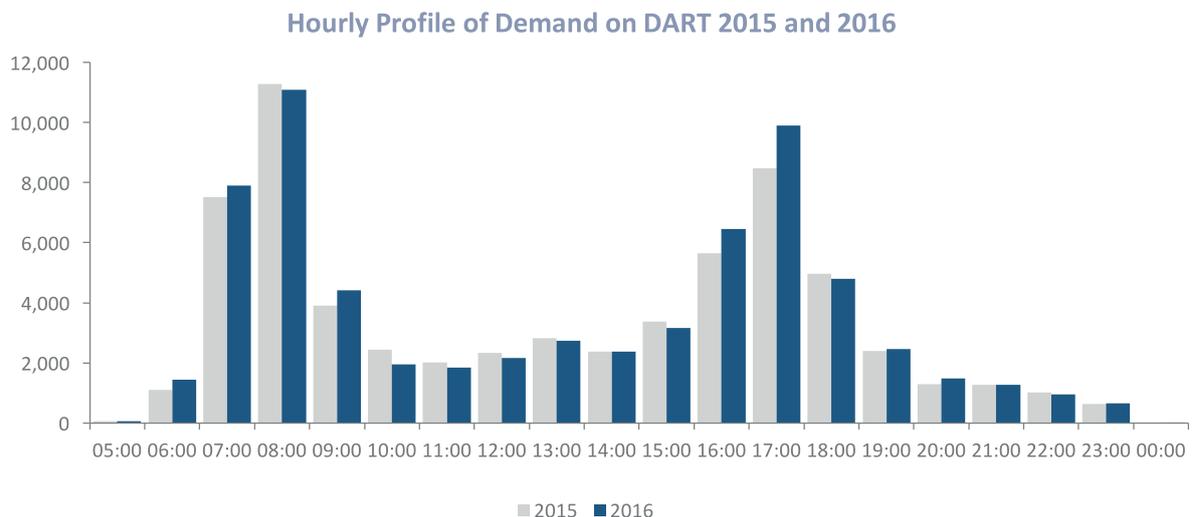
Table 11 Total daily patronage on DART lines, 2016

Line	2015	2016	Annual % Change
DART Northbound	32,239	33,595	4%
DART Southbound	32,666	33,528	3%
Total	64,905	67,123	3%

4.1.2 Hourly Profile of Demand

Chart 7 shows variations in demand throughout the day on the DART line in 2015 and 2016. This is based on passenger numbers boarding services.

Chart 7 Hourly profile of demand on DART 2015 and 2016



4.1.3 Profile of Demand by Station

Chart 8 shows the daily build-up of passengers along the route of the DART Northbound line from Greystones to Howth Junction, where the network then splits into the Howth and Malahide branches. The change in the cumulative number of passengers on board at each station is the net impact of the number of passengers alighting and boarding trains. Chart 9 shows the profile of demand in the southbound direction which, as would be expected, mirrored the northbound profile.

Chart 8 Profile of Demand by Station, DART Northbound, 2015 and 2016

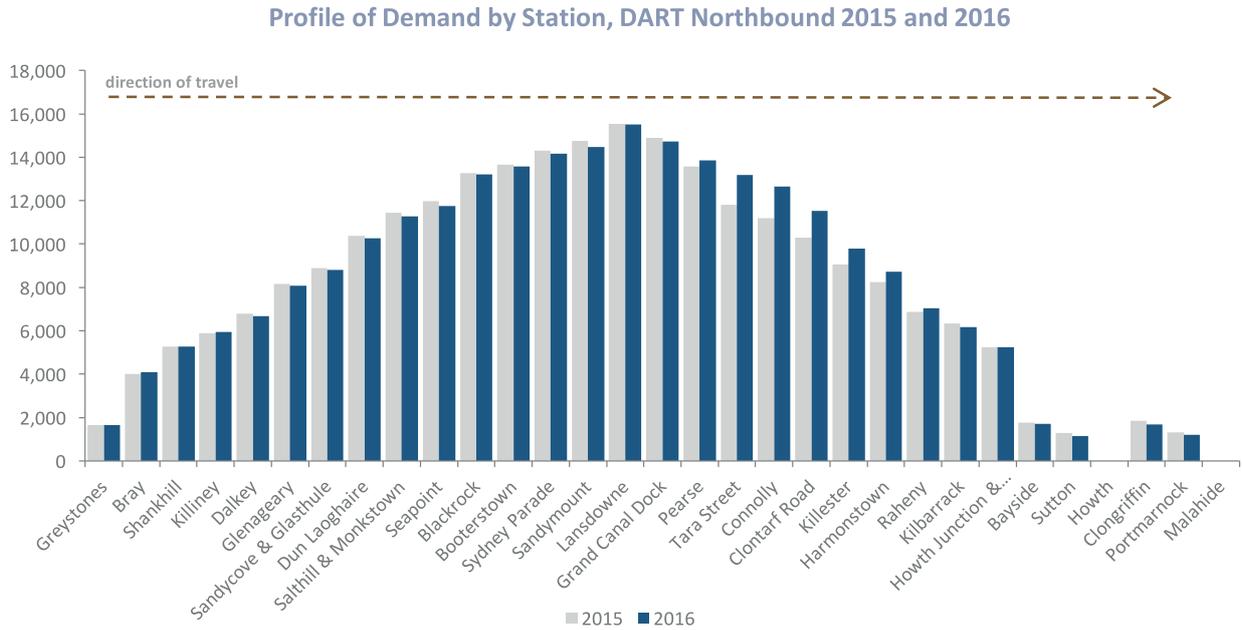
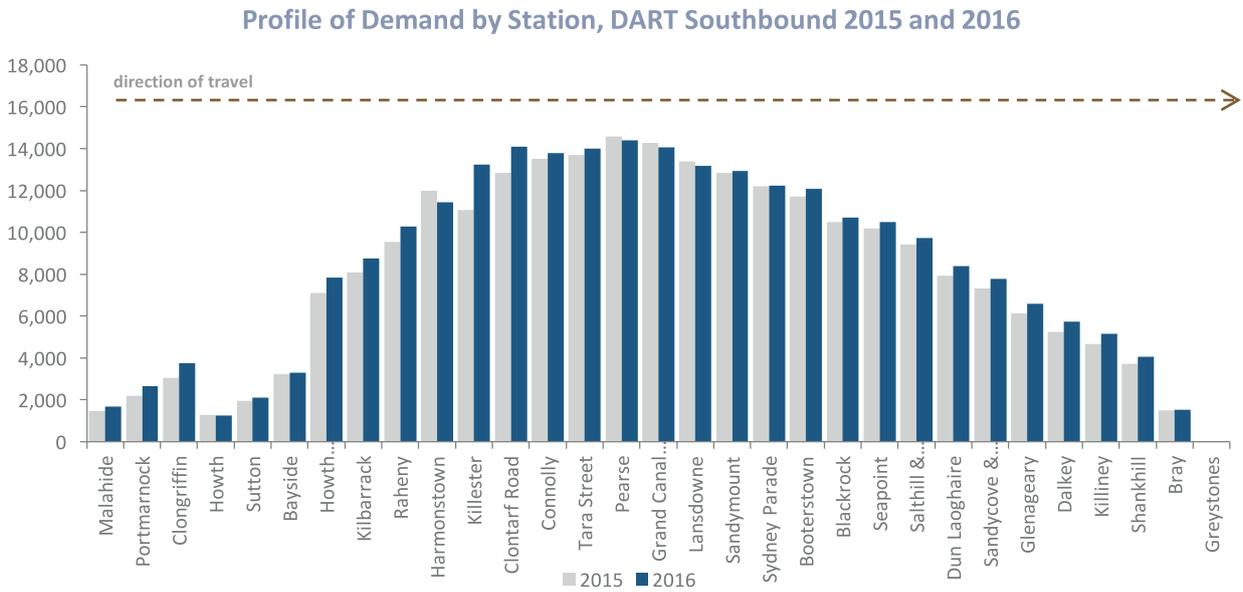


Chart 9 Profile of Demand by Station, DART Southbound, 2015 and 2016



4.2 Dundalk – Rosslare

4.2.1 Services included:

Intercity: Dublin – Rosslare / Wexford
Commuter: Dublin – Gorey

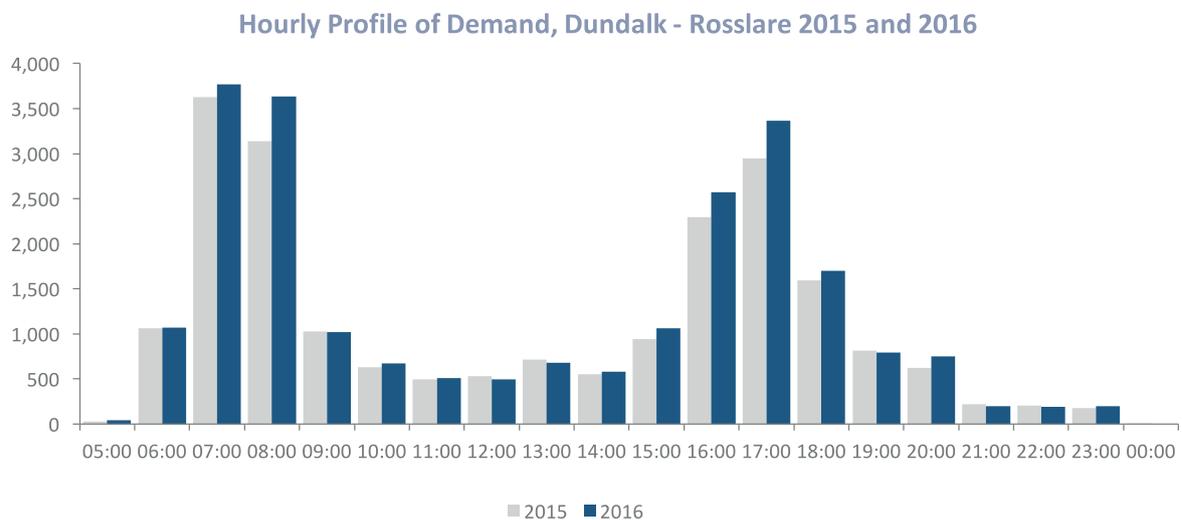
Commuter: Dublin – Dundalk / Drogheda
Intercity: Dublin – Belfast

Table 12 Total daily patronage on Dundalk – Rosslare lines, 2016

Line	2015	2016	Annual % Change
Northbound	10,132	11,480	13%
Southbound	11,378	11,808	4%
Total	21,510	23,288	8%

4.2.2 Hourly profile of Demand

Chart 10 Hourly profile of demand, Dundalk – Rosslare, 2015 and 2016



4.2.3 Profile of Demand by Station

Charts 11 and 12 show the demand profile of patronage on the Dundalk – Rosslare section of the network.

Chart 11 Profile of Demand by Station, Dundalk - Rosslare (Northbound), 2015 and 2016

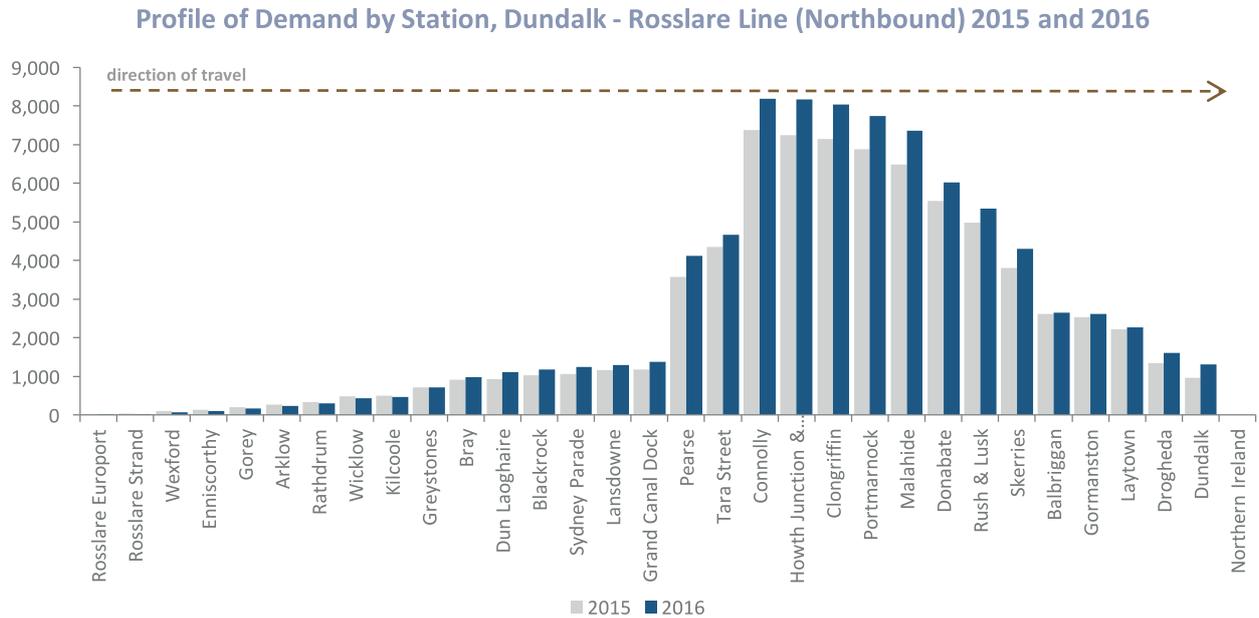
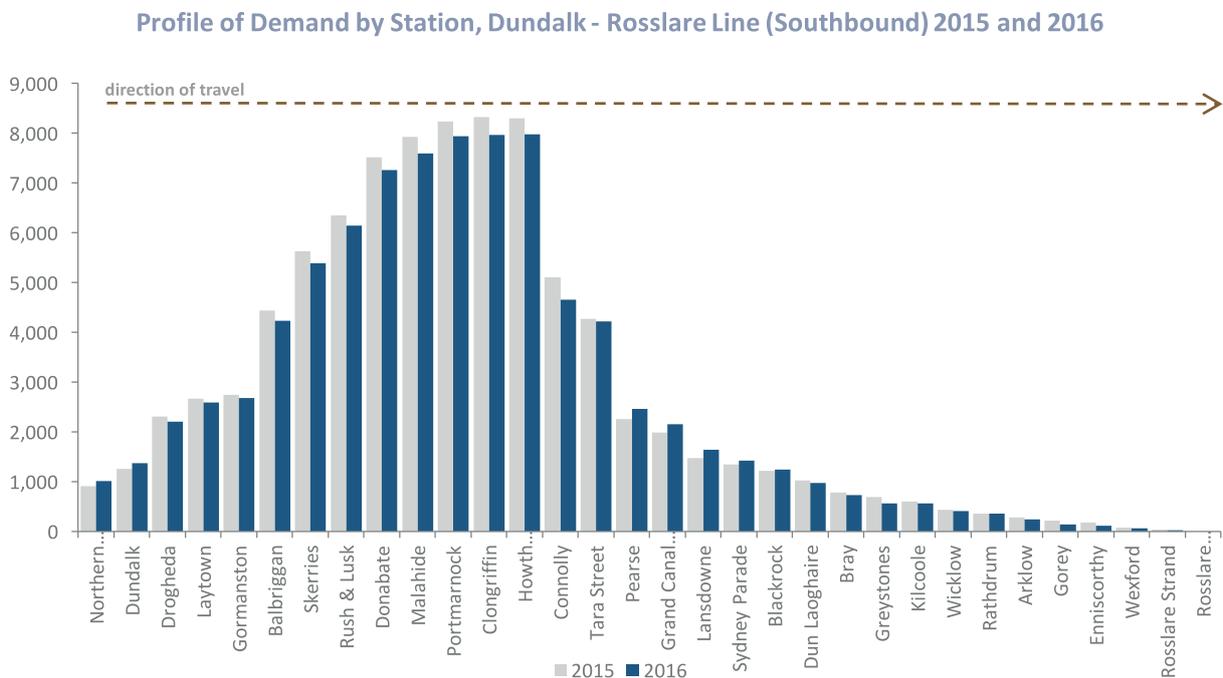


Chart 12 Profile of Demand by Station, Dundalk - Rosslare line (Southbound), 2015 and 2016



4.3 Dublin – Belfast (Enterprise)

4.3.1 Services included:

Intercity: Dublin - Belfast

The Rail Census also captures the total number of passengers on 'Enterprise' services operating between Northern Ireland and the Republic of Ireland. There was an increase in Enterprise service patronage between 2015 and 2016 of approximately 17%. There was a 21% increase in northbound patronage and a 14% increase in southbound patronage. Table 13 shows the total boardings on Enterprise services on Census day in 2015 and 2016.

Although the Enterprise service operates between Dublin and Belfast, on census day 2016 73% of Enterprise trips crossed the border into Northern Ireland (68% in 2015). There was a 26% increase in cross border trips between 2015 and 2016. There was a 37% increase in northbound cross border trips and a 15% increase in the southbound direction. Table 13 shows the total cross border trips on Census day 2015 and 2016.

Table 13 Total Patronage on the Enterprise Service

Enterprise Services	2015	2016	Annual % Change
Northbound	1,484	1,790	21%
Southbound	1,202	1,365	14%
Total	2,686	3,155	17%

Table 14 Total Cross Border Patronage on the Enterprise Service

Enterprise Services	2015	2016	Annual % Change
Northbound	961	1,313	37%
Southbound	853	981	15%
Total	1,814	2,294	26%

4.4 Sligo – Longford – Bray

4.4.1 Services included:

Intercity: Dublin – Sligo

Commuter: Dublin – Maynooth/Longford

Commuter: Dublin – M3 Parkway

Commuter: Bray – Dublin (excluding DART)

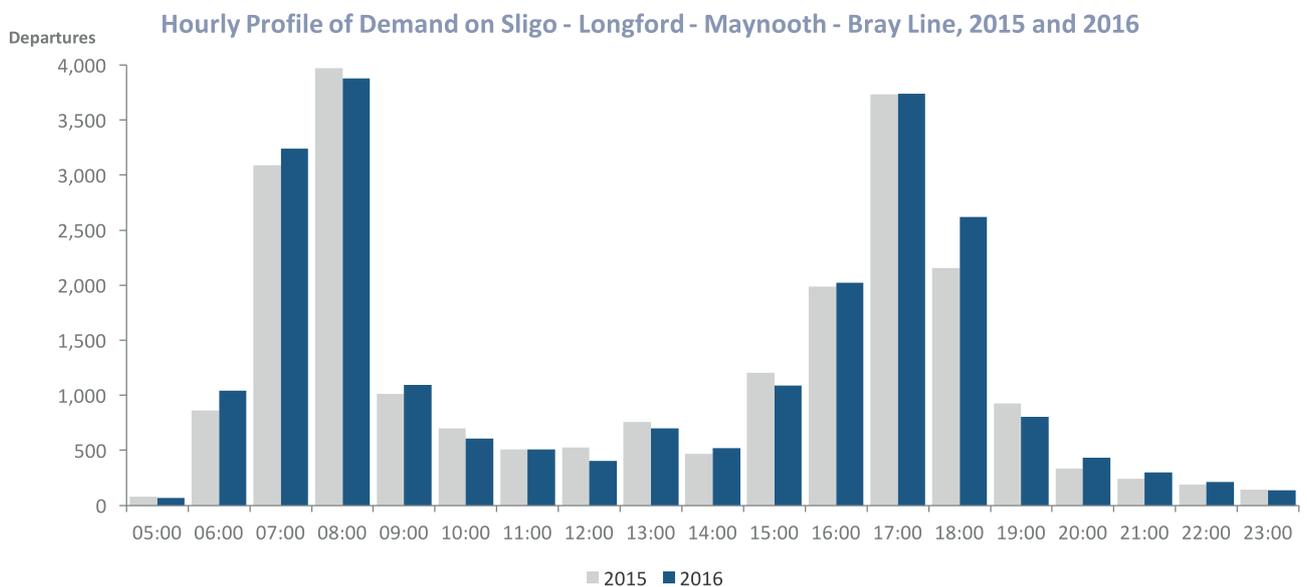
Commuter: Bray – Maynooth

Table 15 Total daily patronage on Sligo - Bray lines, 2016

Line	2015	2016	Annual % Change
Eastbound	11,637	12,177	5%
Westbound	11,239	11,228	0%
Total	22,876	23,405	2%

4.4.2 Hourly Profile of Demand

Chart 13 Hourly Profile of Demand, Sligo - Longford - Bray, 2015 and 2016



4.4.3 Profile of Demand by Station

Charts 14 and 15 show the daily patronage build-up on the Bray to Sligo line in 2015 and 2016.

Chart 14 Profile of Demand by Station, Bray - Dublin - Sligo (Eastbound), 2015 and 2016⁵

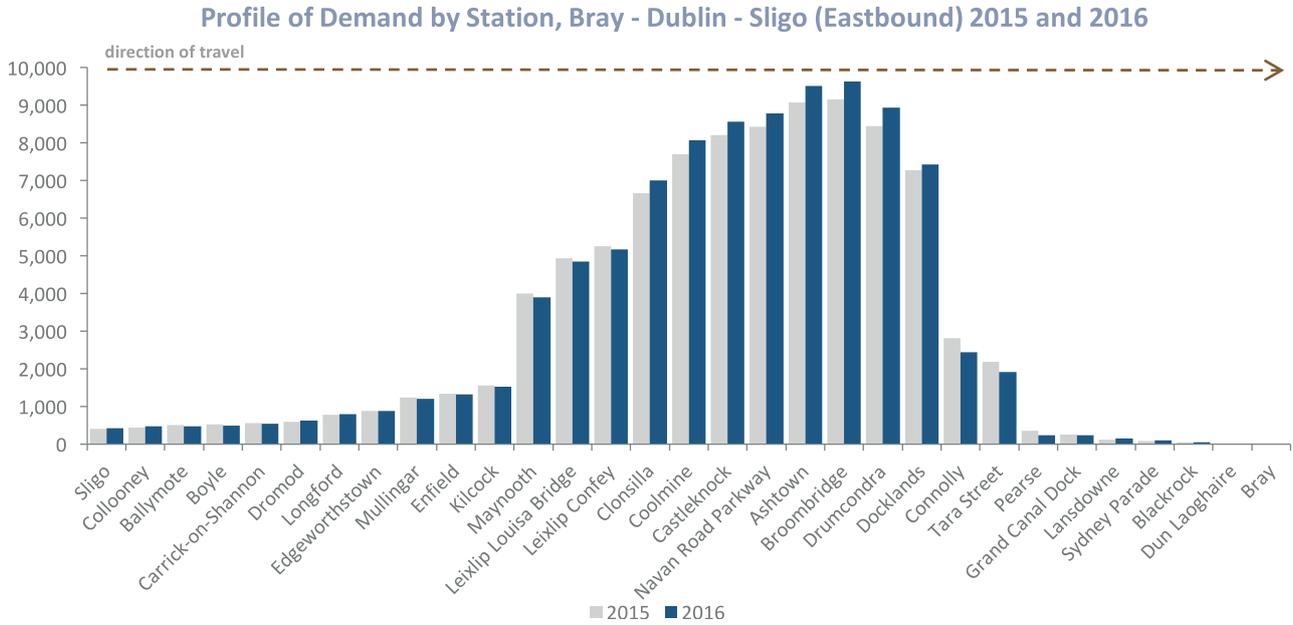
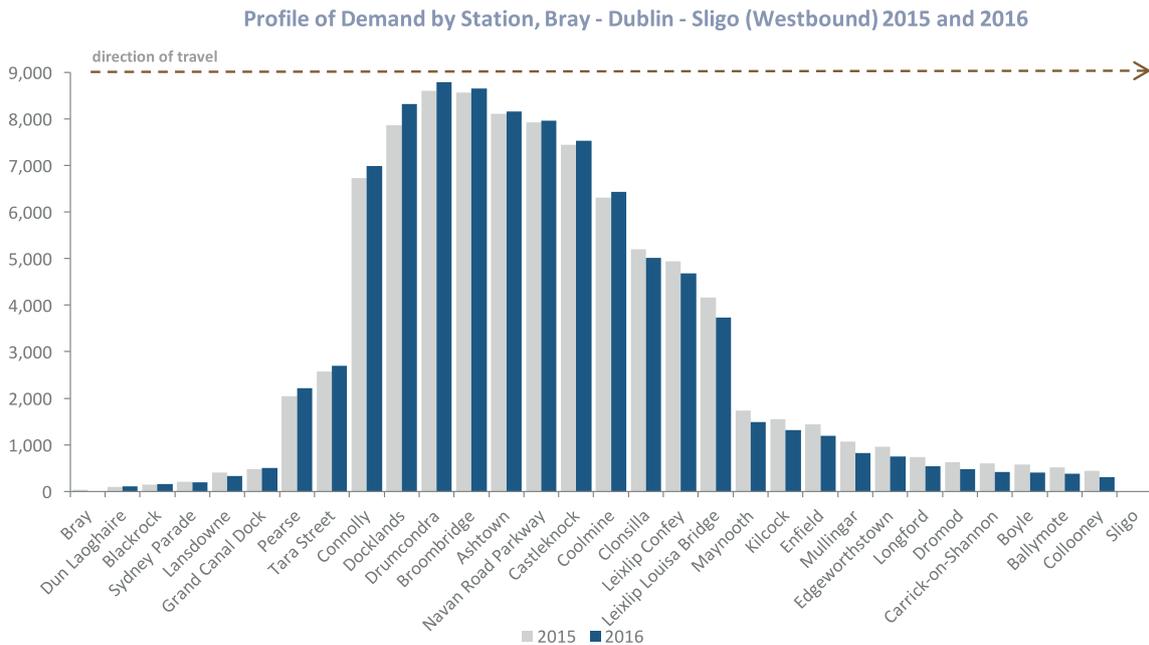


Chart 15 Profile of Demand by Station, Sligo - Dublin - Bray (Westbound), 2015 and 2016



5 'Dunboyne spur' Patronage (M3 Parkway - Dunboyne - Hansfield) represented at Clonsilla

4.5 Heuston Commuter Services

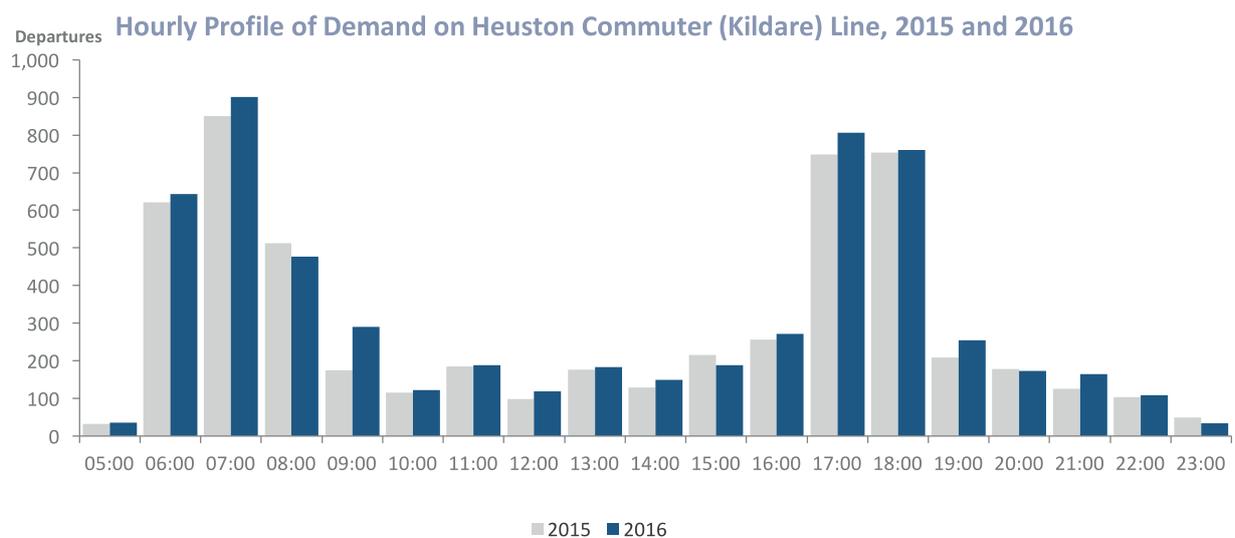
4.5.1 Services included:

Commuter: Dublin Heuston - Kildare, Newbridge, Portlaoise & Portarlington

Table 16 Total daily patronage on Commuter Services to & from Heuston, 2016

Line	2015	2016	Annual % Change
From Heuston	2,786	2,898	4%
To Heuston	2,877	3,130	9%
Total	5,663	6,028	6%

Chart 16 Hourly Profile of Demand, Heuston Commuter, 2015 and 2016



4.5.2 Profile of Demand by Station

Charts 17 and 18 show the daily patronage build-up on the Heuston commuter line in 2015 and 2016.

Chart 17 Profile of Demand by Station, Kildare Line (Eastbound), 2015 and 2016⁶

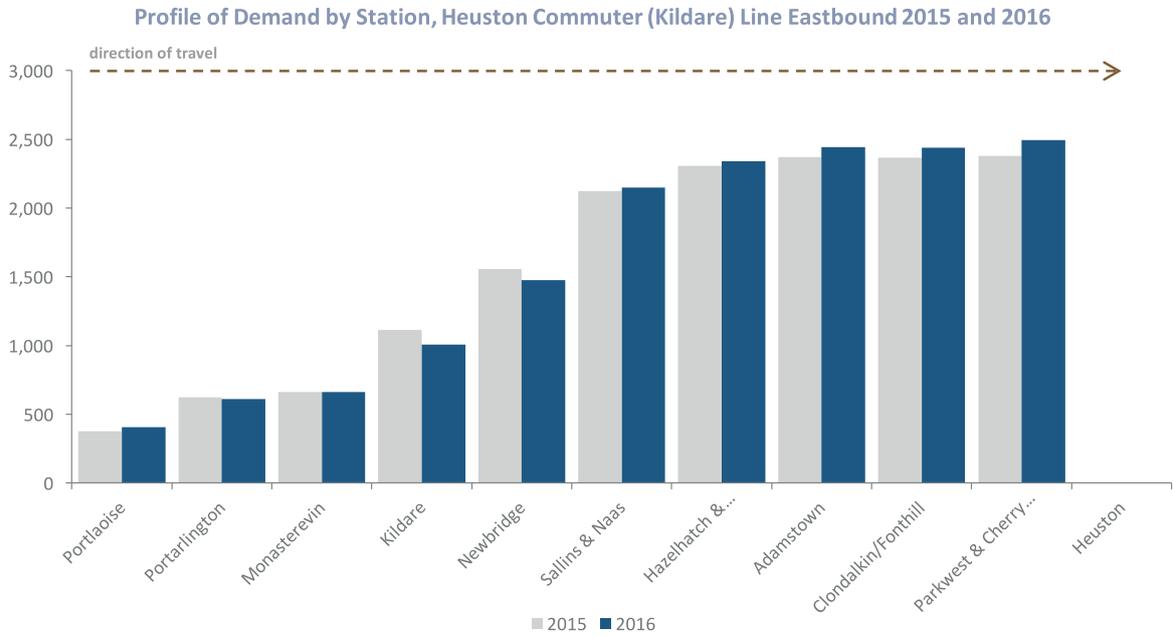
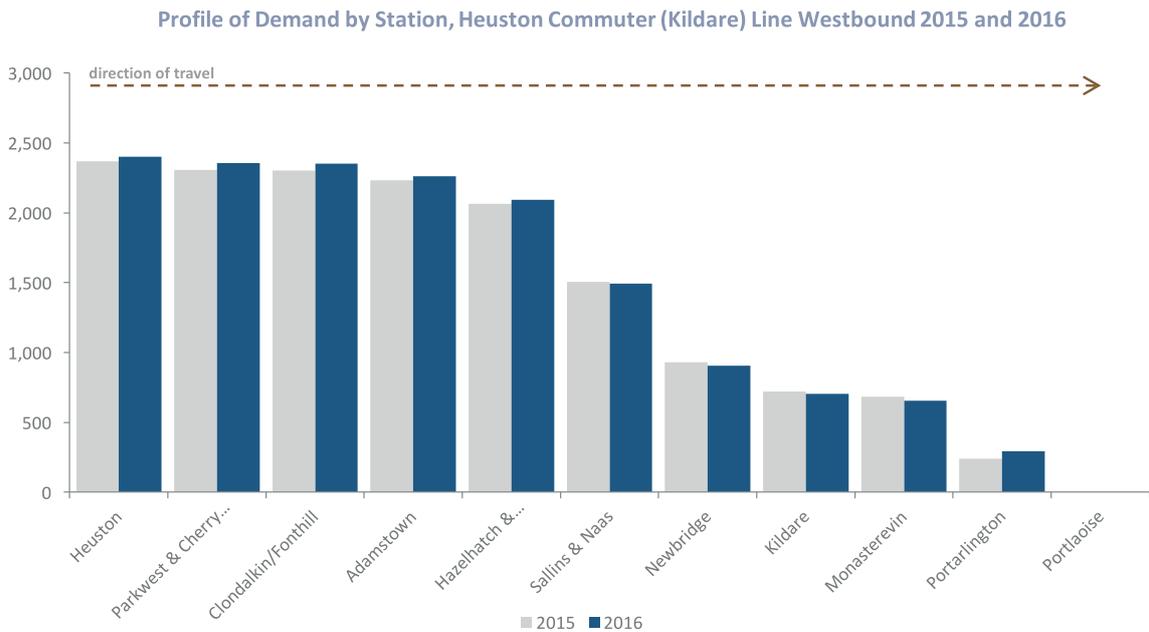


Chart 18 Profile of Demand by Station, Kildare Line (Westbound), 2015 and 2016⁴



6 Patronage at Athlone, Clara and Tullamore represented at Portarlington, from Athy and Carlow at Kildare

4.6 Heuston Inner City Services

4.6.1 Services

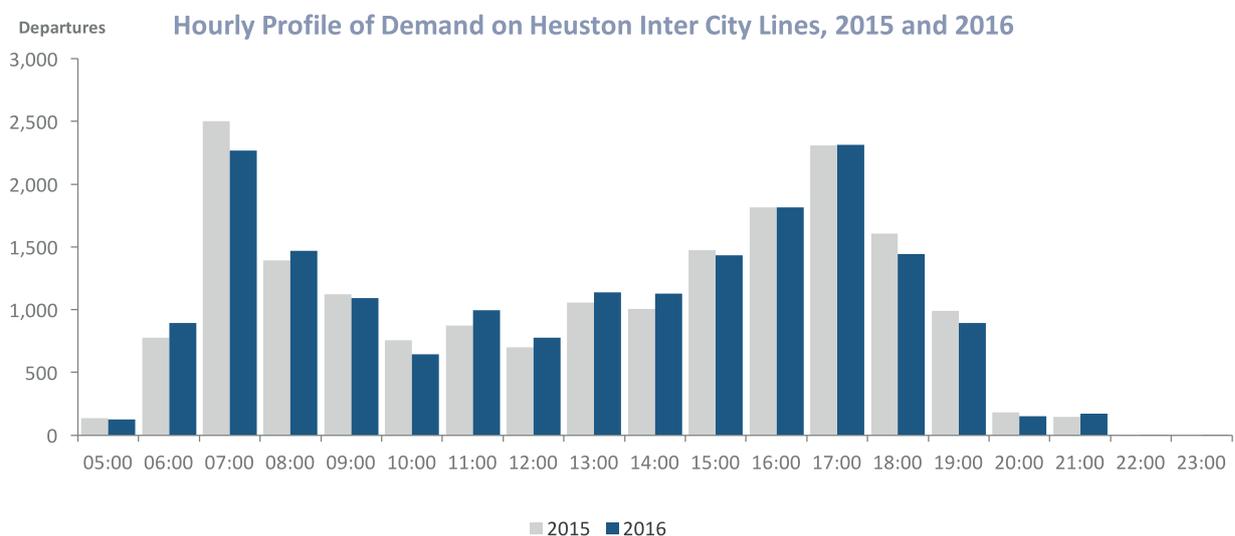
A number of rail lines operate out of Heuston. This network of lines serves the majority of the country, with services to and from Kildare, Waterford, Newbridge, Athlone, Carlow, Portlaoise, Cork, Tralee, Limerick, Galway and Westport. Chart 19 shows the build-up of demand on all Inter City Heuston services over the course of the census day. The build-up captures the total boardings per hour based on time of arrival or departure from Heuston station.

Table 17 Total daily patronage on Inter City Services to & from Heuston, 2016

Line	2015	2016	Annual % Change
From Heuston	9,197	9,031	-2%
To Heuston	9,526	9,568	0%
Total	18,723	18,599	-1%

4.6.2 Hourly Profile of Demand

Chart 19 Profile of Demand by Station, Heuston Inter City services, 2015 and 2016



4.7 Cork Commuter and Regional

4.7.1 Services included:

Midleton/Cobh - Cork - Mallow - Tralee

Table 18 Total daily patronage on Cork Commuter Lines, 2016

Line	2015	2016	Annual % Change
East/South bound	2,516	2,840	13%
West/North bound	2,347	2,751	17%
Total	4,863	5,591	15%

4.7.2 Hourly Profile of Demand

Chart 20 Hourly Profile of Demand, Cork Commuter and Regional Lines, 2015 and 2016

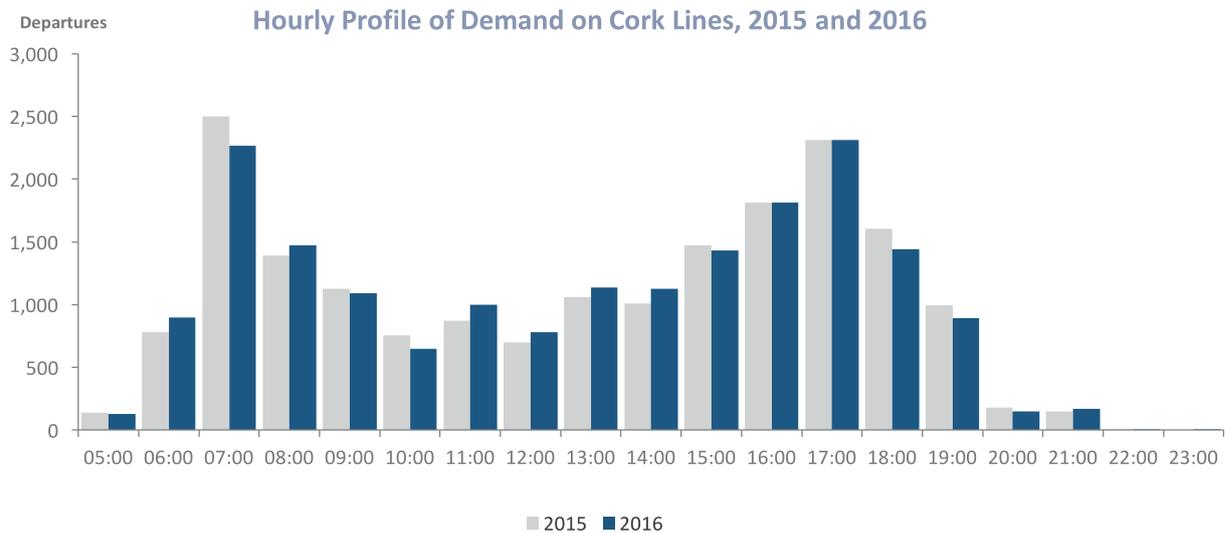


Chart 21 Profile of Demand by Station, Cobh - Cork - Mallow - Tralee

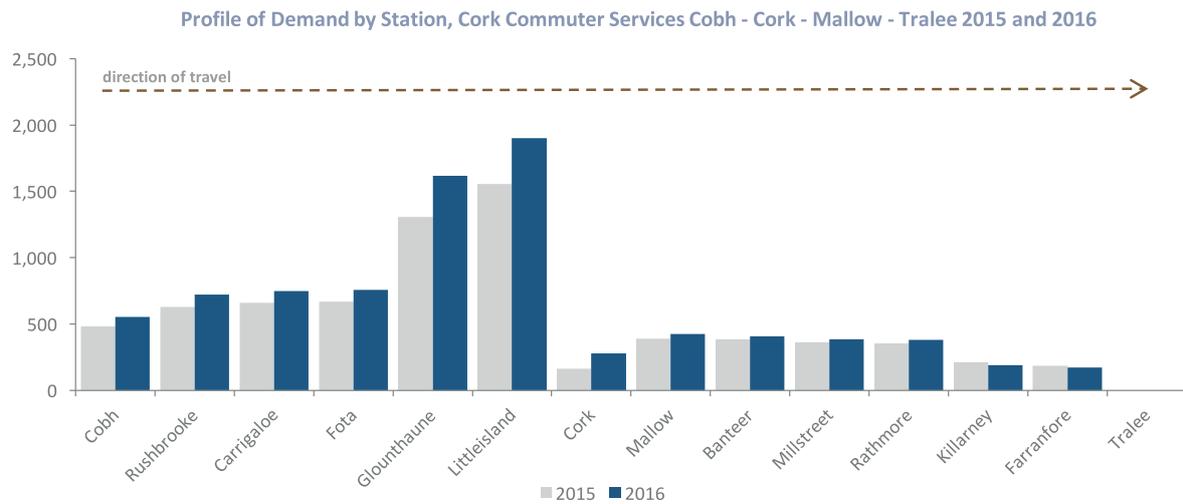
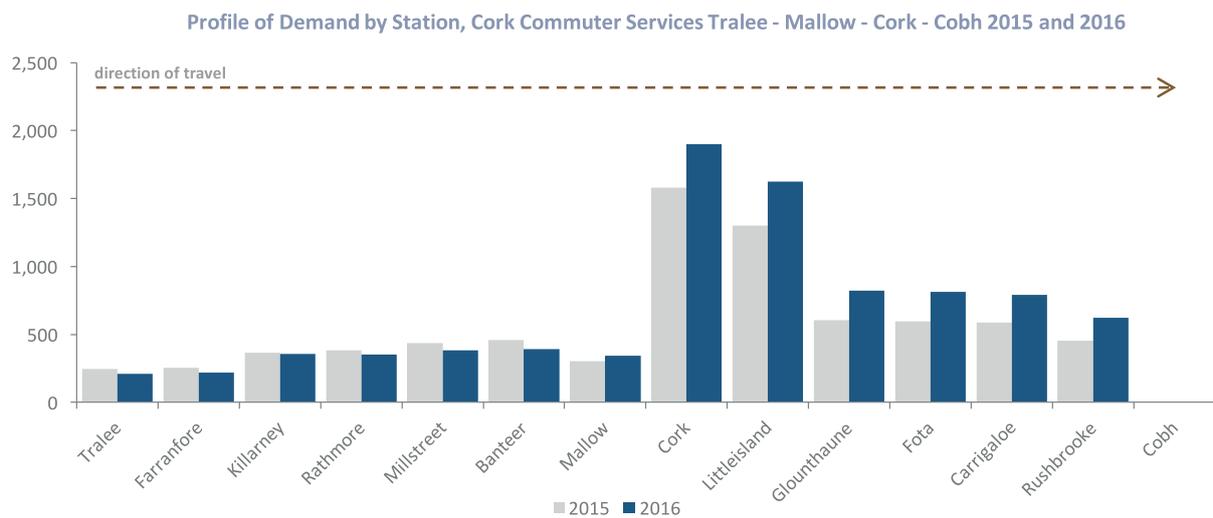


Chart 22 Profile of Demand by Station, Tralee - Mallow - Cork - Cobh



4.8 Other Lines

Table 19 Daily Patronage on remaining Lines outside Cork and the GDA

Line	2015	2016	Annual % Change
Galway - Athenry - Ennis - Limerick	1,147	1,402	22%
Limerick - Limerick Junction/Nenagh - Ballybrophy	1,277	978	-23%
Waterford - Limerick Junction	79	109	38%
Total	2503	2489	-1%

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5 Radial Rail Usage in Dublin

Daily boardings by radial corridor

Table 20 – Daily Boardings from Stations Inbound to the City Centre

Radial corridor	Section	Service	Boardings				
			2012	2013	2014	2015	2016
Northern line	Malahide/Howth - Clontarf Road	DART	12,403	11,949	12,160	14,432	16,017
	Dundalk - Howth Junction	Commuter	7,064	7,380	7,329	8,103	8,160
	Northern Ireland-Donabate	InterCity	1,536	1,410	1,167	1,202	1,365
Total			21,003	20,739	20,656	23,737	25,541
South Eastern line	Greystones - Grand Canal Dock	DART	19,667	19,468	18,630	22,081	22,465
	Bray - Grand Canal Dock	Commuter	817	495	558	521	538
	Rosslare - Grand Canal Dock	InterCity	1,180	876	1,521	1,482	1,644
Total			21,664	20,839	20,709	24,084	24,647
Heuston Lines	Portlaoise - Heuston	Commuter	1,737	2,275	2,741	2,887	2,973
	National - Heuston	InterCity	8,251	8,927	8,576	9,526	9,918
Total			9,988	11,202	11,317	12,413	12,891
Sligo lines	Longford - Drumcondra	Commuter	7,594	7,500	8,151	9,396	9,793
	Sligo - Drumcondra	InterCity	1,871	1,611	1,635	2,011	1,912
Total			9,465	9,111	9,786	11,407	11,705

5.1 Peak hour flows by radial corridor

Tables 21 & 22 - Maximum Flows per Line in the Morning & Evening Peak Hours
(8:00-9:00 & 17:00-18:00)

Radial corridor	Service	Max. hourly passenger flow	Location of Maximum Flow
Northern lines	DART	5,322	Clontarf Road - Connolly
	Commuter	2,165	Howth Junction - Connolly
	InterCity	213	Drogheda - Connolly
Total		7,700	
South-eastern lines	DART	4,268	Blackrock - Booterstown
	Commuter	-	No Commuter services 08:00-09:00
	InterCity	477	Blackrock - Lansdowne Rd.
Total		4,745	
Heuston Lines	Commuter	603	Clondalkin/Fonhill - Adamstown
	InterCity	1,391	Newbridge - Heuston
Total		1,994	
Sligo lines	Commuter	3,784	Ashtown - Broombridge
	InterCity	538	Maynooth - Leixlip Louisa Bridge
Total		4,322	

Line	Service	Max. hourly Passenger Flow	Location of Maximum Flow
Northern lines	DART	3,835	Connolly - Clontarf Road
	Commuter	1,617	Connolly - Howth Junction & Donaghmede
	InterCity	267	Connolly - Dundalk
Total		5,719	
South-eastern lines	DART	2,503	Pearse - Grand Canal Dock
	Commuter	450	Pearse - Dun Laoghaire
	InterCity	-	No Inter City services 08:00-09:00

Line	Service	Max. hourly Passenger Flow	Location of Maximum Flow
Total		2,953	
Heuston Lines	Commuter	758	Parkwest & Cherry Orchard - Clondalkin/Fonthill
	InterCity	1,582	Heuston - Kildare
Total		2,340	
Sligo lines	Commuter	1,789	Navan Road Parkway - Castleknock
	InterCity	438	Connolly - Leixlip Louisa Bridge
Total		2,227	

5.2 Train loadings by radial corridor

Table 23 & 24 - Most Heavily Loaded Trains in the Morning Peak

Line	Service	Maximum load per train	Service	Location
Northern lines	DART	1,006	08:02 Howth - Greystones	Clontarf Road - Connolly
	Commuter	865	06:47 Drogheda - Pearse	Portmarnock - Connolly
	InterCity	213	06:50 Belfast - Connolly	Drogheda - Connolly
South Eastern lines	DART	1,204	08.00 Greystones-Malahide	Blackrock - Lansdowne Road
	Commuter	477	05:35 Rosslare Europort - Dundalk	Blackrock - Lansdowne Road
	InterCity	-	No Inter City Services	
Heuston Lines	Commuter	278	07:20 Portlaoise - Heuston	Clondalkin/Fonthill - Parkwest & Cherry Orchard
	InterCity	458	06:05 Waterford - Heuston	Newbridge - Heuston
Sligo lines	Commuter	799	07.55 Maynooth - Bray	Broombridge - Drumcondra
	InterCity	538	05.45 Sligo - Connolly	Maynooth - Broombridge

Table 25 - Most Heavily Loaded Trains in the Evening Peak

Line	Service	Maximum load per train	Train	Location of busiest service
Northern lines	DART	941	16.30 Greystones - Malahide	Connolly - Clontarf Road
	Commuter	636	16.50 Bray - Drogheda	Connolly - Clongriffin
	InterCity	358	16:50 Connolly - Belfast	Connolly - Dundalk
South Eastern lines	DART	782	17:30 Malahide - Greystones	Lansdowne Road - Sandymount
	Commuter	450	17:36 Connolly - Wexford	Pearse - Dun Laoghaire
	InterCity	-	No Inter City Services	
Heuston Lines	Commuter	295	17.10 Heuston - Athlone	Heuston - Newbridge
	InterCity	425	16:40 Heuston - Waterford	Heuston - Sallins & Naas
Sligo lines	Commuter	677	17.05 Bray - Maynooth	Connolly - Drumcondra
	InterCity	458	17.05 Connolly - Sligo	Connolly - Drumcondra

Appendix A: Daily Boardings at each Station, by Service Type

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Rosslare Eur	-	-	11	-	-	-	11	21	13	20	20
Rosslare Strand	-	-	16	-	-	-	16	24	14	21	25
Wexford	-	-	45	31	-	-	76	115	78	68	81
Enniscorthy	-	-	42	12	-	-	54	57	38	43	61
Gorey	-	-	66	7	-	-	73	86	78	86	105
Arklow	-	-	81	4	-	-	85	88	91	109	119
Rathdrum	-	-	63	5	-	-	68	111	75	98	94
Wicklow	-	-	156	12	-	-	168	155	152	166	180
Kilcoole	-	-	39	-	-	-	39	24	33	31	23
Greystones	1,637	-	255	35	-	-	1,927	1,951	1,561	1,783	1,858
Bray	2,543	201	335	65	-	-	3,144	2,974	2,573	2,909	3,029
Shankill	1,277	90	-	-	-	-	1,367	1,456	1,085	1,149	1,301
Killiney	769	84	-	-	-	-	853	792	731	882	859
Dalkey	1,199	422	-	-	-	-	1,621	1,634	1,301	1,531	1,544
Glenageary	1,555	111	-	-	-	-	1,666	1,661	1,388	1,568	1,494
Sandycove & Glasthule	995	213	-	-	-	-	1,208	1,157	1,004	1,022	995
Dun Laoghaire	2,209	795	256	197	117	-	3,574	3,315	2,610	3,168	3,359
Salthill & Monkstown	1,200	187	-	-	-	-	1,387	1,379	1,065	1,168	1,041
Seapoint	610	226	-	-	-	-	836	869	682	785	699
Blackrock	2,220	572	109	16	56	1	2,974	2,862	2,699	2,091	2,399
Boosterstown	1,002	642	-	-	-	-	1,644	1,320	1,274	1,334	1,164
Sydney Prde	1,241	508	61	31	40	2	1,883	1,847	1,552	1,327	1,308

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Sandymount	684	360	-	-	-	-	1,044	1,243	828	889	975
Lansdowne	2,147	963	155	79	146	10	3,500	3,459	2,868	2,529	2,490
Grand Canal Dock	1,177	1,388	92	60	179	-	2,896	2,671	2,712	2,579	2,825
Pearse	4,048	4,997	3,224	677	1,790	91	14,827	13,292	13,560	12,168	11,312
Tara Street	2,578	2,833	1,112	590	614	225	7,952	7,730	6,746	6,344	6,556
Connolly	2,601	2,919	3,992	816	4,386	143	14,857	14,679	12,029	12,512	13,477
Clontarf Rd	499	1,447	-	-	-	-	1,946	1,694	1,272	1,377	1,431
Killester	215	2,010	-	-	-	-	2,225	1,786	1,595	1,575	1,592
Harmonstwn	105	1,291	-	-	-	-	1,396	1,071	998	1,011	994
Raheny	208	1,816	-	-	-	-	2,024	1,883	1,758	1,641	1,672
Kilbarrack	234	1,139	-	-	-	-	1,373	1,368	1,106	1,043	1,138
Howth Junc Donaghmede	346	1,035	222	215	-	-	1,818	1,715	1,613	1,667	1,730
Bayside	116	1,284	-	-	-	-	1,400	1,403	1,222	1,156	1,024
Sutton	45	918	-	-	-	-	963	741	669	689	657
Howth	-	1,240	-	-	-	-	1,240	1,259	875	1,073	1,285
Clongriffin	59	1,156	4	37	-	-	1,256	1,013	830	767	674
Portmarnock	54	991	39	366	-	-	1,450	1,191	1,182	1,186	1,236
Malahide	22	1,690	301	613	-	-	2,626	2,604	2,086	2,177	2,318
Donabate	-	-	157	1,235	-	-	1,392	1,386	1,105	1,149	1,213
Rush & Lusk	-	-	106	866	-	-	972	905	808	920	800
Skerries	-	-	126	1,298	-	-	1,424	1,446	1,314	1,365	1,279
Balbriggan	-	-	120	1,662	-	-	1,782	1,872	1,757	1,753	1,778
Gormanston	-	-	14	87	-	-	101	72	87	113	92
Laytown	-	-	5	392	-	-	397	392	305	371	375
Drogheda	-	-	171	915	-	-	1,086	1,264	957	962	1,094
Dundalk	-	-	105	474	-	-	579	465	394	492	567
Belfast	-	-	-	1,011	-	-	1,011	853	1,094	1,047	1,040
Docklands	-	-	-	-	1,326	-	1,326	1,064	874	850	811

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Drumcondra	-	-	-	-	808	375	1,183	1,258	1,291	1,065	1,150
Broombridge	-	-	-	-	139	279	418	370	221	249	229
Ashtown	-	-	-	-	153	842	995	928	930	743	743
Navan Road Parkway	-	-	-	-	55	268	323	270	245	232	197
Castleknock	-	-	-	-	156	636	792	781	716	841	840
Coolmine	-	-	-	-	253	1,249	1,502	1,544	1,332	1,554	1,550
Clonsilla	-	-	-	-	415	1,352	1,767	1,698	1,480	1,161	1,262
Hansfield	-	-	-	-	1	209	210	143	87	58	-
Dunboyne	-	-	-	-	-	279	279	184	220	171	177
M3 Parkway	-	-	-	-	-	400	400	298	174	206	226
Leixlip Conf.	-	-	-	-	115	414	529	520	416	497	511
Leixlip Louisa Bridge	-	-	-	-	75	1,037	1,112	1,067	1,054	834	969
Maynooth	-	-	-	-	174	2,521	2,695	2,831	2,006	2,232	2,202
Kilcock	-	-	-	-	15	222	237	258	225	233	247
Enfield	-	-	-	-	6	131	137	127	100	110	131
Mullingar	-	-	-	-	55	418	473	509	492	370	451
Edge'stown	-	-	-	-	12	104	116	130	104	122	167
Longford	-	-	-	-	31	223	254	322	266	181	221
Dromod	-	-	-	-	18	94	112	79	124	88	81
Carrick-on-Shannon	-	-	-	-	24	81	105	141	103	95	114
Boyle	-	-	-	-	24	43	67	77	58	54	76
Ballymote	-	-	-	-	41	50	91	131	74	93	69
Collooney	-	-	-	-	4	52	56	56	50	46	41
Sligo	-	-	-	-	-	426	426	401	307	379	436

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Heuston	-	9,537	-	-	-	-	9,537	9,997	9,394	8,497	8,650
Parkwest & C'yoOrchard	161	94	-	-	-	-	255	202	184	155	126
Clondalkin / Fonthill	31	23	-	-	-	-	54	40	54	56	37
Adamstown	118	16	-	-	-	-	134	108	87	71	85
Hazelhatch & Celbridge	259	40	-	-	-	-	299	271	270	260	323
Sallins Naas	943	83	-	-	-	-	1,026	964	1,123	814	916
Newbridge	1,079	145	-	-	-	-	1,224	1,067	1,081	1,058	989
Kildare	534	241	-	-	-	-	775	683	612	806	754
Athy	379	85	-	-	-	-	464	442	314	360	446
Carlow	602	143	-	-	-	-	745	593	575	657	565
M'asterevin	95	6	-	-	-	-	101	87	91	72	37
P'tarlinton	441	124	-	-	-	-	565	705	806	677	504
Portlaoise	694	131	-	-	-	-	825	804	727	721	488
Ballybrophy	136	6	-	-	19	-	161	121	99	146	84
Templemore	61	16	-	-	-	-	77	106	70	62	67
Thurles	378	168	-	-	17	-	563	557	559	483	504
Limerick Junc	667	132	-	-	648	54	1,501	1,562	1,409	1,109	1,334
Limerick	243	-	-	-	263	606	1,112	1,157	1,073	963	1,221
Charleville	61	12	-	-	-	-	73	84	65	119	78
Mallow	526	265	290	373	-	-	1,454	1,451	1,368	1,569	1,246
Cork	1,565	-	-	2,187	-	-	3,752	3,462	2,896	3,188	3,112
Muine Bheag	128	17	-	-	-	-	145	127	146	129	108
Kilkenny	324	76	-	-	-	-	400	355	350	362	328
T'mastown	46	6	-	-	-	-	52	39	39	53	36
Waterford	461	-	-	-	33	-	494	447	518	68	500

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Tullamore	363	107	-	-	-	-	470	618	475	452	371
Clara	124	13	-	-	-	-	137	109	83	61	55
Athlone	436	277	-	-	-	-	713	705	560	560	468
Ballinasloe	81	114	-	-	-	-	195	204	68	121	109
Woodlawn	9	26	-	-	-	-	35	38	22	24	10
Attymon	-	8	-	-	-	-	8	7	3	1	1
Athenry	109	102	-	-	149	16	376	393	266	141	363
Galway	989	-	-	-	-	271	1,260	1,402	1,218	1,053	1,011
Roscommon	73	15	-	-	-	-	88	75	72	80	63
Castlerea	61	9	-	-	-	-	70	58	60	49	53
Ballyhaunis	70	10	-	-	-	-	80	67	64	45	45
Claremorris	98	15	-	-	-	-	113	86	87	66	54
Castlebar	141	4	-	-	-	-	145	120	114	82	93
Westport	153	-	-	-	-	-	153	135	104	85	90
Manulla Junc	65	81	-	-	-	-	146	119	78	101	138
Foxford	14	5	-	-	-	-	19	5	-	15	12
Ballina	62	-	-	-	-	-	62	50	-	51	65
Banteer	13	-	16	3	-	-	32	39	19	38	37
Millstreet	18	-	33	4	-	-	55	91	111	380	43
Rathmore	10	-	12	8	-	-	30	59	18	42	41
Killarney	19	5	172	17	-	-	213	224	228	357	240
Farranfore	4	-	11	6	-	-	21	21	14	32	29
Tralee	31	-	209	-	-	-	240	236	208	411	281
Littleisland	-	-	351	81	-	-	432	347	218	316	250
Gl'thaune	-	-	172	57	-	-	229	186	139	203	162
C'twohill	-	-	129	19	-	-	148	95	98	91	83
Midleton	-	-	638	-	-	-	638	461	458	495	422

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Fota	-	-	11	3	-	-	14	10	9	82	23
Carrigaloe	-	-	33	7	-	-	40	37	19	31	36
Rushbrooke	-	-	171	23	-	-	194	195	87	156	201
Cobh	-	-	555	-	-	-	555	481	369	517	504
Sixmilebrdg	-	-	-	-	14	43	57	53	55	46	60
Ennis	-	-	-	-	27	126	153	261	173	236	276
Gort	-	-	-	-	11	20	31	19	20	13	18
Ardrahan	-	-	-	-	1	4	5	3	7	8	14
Craughwell	-	-	-	-	9	9	18	13	13	10	27
Oranmore	16	4	-	-	40	10	70	63	19	23	
Roscrea	-	-	-	-	4	2	6	7	4	19	15
Cl'Jordan	-	-	-	-	3	6	9	6	8	15	5
Nenagh	-	-	-	-	8	5	13	17	9	14	18
Birdhill	-	-	-	-	6	-	6	11	6	10	8
C'leconnell	-	-	-	-	12	-	12	15	10	15	9
Carrick-on-Suir	-	-	-	-	2	1	3	1	-	6	15
Clonmel	-	-	-	-	23	4	27	23	20	29	29
Cahir	-	-	-	-	7	3	10	9	5	11	9
Tipperary	-	-	-	-	3	10	13	11	7	9	31
TOTAL	46,486	45,689	14,283	14,596	12,527	13,367	146,948	141,158	124,351	123,435	124,708

Appendix B: Daily Alightings at each Station, by Service Type

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Rosslare Eur	-	-	-	25	-	-	25	27	16	21	18
Rosslare Strand	-	-	-	35	-	-	35	42	24	25	30
Wexford	-	-	2	80	-	-	82	137	82	31	64
Enniscorthy	-	-	6	45	-	-	51	53	65	49	55
Gorey	-	-	9	107	-	-	116	85	77	89	107
Arklow	-	-	6	120	-	-	126	93	95	122	117
Rathdrum	-	-	4	48	-	-	52	106	93	88	92
Wicklow	-	-	16	165	-	-	181	187	162	160	145
Kilcoole	-	-	3	6	-	-	9	96	25	26	34
Greystones	-	1,527	20	196	-	-	1,743	1,711	1,460	1,551	1,571
Bray	101	2,726	67	314	-	12	3,220	2,870	2,997	2,818	2,867
Shankill	81	1,197	-	-	-	-	1,278	1,147	1,049	1,012	1,088
Killiney	100	672	-	-	-	-	772	741	734	750	774
Dalkey	487	1,255	-	-	-	-	1,742	1,650	1,258	1,594	1,586
Glenageary	139	1,315	-	-	-	-	1,454	1,468	1,324	1,311	1,299
Sandycove & Glasthule	261	823	-	-	-	-	1,084	1,067	968	957	999
Dun Laoghaire	741	2,121	121	467	6	36	3,492	3,430	2,633	3,178	3,278
Salthill & Monkstown	211	971	-	-	-	-	1,182	1,084	949	981	990
Seapoint	120	434	-	-	-	-	554	629	514	551	550
Blackrock	753	1,934	37	199	5	57	2,985	2,866	2,764	2,265	2,353
Boosterstown	638	807	-	-	-	-	1,445	1,429	1,098	1,144	1,131
Sydney Prde	666	1,204	6	247	5	47	2,175	1,898	1,716	1,542	1,525

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Sandymount	375	606	-	-	-	-	981	1,355	846	836	972
Lansdowne	1,108	1,976	104	591	8	101	3,888	4,089	2,722	3,328	2,906
Grand Canal Dock	1,963	1,599	12	369	15	-	3,958	3,759	3,355	3,051	2,833
Pearse	4,893	4,600	468	2,433	68	1,759	14,221	14,127	12,021	11,238	11,271
Tara Street	3,329	2,618	579	1,028	141	766	8,461	9,645	7,513	7,473	7,971
Connolly	3,072	3,223	469	4,135	89	5,121	16,109	15,220	12,931	13,311	14,128
Clontarf Rd	1,628	578	-	-	-	-	2,206	1,713	1,405	1,337	1,346
Killester	1,952	218	-	-	-	-	2,170	1,547	1,511	1,386	1,363
Harmonstown	1,165	147	-	-	-	-	1,312	990	897	823	916
Raheny	1,889	272	-	-	-	-	2,161	1,789	1,698	1,493	1,489
Kilbarrack	1,106	225	-	-	-	-	1,331	955	1,112	1,072	994
Howth Junc Donaghmede	1,348	260	228	208	-	-	2,044	2,179	1,708	1,836	1,764
Bayside	1,141	109	-	-	-	-	1,250	1,113	1,091	1,048	958
Sutton	616	46	-	-	-	-	662	536	640	616	646
Howth	1,138	-	-	-	-	-	1,138	1,286	898	1,255	1,178
Clongriffin	794	46	138	7	-	-	985	875	726	567	640
Portmarnock	591	19	340	24	-	-	974	899	940	978	1,057
Malahide	1,189	-	687	282	-	-	2,158	2,508	1,992	2,178	2,302
Donabate	-	-	1,489	109	-	-	1,598	1,161	1,057	1,051	1,029
Rush & Lusk	-	-	782	112	-	-	894	775	795	828	876
Skerries	-	-	1,177	143	-	-	1,320	1,466	1,227	1,308	1,460
Balbriggan	-	-	1,763	105	-	-	1,868	1,422	1,564	1,711	1,543
Gormanston	-	-	52	3	-	-	55	82	71	99	85
Laytown	-	-	343	11	-	-	354	367	349	345	367
Drogheda	-	-	838	79	-	-	917	1,121	1,041	979	1,040
Dundalk	-	-	401	115	-	-	516	475	453	532	515
Belfast	-	-	1,313	-	-	-	1,313	936	1,126	1,100	1,074

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Docklands	-	-	-	-	-	1,515	1,515	1,244	1,141	966	1,048
Drumcondra	-	-	-	-	343	1,070	1,413	1,249	1,154	1,135	1,176
Broombridge	-	-	-	-	274	166	440	318	257	215	207
Ashtown	-	-	-	-	647	103	750	787	773	665	660
Navan Road Parkway	-	-	-	-	253	50	303	253	222	202	204
Castleknock	-	-	-	-	579	148	727	784	694	817	793
Coolmine	-	-	-	-	1,353	174	1,527	1,682	1,406	1,317	1,392
Clonsilla	-	-	-	-	1,076	401	1,477	1,470	1,126	1,202	1,173
Hansfield	-	-	-	-	182	2	184	148	101	82	
Dunboyne	-	-	-	-	227	1	228	202	211	138	185
M3 Parkway	-	-	-	-	344	-	344	283	215	231	231
Leixlip Conf.	-	-	-	-	451	105	556	473	436	428	480
Leixlip Louisa Bridge	-	-	-	-	1,025	72	1,097	933	1,039	870	932
Maynooth	-	-	-	-	2,412	155	2,567	2,906	2,276	2,148	2,242
Kilcock	-	-	-	-	194	19	213	258	236	232	225
Enfield	-	-	-	-	129	12	141	144	142	148	145
Mullingar	-	-	-	-	422	94	516	558	564	407	507
Edge'stown	-	-	-	-	83	18	101	149	122	145	169
Longford	-	-	-	-	241	51	292	374	269	212	194
Dromod	-	-	-	-	79	17	96	138	120	86	94
Carrick-on-Shannon	-	-	-	-	89	29	118	140	94	135	122
Boyle	-	-	-	-	40	28	68	70	57	69	100
Ballymote	-	-	-	-	70	40	110	126	64	108	90
Collooney	-	-	-	-	67	8	75	92	74	84	58
Sligo	-	-	-	-	311	-	311	443	304	292	467

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Heuston	10,007	-	-	-	-	-	10,007	9,753	9,273	8,686	8,515
Parkwest & C'yOrchard	109	138	-	-	-	-	247	265	171	114	140
Clondalkin / Fonthill	35	29	-	-	-	-	64	48	51	48	46
Adamstown	16	106	-	-	-	-	122	114	97	98	107
Hazelhatch & Celbridge	55	235	-	-	-	-	290	276	260	258	325
Sallins Naas	81	1,047	-	-	-	-	1,128	1,018	1,006	908	943
Newbridge	176	993	-	-	-	-	1,169	1,105	1,034	999	973
Kildare	237	502	-	-	-	-	739	662	731	733	616
Athy	95	371	-	-	-	-	466	510	408	371	461
Carlow	184	551	-	-	-	-	735	637	582	617	524
M'asterevin	4	66	-	-	-	-	70	71	82	64	56
P'tarlington	105	510	-	-	-	-	615	705	754	587	528
Portlaoise	209	584	-	-	-	-	793	745	737	583	418
Ballybrophy	-	119	-	-	-	12	131	139	108	129	129
Templemore	18	66	-	-	-	-	84	80	90	89	81
Thurles	169	405	-	-	-	-	574	456	578	463	458
Limerick Junc	164	664	-	-	47	613	1,488	1,552	1,435	1,263	1,571
Limerick	-	232	-	-	680	291	1,203	1,167	1,000	849	1,192
Charleville	12	55	-	-	-	-	67	82	91	185	79
Mallow	325	378	338	229	-	-	1,270	1,251	1,276	1,460	1,404
Cork	-	1,565	2,246	-	-	-	3,811	3,354	2,764	3,322	3,239
Muine Bheag	30	136	-	-	-	-	166	162	153	174	121
Kilkenny	79	269	-	-	-	-	348	285	404	346	263
T'mastown	3	62	-	-	-	-	65	48	41	55	36
Waterford	-	356	-	-	-	17	373	421	472	414	437
Tullamore	105	341	-	-	-	-	446	678	447	327	412
Clara	20	99	-	-	-	-	119	117	82	75	41
Athlone	220	369	-	-	-	-	589	637	604	575	427
Ballinasloe	89	62	-	-	-	-	151	182	148	69	119
Woodlawn	29	9	-	-	-	-	38	43	25	18	26
Attymon	9	-	-	-	-	-	9	7	8	45	11
Athenry	135	123	-	-	15	95	368	422	297	133	241
Galway	-	911	-	-	288	-	1,199	1,162	778	1,125	884
Roscommon	16	59	-	-	-	-	75	74	83	84	69
Castlerea	5	62	-	-	-	-	67	63	66	57	61

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Ballyhaunis	10	49	-	-	-	-	59	70	48	45	52
Claremorris	11	84	-	-	-	-	95	89	63	128	82
Castlebar	6	144	-	-	-	-	150	79	103	110	128
Westport	-	101	-	-	-	-	101	133	123	124	118
Manulla Junc	78	73	-	-	-	-	151	123	69	15	90
Foxford	4	19	-	-	-	-	23	7	-	21	18
Ballina	-	62	-	-	-	-	62	59	-	72	80
Banteer	-	2	8	20	-	-	30	22	17	34	26
Millstreet	-	10	3	25	-	-	38	60	52	34	48
Rathmore	2	6	17	15	-	-	40	45	33	53	34
Killarney	3	64	33	208	-	-	308	238	254	328	266
Farranfore	-	8	1	20	-	-	29	36	24	33	25
Tralee	-	49	-	174	-	-	223	268	288	405	216
Littleisland	-	-	67	356	-	-	423	378	215	315	288
Gl'thaune	-	-	48	191	-	-	239	246	136	207	196
C'twohill	-	-	27	110	-	-	137	92	93	100	81
Midleton	-	-	-	583	-	-	583	465	488	495	456
Fota	-	-	3	15	-	-	18	9	11	81	30
Carrigaloe	-	-	9	28	-	-	37	13	24	32	41
Rushbrooke	-	-	3	191	-	-	194	180	124	146	204
Cobh	-	-	-	623	-	-	623	455	396	517	492
Sixmilebrdg	-	-	-	-	40	15	55	30	54	28	41
Ennis	-	-	-	-	155	56	211	151	273	199	229
Gort	-	-	-	-	11	14	25	12	17	9	11
Ardrahan	-	-	-	-	2	-	2	8	12	6	3
Craughwell	-	-	-	-	8	9	17	14	28	10	15
Oranmore	36	16	-	-	10	27	89	73	54	22	-
Roscrea	-	-	-	-	1	4	5	3	5	7	1
Cl'jordan	-	-	-	-	6	3	9	9	5	5	4
Nenagh	-	-	-	-	9	6	15	17	11	5	2
Birdhill	-	-	-	-	3	1	4	10	8	2	2
C'leconnell	-	-	-	-	2	3	5	5	3	2	6
Carrick-on-Suir	-	-	-	-	3	3	6	-	13	4	7
Clonmel	-	-	-	-	3	15	18	17	29	25	46
Cahir	-	-	-	-	6	5	11	2	11	11	10
Tipperary	-	-	-	-	10	1	11	10	17	7	13
TOTAL	46,486	45,689	14,283	14,596	12,527	13,367	146,948	142,149	124,126	123,338	124,604

Appendix C: Train Capacity by Type

Train Type		Capacity	
4-DART	(4 car DART set)	700	Seats + Standing Accommodation
6-DART	(6 car DART set)	1050	Seats + Standing Accommodation
8-DART	(8 car dart set)	1400	Seats + Standing Accommodation
2 x 2600	(2 car commuter rail car)	206	Seats + Standing Accommodation
2 x 2800	(2 car commuter rail car)	221	Seats + Standing Accommodation
4 x 29000	(4 car Commuter railcar)	640	Seats + Standing Accommodation
8 x 29000	(8 car Commuter railcar)	1280	Seats + Standing Accommodation
1 x 3ICR	(3-car InterCity railcar)	190	Seats
1 x 6ICR	(6-car Premier Class InterCity railcar)	376	Seats
1 x 6HCR	(6-car High Capacity InterCity Railcar)	406	Seats
7 x MkIV	(7 car Mk IV set)	348	Seats
7 x DD	(7 car De Dietrich set)	358	Seats

Appendix D: Average Daily Boardings on Phoenix Park Tunnel Services*

Service	Boardings
06:14 Newbridge - Grand Canal Dock	71
06:50 Hazelhatch - Grand Canal Dock	39
07:00 Newbridge - Grand Canal Dock	256
07:20 Newbridge - Grand Canal Dock	344
07:25 Grand Canal Dock - Hazelhatch	12
07:49 Grand Canal Dock - Hazelhatch	19
08:10 Grand Canal Dock - Newbridge	33
08:10 Hazelhatch - Grand Canal Dock	195
08:35 Hazelhatch - Grand Canal Dock	69
09:12 Newbridge - Grand Canal Dock	51
15:10 Newbridge - Grand Canal Dock	14
15:55 Hazelhatch - Grand Canal Dock	17
16:20 Grand Canal Dock - Hazelhatch	64
16:40 Grand Canal Dock - Newbridge	161
17:00 Grand Canal Dock - Hazelhatch	123
17:00 Hazelhatch - Grand Canal Dock	36
17:25 Hazelhatch - Grand Canal Dock	20
17:28 Grand Canal Dock - Newbridge	253
17:55 Hazelhatch - Grand Canal Dock	17
17:57 Newbridge - Grand Canal Dock	23
17:58 Grand Canal Dock - Hazelhatch	139
18:16 Grand Canal Dock - Newbridge	122
18:40 Grand Canal Dock - Hazelhatch	50
19:13 Grand Canal Dock - Hazelhatch	36
Grand Total	2,157

* Surveyed on 12th and 26th of January 2017

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