

09th January 2018

Email [REDACTED]

Re: FOI Request Response [IE_FOI_170]

Dear [REDACTED]

I refer to your request dated 16th October 2018 made under the Freedom of Information Act 2014, which was received on the 17th October, for records held by Iarnród Éireann.

Request:

- Specific legislation or regulations which address or intend to address maximum or safe occupancy or safe Working loads of carriages used for DART services.
- Maximum occupancy of the different types of carriages used for DART services.
- Records (dates, locations, findings where they exist) of DART occupancy monitoring by Irish Rail.
- Records (dates, locations, findings where they exist) of DART occupancy monitoring by any third parties including statutory bodies.
- Records which pertain to decisions determining the capacity to allocate to individual scheduled DART services.
- Records of any cost benefit analysis and / or risk assessment pertaining to the allocation of capacity to individual DART services.
- Records of correspondence between Irish Rail and the Health and Safety Authority since January 2014.

I, Annette Reilly, have now made a final decision to grant your request on 19th November 2018.

You have sought access to the records as listed above and I consider this an appropriate form of access in this case. Accordingly, a copy of the records is now attached including a copy of the schedule to these records.

Rights of appeal

In the event that you are not happy with this decision you can make an appeal in relation to this matter, you can do so by writing to the FOI Unit, Corporate Communications, Iarnród Éireann Irish Rail, Connolly Station, Amiens St, Dublin 1 or by e-mail to foi@irishrail.ie. You should make your appeal within 4 weeks (20 working days) from the date of this notification, where a day is defined as a working day excluding, the weekend and public holidays, however, the making of a late appeal may be permitted in appropriate circumstances.

The appeal will involve a complete reconsideration of the matter by a more senior member of the staff of this body.

Should you have any questions or concerns regarding the above, please contact the FOI Officer on 01, 7034293.

Yours sincerely,

Ms. Annette Reilly



P.P Lynette O'Toole

Data Protection Executive

National Heavy Rail Census Report 2017

July 2018

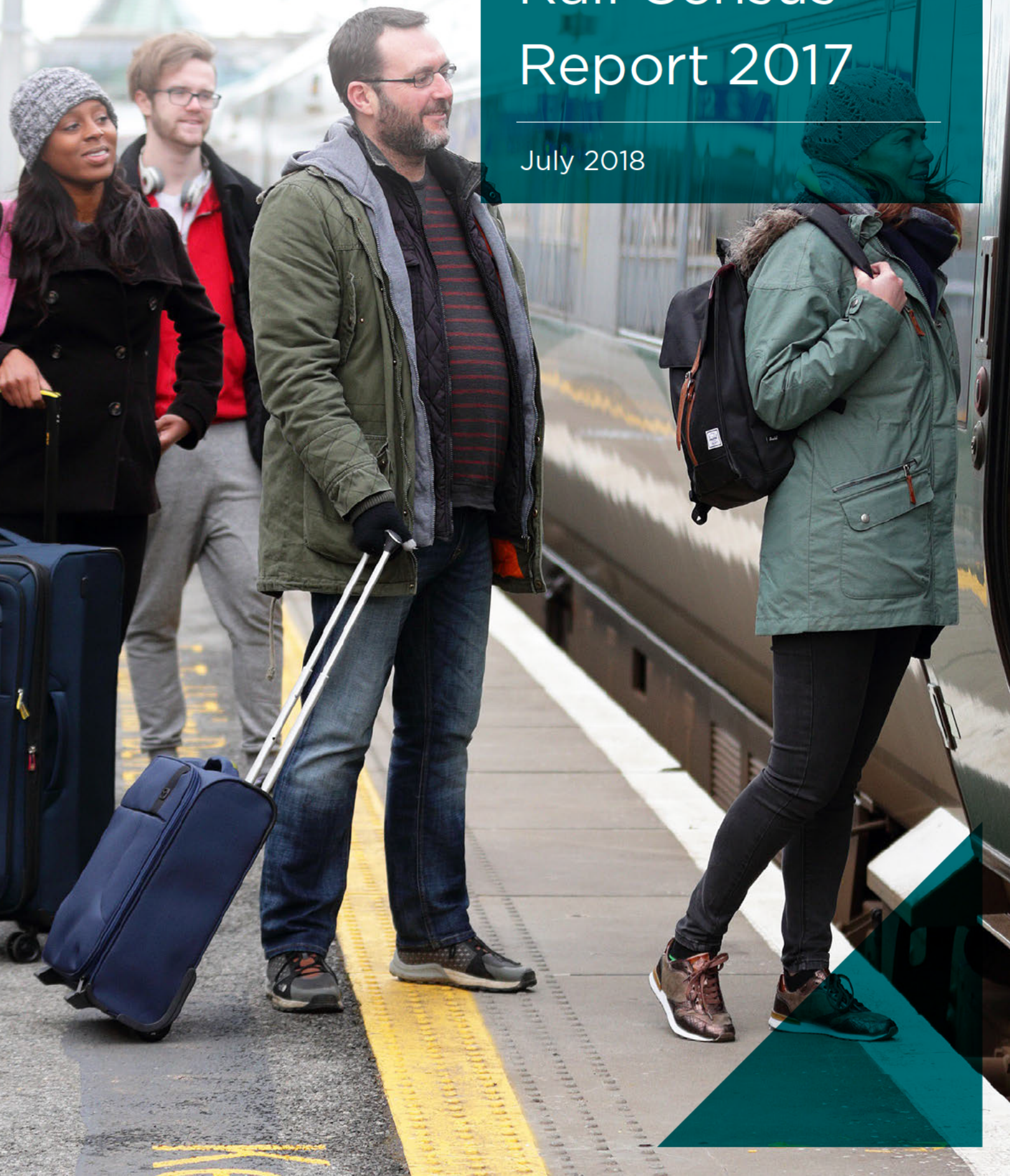


Table of Contents

Introduction	4
Operating Conditions on the Day of the Census	4
Overview of the Rail Network	5
Changes to Rail Services in 2017	10
Trends in Daily Rail Patronage, 2003 – 2017	11
Key Events since 2003	11
Historic Trends in the Greater Dublin Area (GDA)	12
Analysis of Mode Share from the Canal Cordon Count	15
Comparison of Census Data and Annual Rail Statistics	18
Rail Usage in the GDA and Economic Trends	18
Rail Patronage	20
National and Greater Dublin Area	20
Rail Usage according to Service Categories	20
Rail Usage on Individual Lines	21
Busiest Stations	22
Variation in Station Usage	23
Patronage by Line	24
DART	24
Hourly Profile of Demand	24
Profile of Demand by Station	25
Dundalk – Rosslare	26
Hourly profile of Demand	26
Profile of Demand by Station	27
Dublin – Belfast (Enterprise)	28
Sligo – Longford – Bray	29
Hourly Profile of Demand	29
Profile of Demand by Station	30
Heuston Commuter Services	31
Profile of Demand by Station	32
Heuston Inter City Services	33
Cork Commuter and Regional	35
Hourly Profile of Demand	35
Other Lines	38
Radial Rail Usage in Dublin	39
Daily boardings by radial corridor	39
Peak hour flows by radial corridor	40
Train loadings by radial corridor	41
Appendix A: Daily Boardings at each Station by Service Type	42
Appendix B: Daily Alightings at each Station by Service Type	48
Appendix C: Train Capacity by Type	53
Appendix D: Phoenix Park Tunnel Services	54

Introduction

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 2017 Census is the sixth 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.

Operating Conditions on 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 factors such as operating conditions, weather, travel delays etc.

The 2017 census took place on 16th November 2017. Operating conditions on the day were normal with no severe cancellations, delays or disruptions on the network.

Overall, on census day, there were 167,867 passenger journeys across the network an increase of 14% on 2016. Daily total passenger journey numbers are now up almost 35% in the period 2012 – 2017. Meanwhile Iarnród Éireann reported 45.5m total passenger journeys in the year 2017 up 6% on 2016 and 24% over the longer period 2012 – 2017. The annual passenger numbers in 2017 represents a return to 2007 peak passenger volumes.

This report provides an overview of the 2017 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 2016 to 2017.

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 2017 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 2017 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.

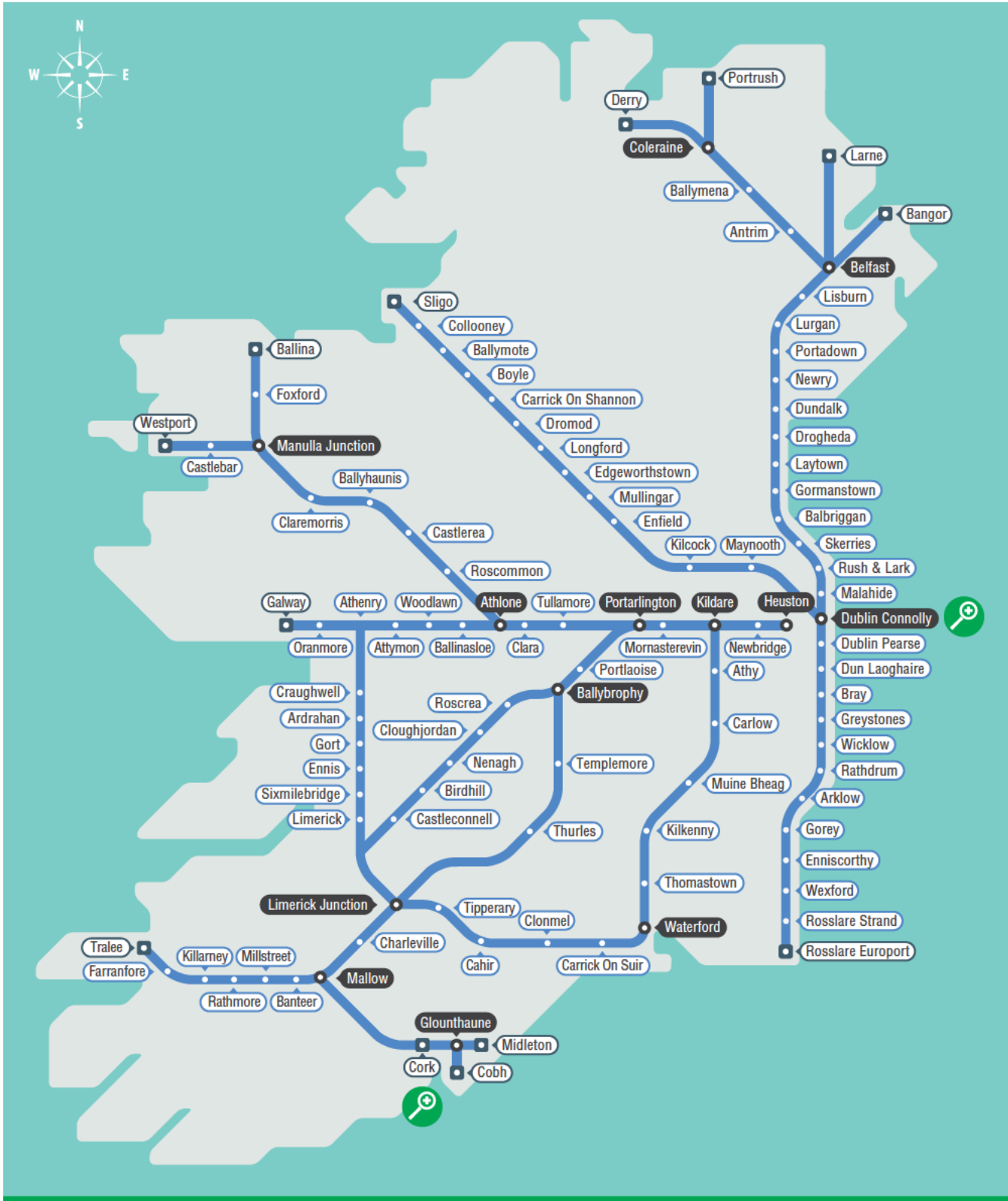
Overview of the Rail Network

The rail network in Ireland consists of approximately 2,400km of railway track and includes 147 open 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
Commuter Routes	Dublin – Dundalk
	Dublin – Portlaoise
	Dublin – Longford
	Dublin – Dunboyne / M3 Parkway
	Dublin – Gorey
	Cork – Cobh – Middleton
DART	Malahide / Howth – Dublin – Bray / Greystones

Figure 1: Inter City Network



Intercity Train Services




 Intercity  Connection  Terminus

Figure 2: Dublin Network

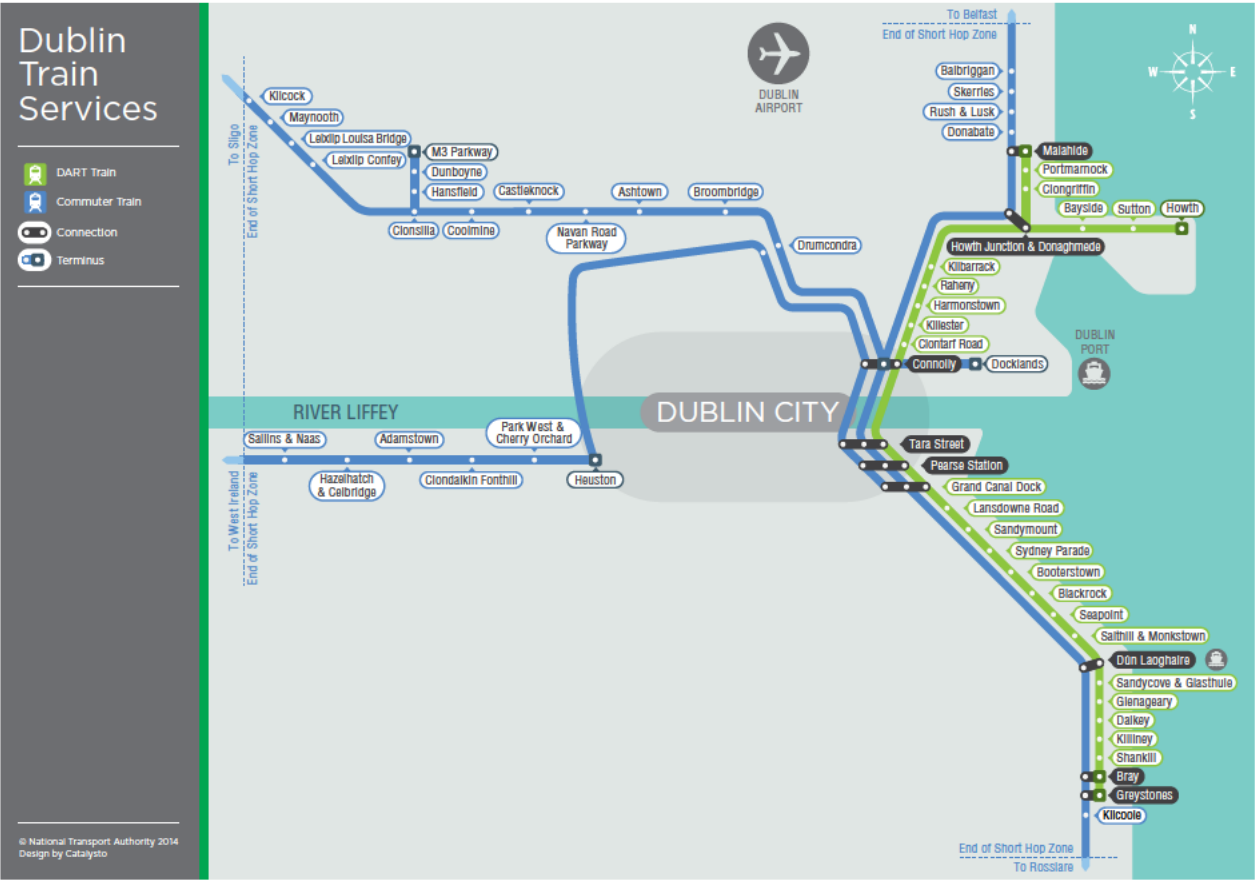
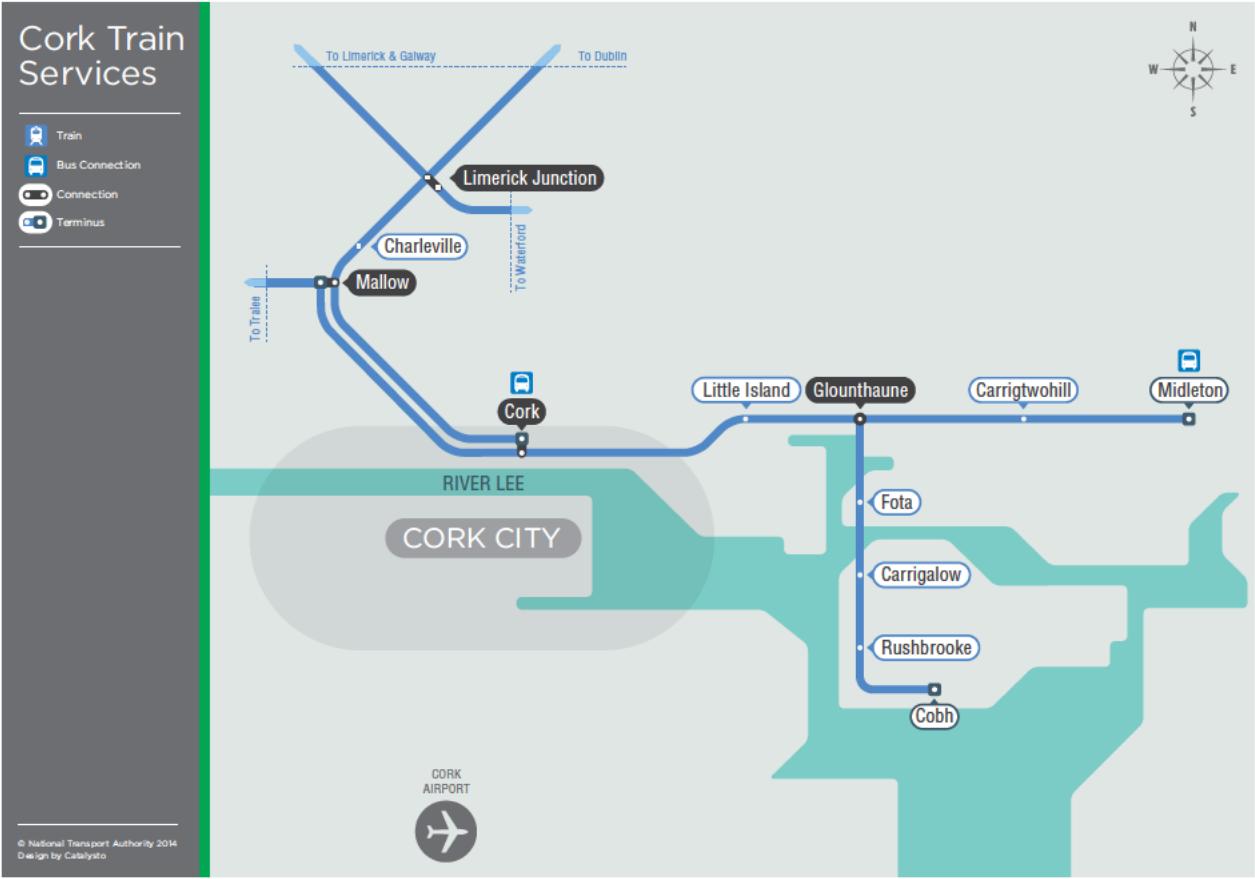


Figure 3: Cork Network



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 2017.

Table 2: Inter City Journey Times and Service Frequency 2017

Route	Fastest journey time 2017	Number of services per weekday ¹
Dublin – Cork	2:25	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 2017

Route	Fastest journey time 2017	Number of services per weekday ¹
Dublin – Portlaoise	0:42	61
Dublin – Hazelhatch & Celbridge (Grand Canal Dock via Phoenix Park Tunnel) ²	0:13 (0:39)	66 (24)
Dublin – Maynooth	0:27	80
Dublin – Drogheda	0:32	65
Dublin – Dundalk	0:55	31
Cork – Mallow	0:21	48
Cork – Midleton	0:23	44
Cork – Cobh	0:24	46

Table 4: DART Journey Times and Service Frequency 2017

Direction	Route	Fastest journey time 2017	Number of services per weekday
Southbound	Malahide/Howth – Bray/Greystones	1:20	80
Northbound	Greystones/Bray – Howth/Malahide	1:16	77

Changes to Rail Services in 2017

In 2016, 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 and calling at Connolly, Tara Street and Pearse Street stations. On 20 November 2016, the new morning and evening peak services were introduced; therefore the changes in rail patronage brought about by the new services were not counted in the 2016 rail census but are reflected here. This should be noted in relation to the comparison analysis between passenger numbers on the Kildare line as a whole in 2016 v 2017.

Iarnród Éireann carried out an additional census of services on the Phoenix Park Tunnel corridor in January 2017. To give a sense of the effect of this new service on patronage, a comparison of January 2017 to November 2017 census data is presented in this report.

As well as the reintroduction of passenger services through the Phoenix Park Tunnel, on December 1st 2017 the Authority extended the 'short hop zone' to include Sallins and Naas station. This had the effect of cutting many single and return fares in half from Sallins and Naas to Heuston. On June 1st 2017, Kilcock station was brought into the 'short hop zone' on the Maynooth/Sligo line.

¹ Total number of daily services in both directions (to/from Dublin & Cork)

² 9 Daily services between Newbridge and Grand Canal Dock via Hazelhatch & Celbridge



Trends in Daily Rail Patronage, 2003 – 2017

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 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 Heuston.
- 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, Ardahan, Craughwell and Oranmore.

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 – Kildare line.

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. In the 2 year period 2014 to 2016 there was a 19% increase in patronage within the GDA. Although this trend continued in 2017, the rate of change has increased. There was a 14% growth in patronage within the GDA between 2016 and 2017. Overall GDA patronage is now at 98% of its peak level in 2007.

The increase in GDA patronage in the last year represents the fifth consecutive year of passenger growth. In the past year there have been increases in patronage on all service types in the GDA. There has been a 12% and 13% increase in patronage on the Longford – Dublin – Bray and the East Coast lines between 2016 and 2017 respectively.

There was an 11% increase in patronage on the DART line (7,542 extra boardings) between 2016 and 2017, however patronage on the line is still 89% that of the peak levels of 2007. Patronage on the DART has grown by a third since 2014, with an additional 19,662 boardings.

Patronage on the Kildare line has almost doubled since the Census began in 2003, and in the last year there has been a 31% increase in patronage on Kildare line services between Kildare and Dublin. This represents an increase of some 3,785 daily passenger boardings. It should be noted that this growth must be considered in the context of the significant change to services on the Kildare line with the commencement of services to Grand Canal Dock since the last rail census of 2016.

Table 5: Daily Passenger Journeys by Network Section 2003 – 2017

Year	DART	Dundalk - Gorey	Longford – Dublin – Bray	Dublin – Kildare	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 ³	123,615
2017	74,665	24,424	25,434	16,063 ⁴	140,586

*2005 No Census Carried Out

³ Does not include Phoenix Park Tunnel Services

⁴ Includes 1,410 daily boardings at Drumcondra, Connolly, Tara, Pearse, Grand Canal Dock

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 2017, have declined by 10% from 63% in 2003 to 54% in 2016, with a further decline in the past year. However this represents an increase of almost 10% in patronage or just over 6,500 daily journeys over the same period. The Kildare line has increased in proportional terms significantly going from 8% in 2003 to 11% in 2017, in part due to year on year growth in patronage from 2012. The proportional contribution of the East Coast line has remained relatively stable over the full period. However the proportional contribution of the Maynooth line has increased from 11% to 18% over the longer term whilst remaining stable for the last 10 years.

Chart 1: Composition of Daily GDA Rail Patronage, 2003 – 2017

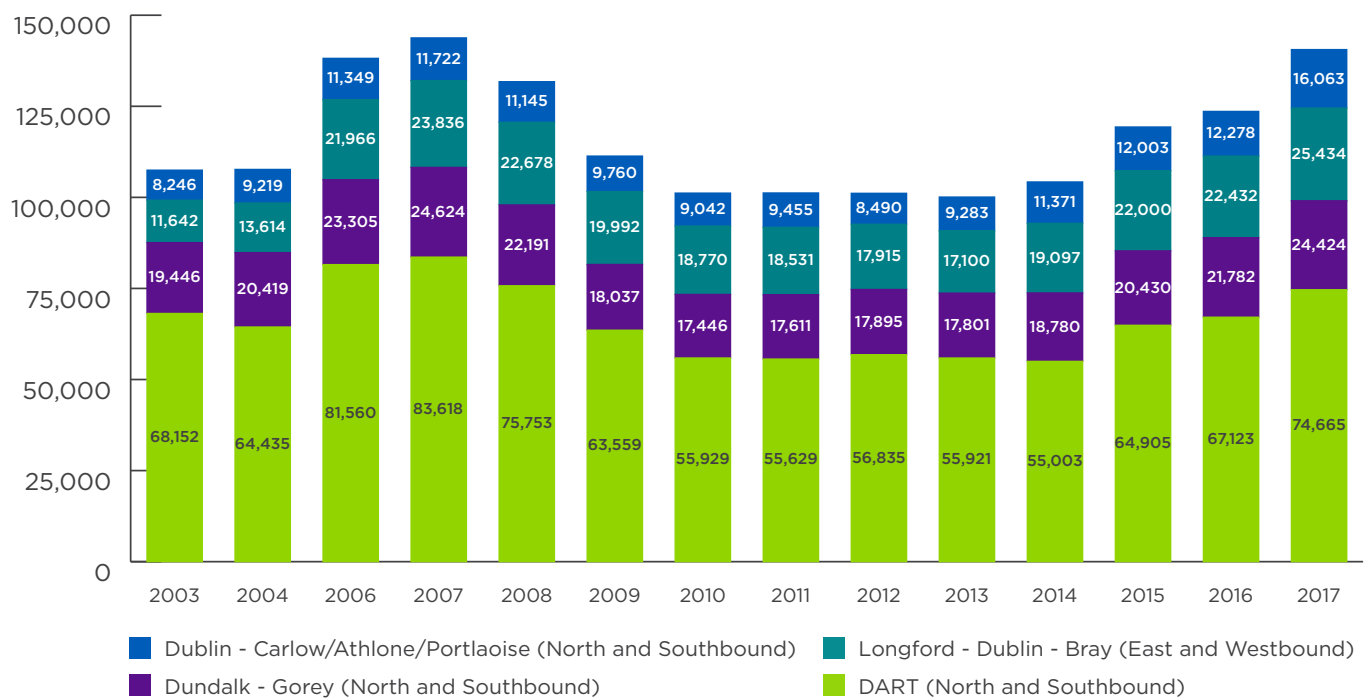
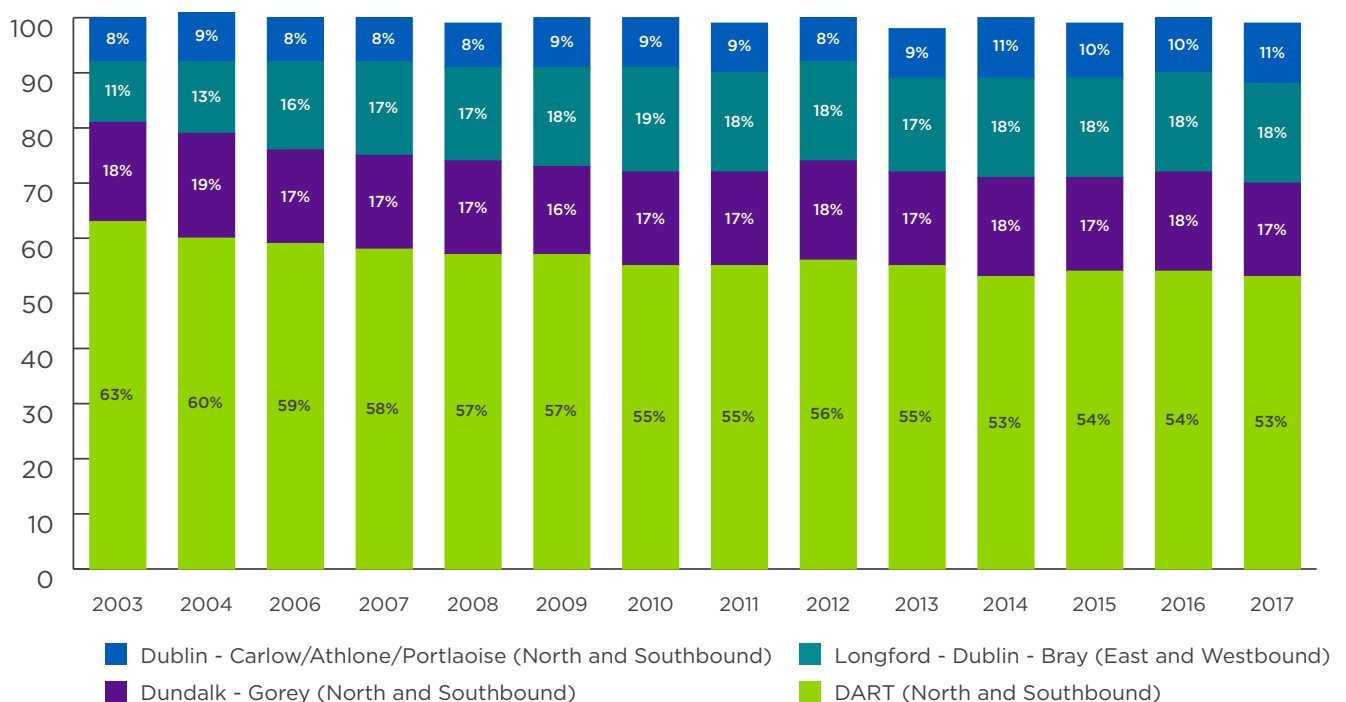


Chart 2: Percentage Composition of daily GDA rail patronage, 2003 – 2017

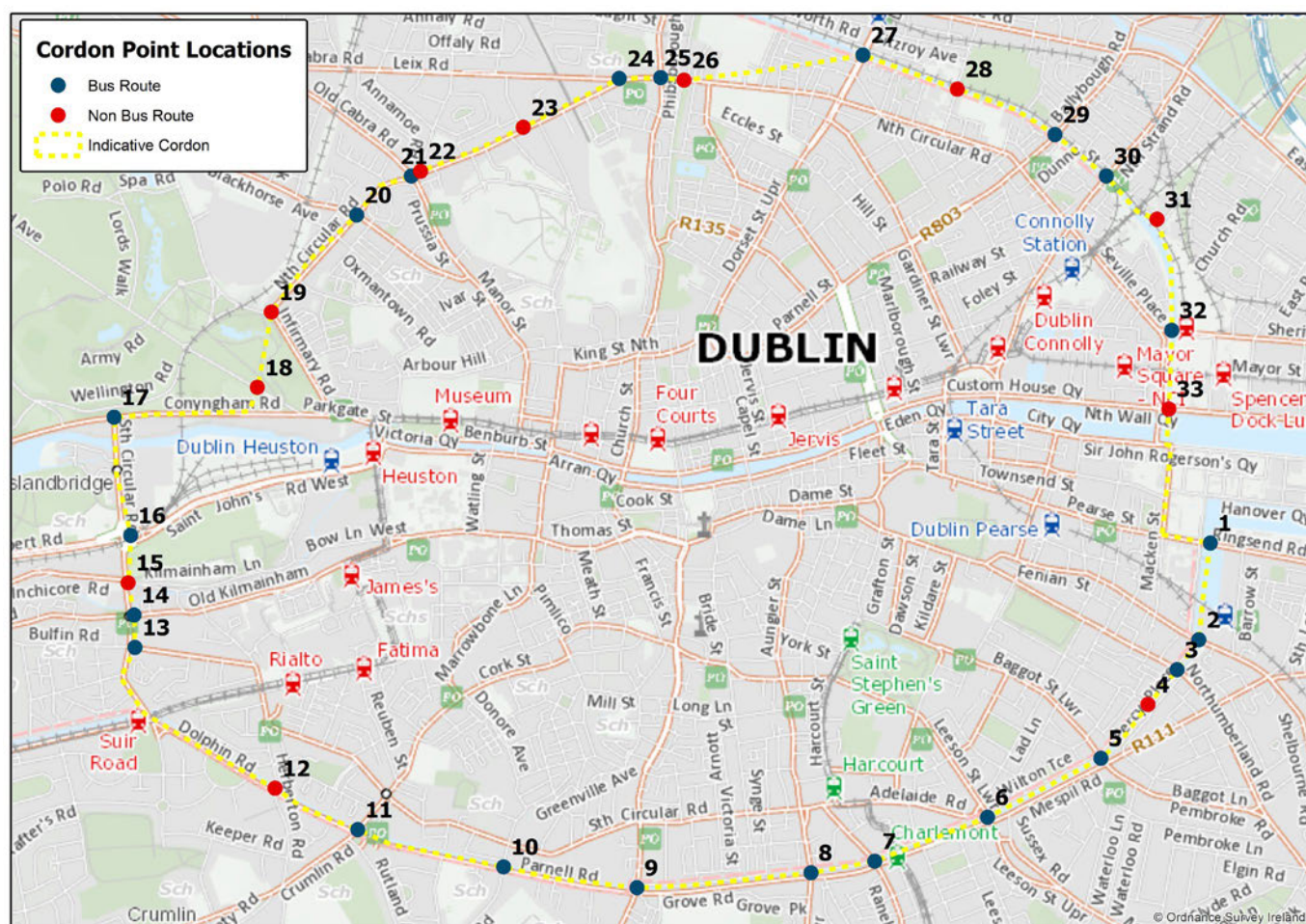


Analysis of Mode Share from the Canal Cordon Count

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 centre⁵ 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 2017. Table 6 details the number of people crossing the canal cordon by mode in 2016 and 2017, and Chart 3 shows the mode share of journeys into the city centre from 2006 to 2017.

Figure 4: Canal Cordon and 33 Count Locations

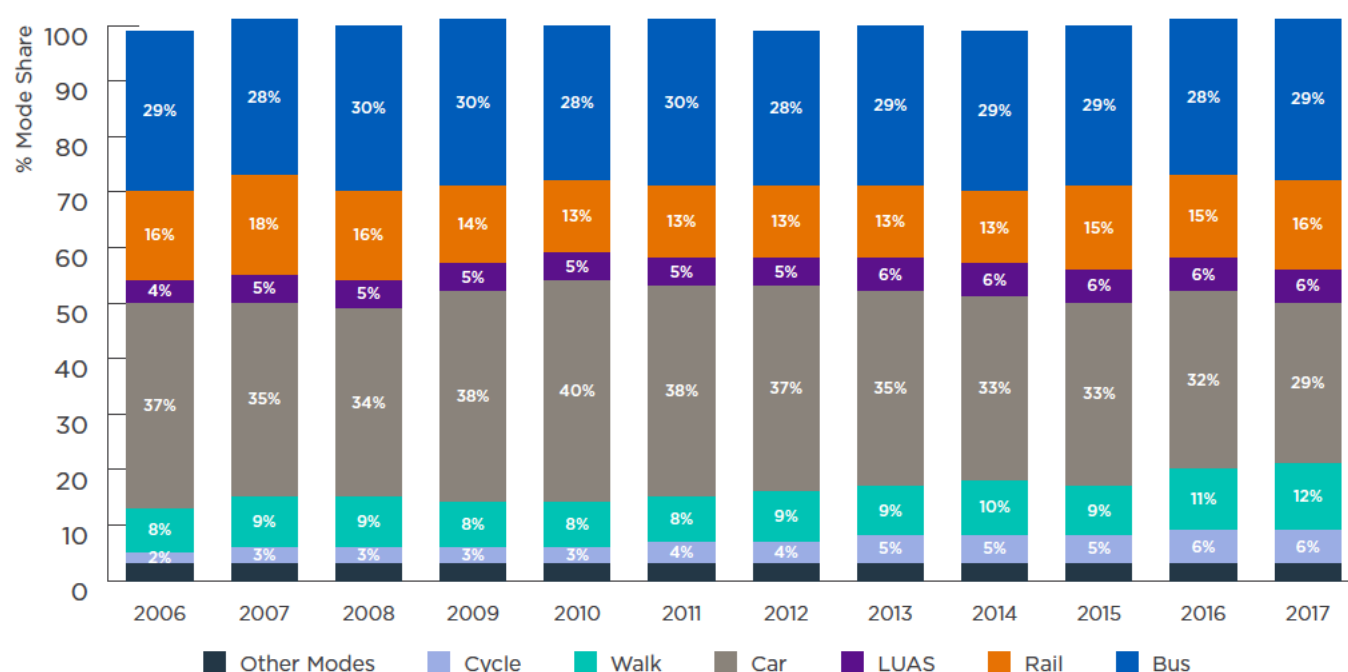


⁵ The counts refer to movements of people in one direction only (i.e. inbound into the city centre) across the various cordon points.

Table 6: Number of People Crossing the Canal Cordon by Mode in 2016 and 2017

Mode	2016	2017	Annual % Change
Bus	56,572	60,798	7%
Rail	31,309	34,409	10%
LUAS	12,254	11,953	-2%
Car	64,885	61,694	-5%
Taxi	2,724	2,623	-4%
Walk	21,473	24,936	16%
Cycle	12,089	12,447	3%
Commercial Vehicle	1,093	1,024	-6%
Motor Bike	1,464	1,532	5%
Total	203,863	211,416	4%

Chart 3: Mode Share of Journeys into the City Centre, 2006 – 2017



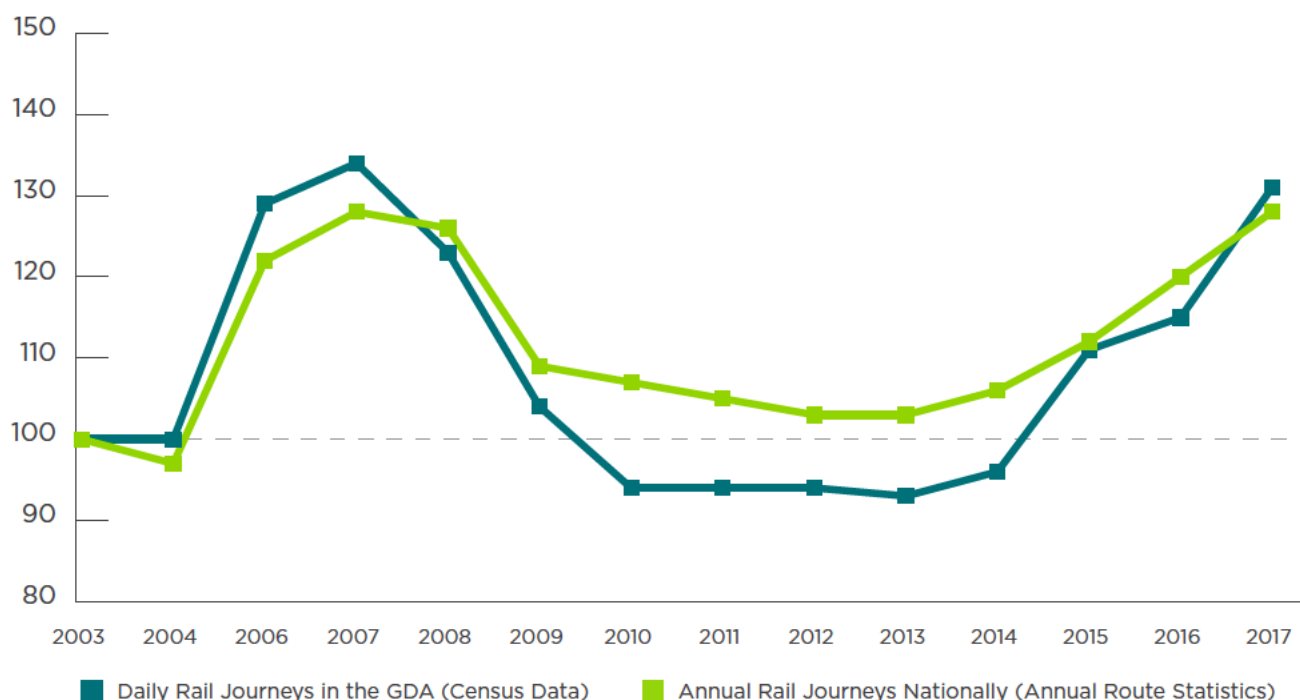
This shows a number of changes in mode share since 2006:

- 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 16% in 2017.
- 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 to 2016. However 2017 saw an increase of 1% in rail mode share, this is only the second increase since 2010.
- 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 increased by 1 percentage point in the past year. Bus is still the dominant public transport mode making up 57% of total public transport mode share.
- The private car mode share continues to decline and is down over 10% from a peak of 40% in 2010.
- In 2017 more than half of all person trips to the City Centre were made on public transport. At 51%, the mode share for public transport is now almost 22% 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 2010-2017 mode share for rail has increased by over 3%.
- The walk mode share increased slightly between 2016 and 2017, at just under 12% it is at its highest point for the period 2006-2017.
- The remaining modes – commercial vehicle, motor bike and taxi – remain largely unchanged since 2006.

Comparison of Census Data and Annual Rail Statistics

Iarnród Éireann 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 - 2017 (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.

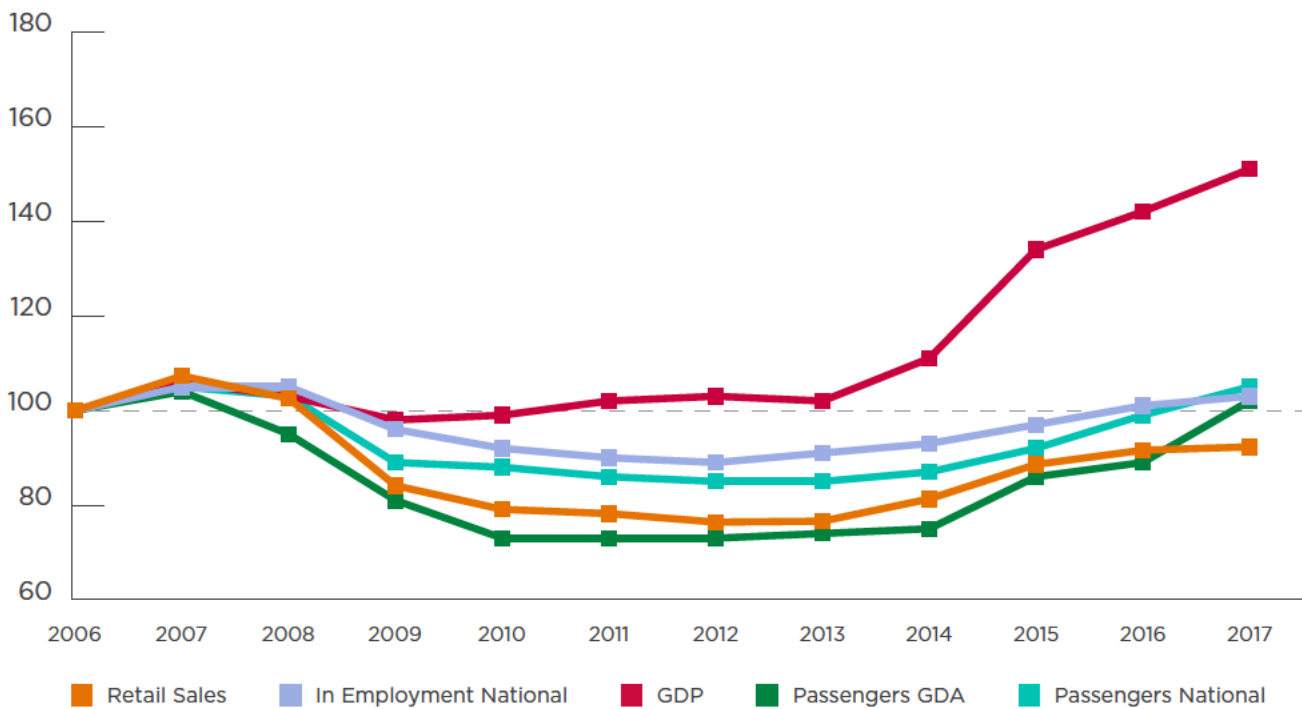
The sharper decline in GDA patronage since 2008 can be explained by differences in rail coverage in the GDA region relative to the rest of Ireland. Daily rail journeys in the GDA were also heavily influenced by the decline in DART patronage. The reverse of these effects can be seen in the period 2014 - 2017 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 2014-2017 has shown significant growth both at national and at the GDA level, with 2.68 million additional rail journeys made in 2017 relative to 2016. National annual rail patronage in 2017 has returned to 2007 levels (the previous peak) with patronage in GDA fast approaching 2007 levels.

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 and nationally with key national economic indicators and the numbers in employment. 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 2006





Rail Patronage

National and Greater Dublin Area

The total patronage on the rail network on Census day was almost 168,000. Total patronage has increased by 14% since 2016 and almost 35% 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 2016. The GDA comprises the counties of Dublin, Kildare, Meath and Wicklow.

As in 2016, of the total number of rail journeys undertaken in 2017, 84% were within the GDA. In each of the years 2012, 2013 and 2014, 83% of journeys were made within the GDA. This shift is explained by increases on the Heuston commuter and Inter City services and modest increases on regional rail services. There is a similar level of growth in patronage inside the GDA. However, this growth is spread more universally with significant percentage increases on both DART and commuter. Although there have been increases in patronage on all lines in the last year, the Cork commuter lines showed the lowest levels of growth at 5%.

Table 7: Rail Patronage – GDA and National

	GDA	% Change on Previous Year	Outside GDA	% Change on Previous Year
Patronage	140,586	13%	27,281	18%

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	74,665	11%
Commuter	67,850	17%
Inter City	17,718	19%
Waterford & Regional services	7,634	12%
Total	167,867	14%

Rail Usage on Individual Lines

Table 9 shows the number of journeys on each of the lines on Census day 2017.

Table 9: Journeys by direction and by line, 2017

Line	Route	Journeys	Annual % Change
DART Northbound	Greystones/Bray – Howth/Malahide	36,691	9%
DART Southbound	Malahide/Howth – Greystones/Bray	37,974	13%
Connolly Northbound	Rosslare – Dundalk	13,056	14%
Connolly Southbound	Dundalk – Rosslare	13,049	11%
Connolly Eastbound	Sligo – Longford – Bray	13,890	14%
Connolly Westbound	Bray – Longford – Sligo	12,493	11%
Heuston North & Eastbound ⁶	Kildare/Newbridge/Athlone/Carlow/Portlaoise/Cork/Limerick/Galway/Westport/Waterford/Tralee – Heuston	16,476	28%
Heuston South & Westbound ⁷	Heuston – Kildare/Newbridge/Athlone/Carlow/Portlaoise/Cork/Limerick/Galway/Westport/Waterford/Tralee	15,514	28%
Cork Commuter Inbound	Cobh/Midleton – Cork /Mallow – Cork	2,974	6%
Cork Commuter Outbound	Cork – Cobh/Midleton / Cork – Mallow	2,920	5%
Regional Northbound	Limerick – Galway/Ballybrophy/Limerick Junction & Waterford – Limerick Junction	1,368	15%
Regional Southbound	Galway/Ballybrophy/Limerick Junction – Limerick & Limerick Junction to Waterford	1,462	13%

⁶Includes Ballina to Manulla Junction and Galway to Athlone services

⁷Includes Manulla Junction to Ballina and Athlone to Westport/Galway services

Busiest Stations

Table 10 below illustrates the Top 10 busiest stations in 2017 in terms of all day boardings and alightings. A comparison with the station ranking in 2016 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, Bray in Wicklow and Maynooth in Kildare also feature in the top ten busiest stations in terms of passenger traffic. As in 2016, 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 2017 the top ten stations for boarding represent 45% of total boardings in the country on census day, down 1 percentage point since 2016. The share of total alightings accounted for by the top ten stations in 2017 was 47%, also down 1% on 2016. As in previous years, significantly more people (25%) alight services in Grand Canal Dock than board services.

Daily throughput at Sallins & Naas, Hazelhatch & Celbridge, Adamstown, Clondalkin Fonthill and Parkwest & Cherry Orchard increased by 47%, 77%, 119%, 179% and 75% respectively since before the introduction of rail services through the Phoenix Park Tunnel in November 2016.

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

Table 10: Top 10 stations by number of boardings and alightings, 2017
(and rank in 2016)

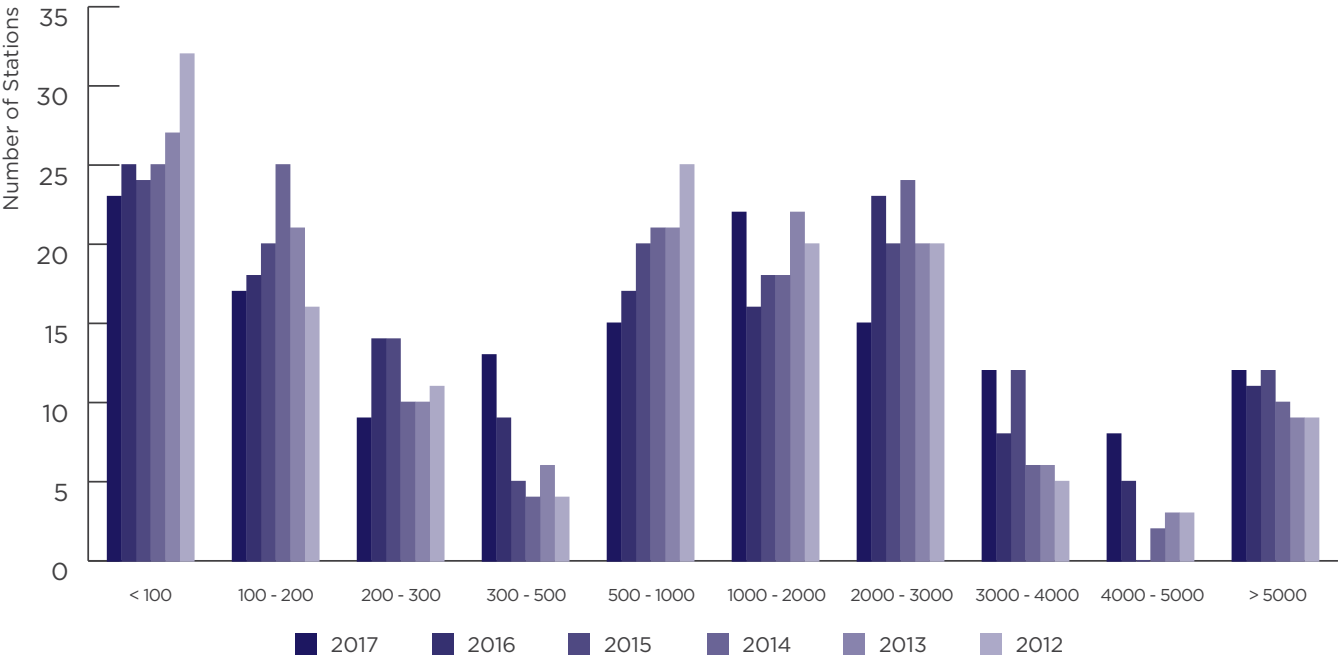
Rank	Boardings		Alightings	
1	Connolly (-)	18,062	Connolly (-)	18,927
2	Pearse (-)	15,465	Pearse (-)	15,636
3	Heuston (-)	10,700	Heuston (-)	11,596
4	Tara Street (-)	9,442	Tara Street (-)	9,801
5	Dún Laoghaire (6)	4,129	Grand Canal Dock (-)	4,637
6	Cork (5)	4,071	Dún Laoghaire (8)	4,096
7	Bray (8)	3,946	Cork (-)	4,022
8	Grand Canal Dock (10)	3,693	Bray (9)	3,758
9	Lansdowne Road (7)	3,429	Lansdowne Road (6)	3,657
10	Malahide (12)	3,329	Maynooth (11)	3,092

Variation in Station Usage

Chart 6 shows the number of daily journeys to and from each station from 2012 to 2017. 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 decreased slightly in 2017 relative to 2016 and is now down 39% on 2012. There has been a decrease in the number of stations with a daily throughput of 300 or less in the last year of 8, or 16%. Meanwhile the number of stations experiencing between 1,000 and 2,000 journeys per day has increased by 38% in the past year. At the opposite end of the scale 12 stations generated in excess of 5,000 journeys on a typical day. Although there has been some variation in the bands in 2017, 69 stations on the network experience more than 1,000 journeys per day compared to 63 in 2016. The number of stations generating in excess of 3,000 journeys increased by 33% since 2016 and there was a 66% increase in stations with a daily throughput between 4,000 – 5,000 passengers in the same period.

Chart 6: Variations in Station Usage





Patronage by Line

DART

Services Included:

Malahide / Howth – Bray / Greystones

The number of total daily journeys on the DART line in 2017 was just under 75,000 up over 7,500 journeys or 11% on 2016 levels. This growth in patronage accounts for 44% of the overall increase in patronage for the entire GDA between 2016 and 2017. Patronage on the DART has been growing steadily since 2014, 2017 patronage levels are now 89% of the peak patronage level of 2007. In 2017, 43% of all rail journeys nationally were on DART services and 53% of all boardings in the GDA were on DART services.

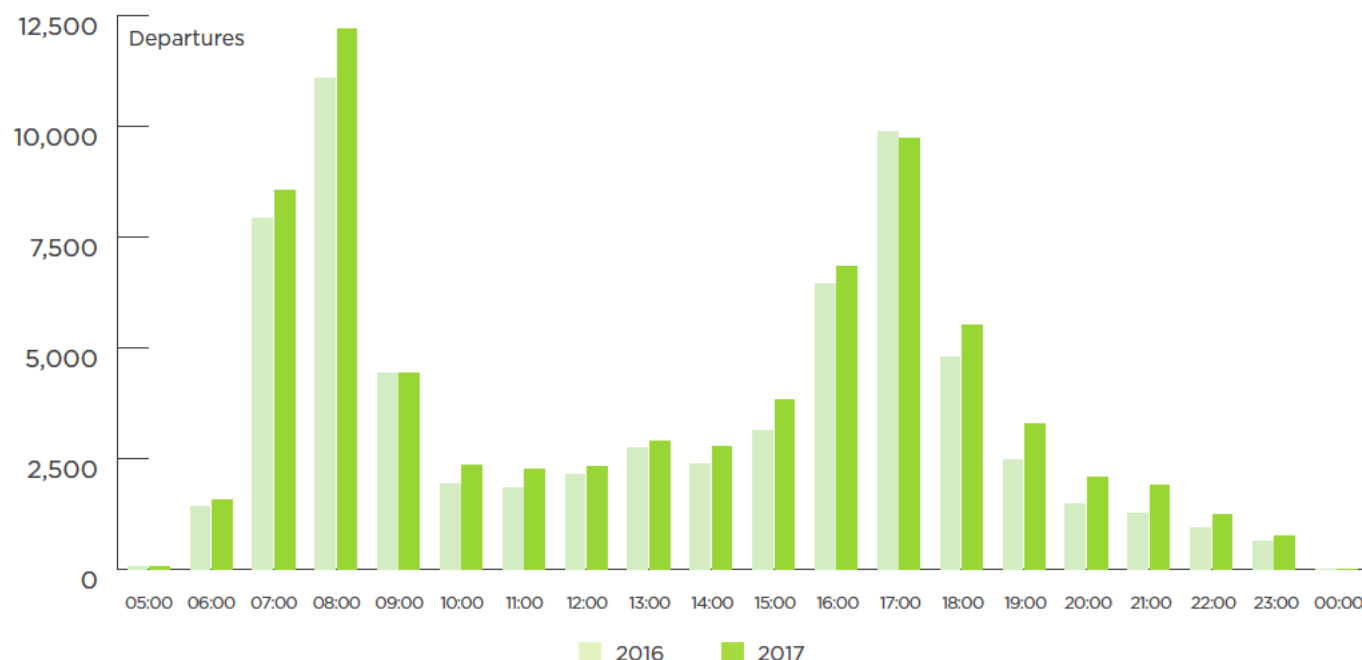
Table 11: Total daily patronage on DART lines, 2017

Line	2016	2017	Annual % Change
DART Northbound	33,595	36,691	9%
DART Southbound	33,528	37,974	13%
Total	67,123	74,665	11%

Hourly Profile of Demand

Chart 7 shows variations in demand throughout the day on the DART line in 2016 and 2017. This is based on passenger numbers boarding services.

Chart 7: Hourly profile of demand on DART 2016 and 2017



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 train 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, 2016 and 2017

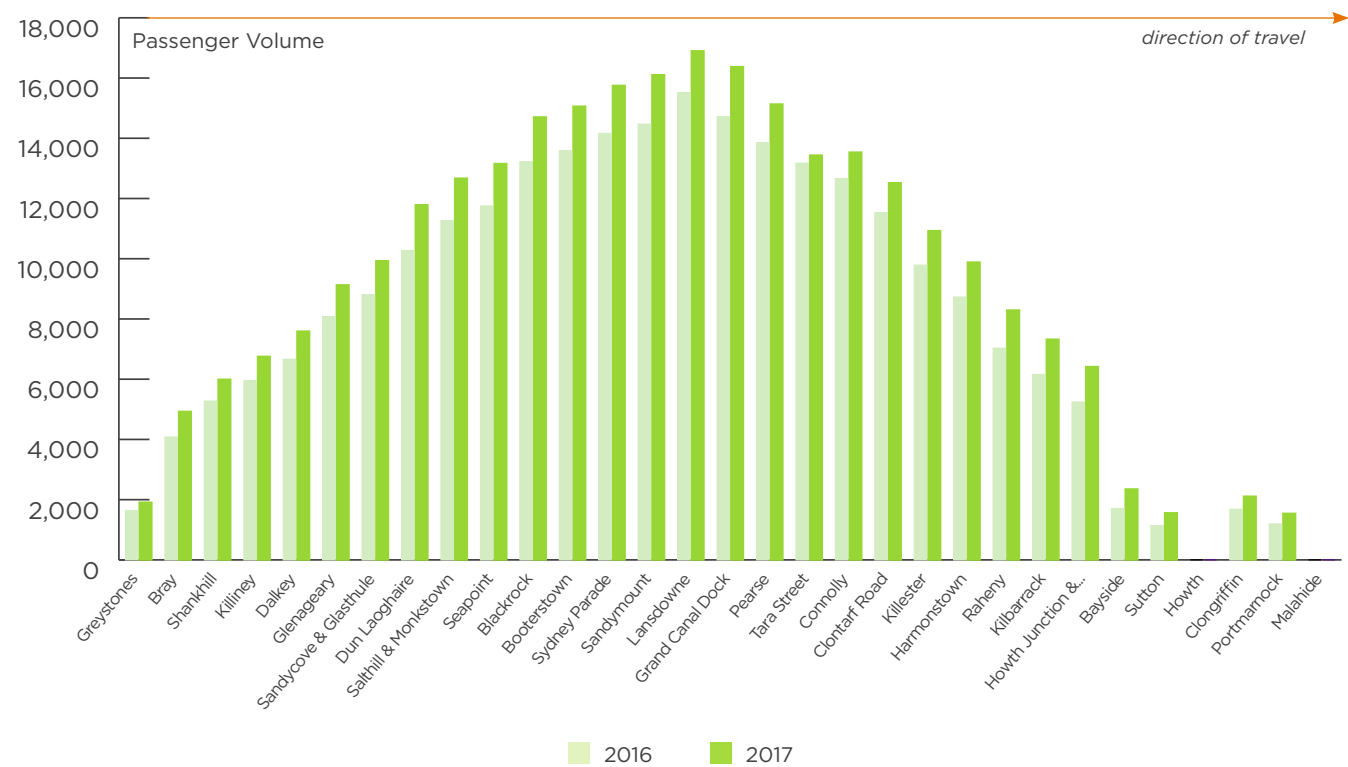
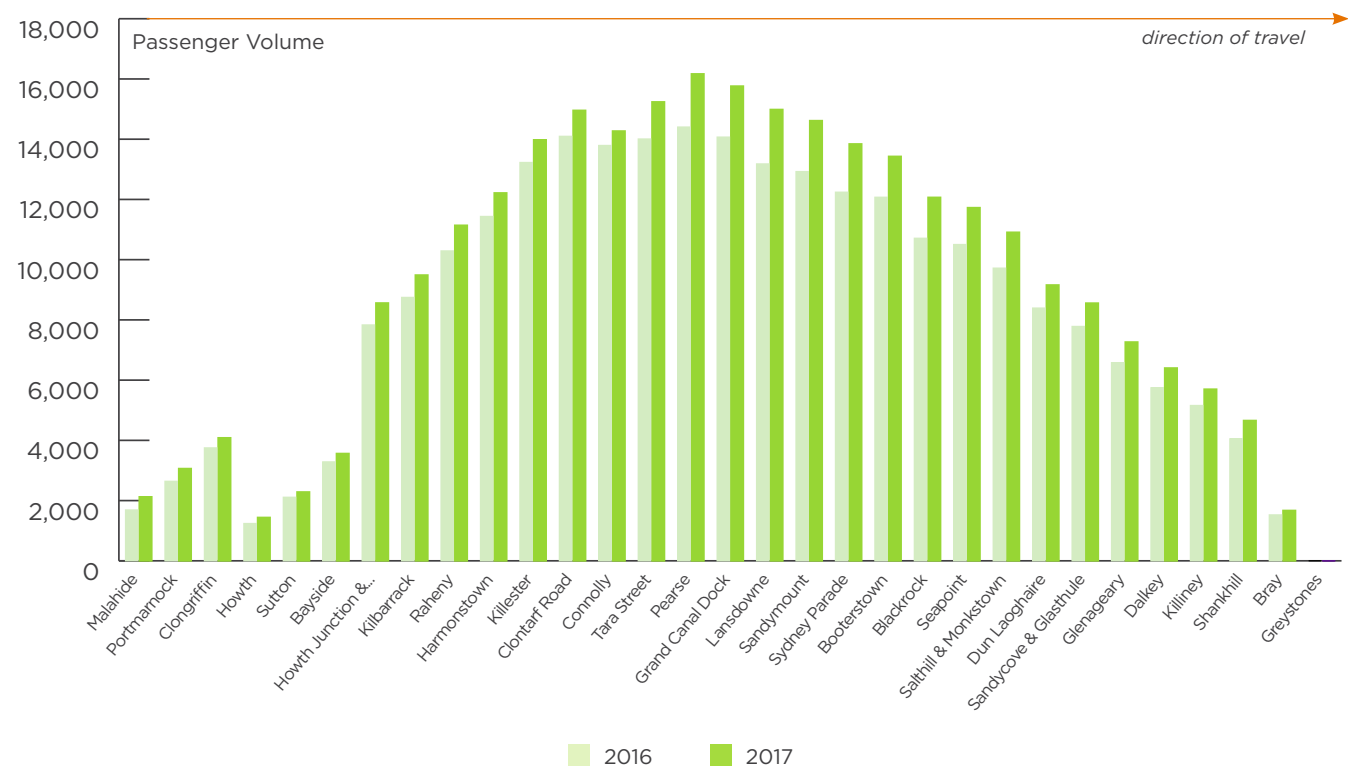


Chart 9: Profile of Demand by Station, DART Southbound, 2016 and 2017



Dundalk – Rosslare

Services Included:

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

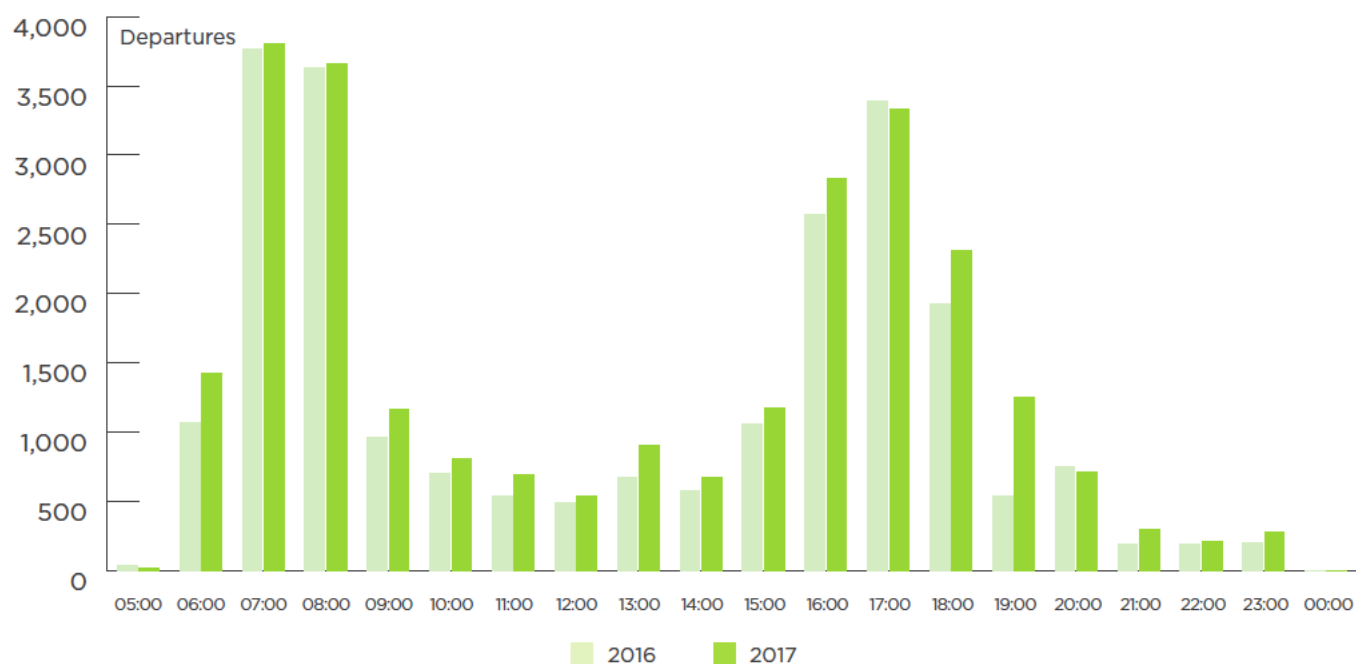
Commuter: Dublin – Dundalk / Drogheda Intercity: Dublin – Belfast

Table 12: Total daily patronage on Dundalk – Rosslare lines, 2017

Line	2016	2017	Annual % Change
Northbound	11,480	13,056	14%
Southbound	11,808	13,049	11%
Total	23,288	26,105	12%

Hourly Profile of Demand

Chart 10: Hourly profile of demand, Dundalk – Rosslare, 2016 and 2017



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, Rosslare - Dundalk (Northbound), 2016 and 2017

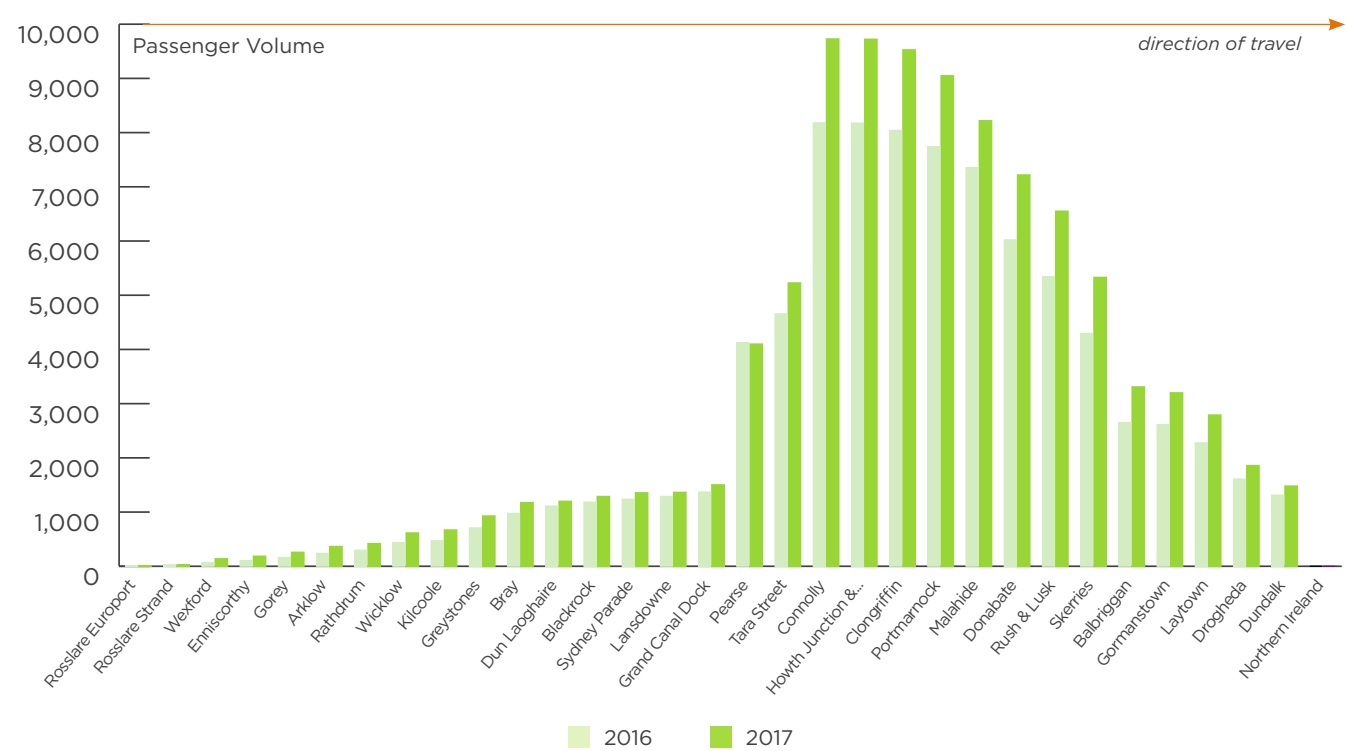
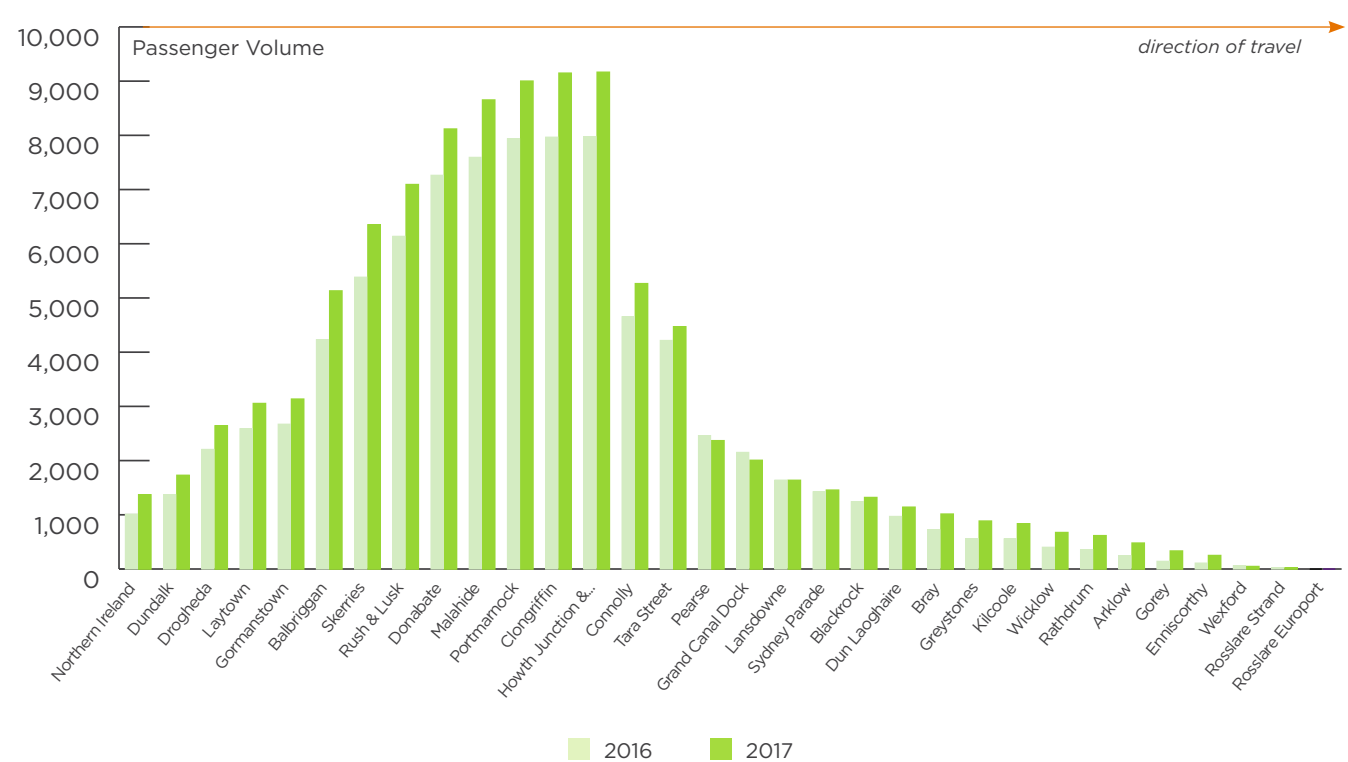


Chart 12: Profile of Demand by Station, Dundalk - Rosslare line (Southbound), 2016 and 2017



Dublin – Belfast (Enterprise)

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 2016 and 2017 of approximately 18%, an increase of 566 daily journeys. There was an 11% increase in northbound patronage and a 27% increase in southbound patronage. Table 13 shows the total boardings on Enterprise services on Census day in 2016 and 2017.

Although the Enterprise service operates between Dublin and Belfast, on census day 2017 85% of Enterprise trips crossed the border into Northern Ireland (73% in 2016)⁸. The bulk of this increase has been in southbound trips from Northern Ireland which is up 35% in the year (341 additional daily journeys). Although more cross border trips were northbound in 2017, the rate of growth is smaller at 12% (164 additional daily journeys). Overall there was a 22% increase in cross border trips between 2016 and 2017. Table 14 shows the total cross border trips on Census day 2016 and 2017.

Table 13: Total Patronage on the Enterprise Service

Line	2016	2017	Annual % Change
Northbound	1,790	1,993	11%
Southbound	1,365	1,728	27%
Total	3,155	3,721	18%

Table 14: Total Cross Boarder Patronage on the Enterprise Service

Line	2016	2017	Annual % Change
Northbound	1,313	1,477	12%
Southbound	981	1,322	35%
Total	2,294	2,799	22%

⁸ Cross boarder trips are defined as: Northbound – total alightings at Belfast; Southbound – total boardings at Belfast

Sligo – Longford – Bray

Services Included:

Intercity: Dublin – Sligo

Commuter: Dublin – Maynooth/Longford

Commuter: Dublin – M3 Parkway

Commuter: Bray – Dublin (excluding DART)

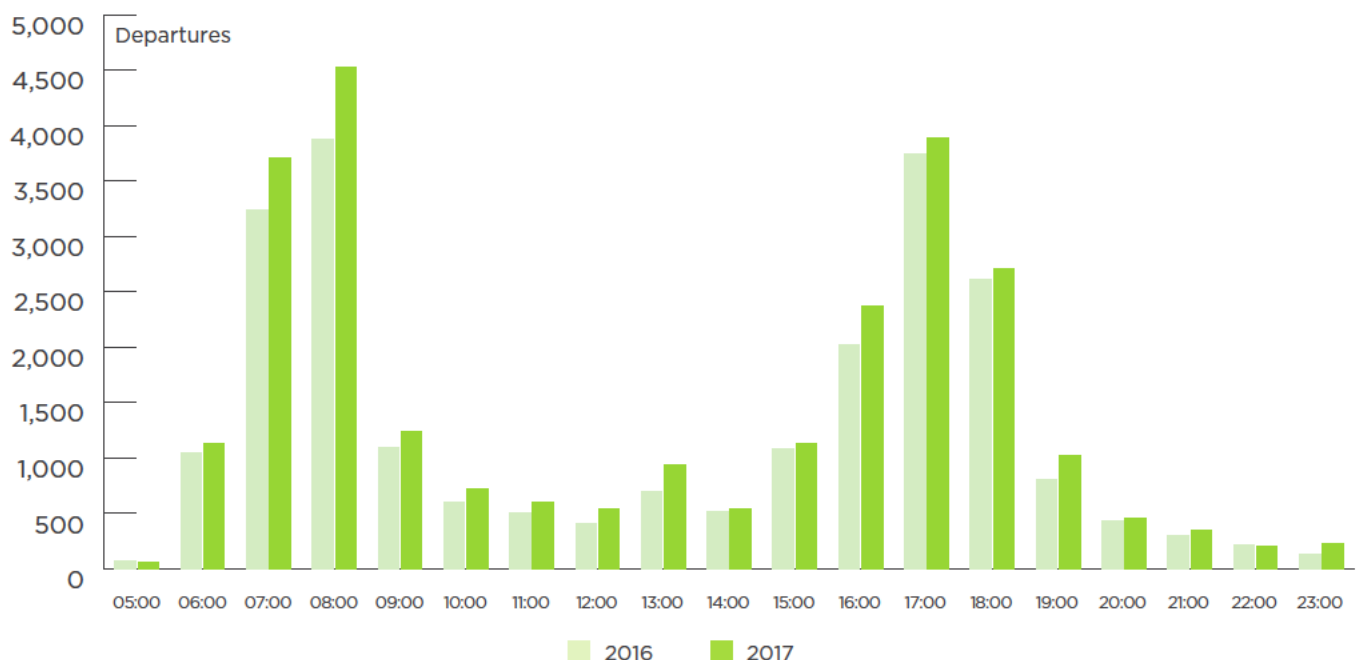
Commuter: Bray – Maynooth

Table 15: Total daily patronage on Sligo - Bray lines, 2017

Line	2016	2017	Annual % Change
Eastbound	12,177	13,890	14%
Westbound	11,228	12,493	11%
Total	23,405	26,383	13%

Hourly Profile of Demand

Chart 13: Hourly Profile of Demand, Sligo – Longford – Bray, 2016 and 2017



Profile of Demand by Station

Charts 14 and 15 show the daily patronage build-up on the Bray to Sligo line in 2016 and 2017.

Chart 14 Profile of Demand by Station, Sligo - Dublin - Bray (eastbound), 2016 and 2017⁹

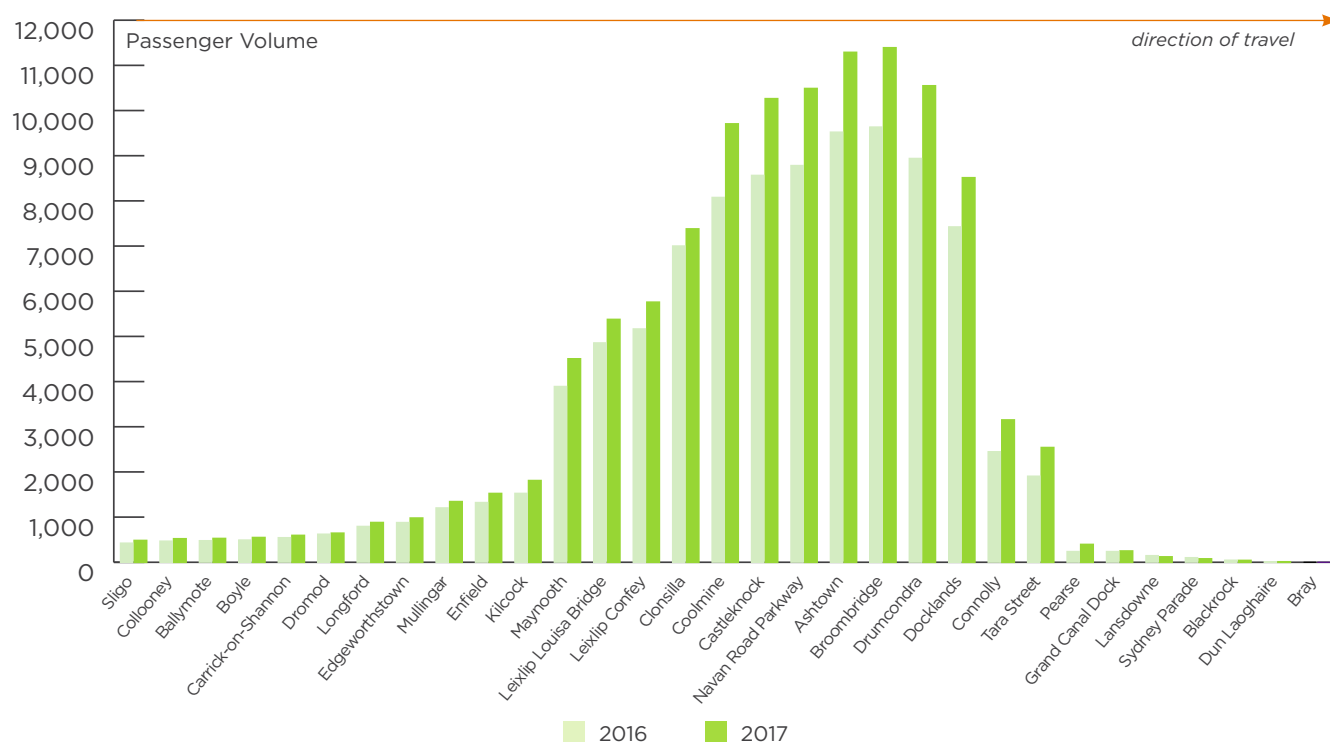
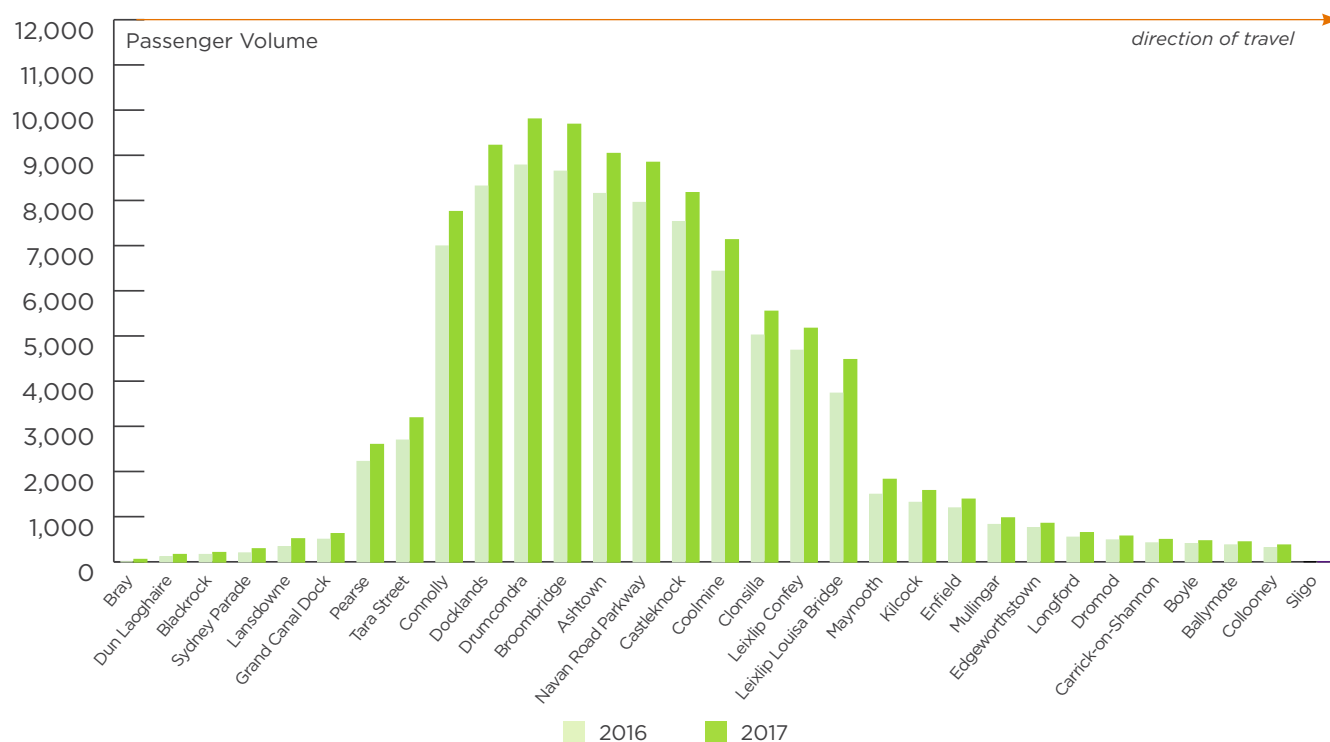


Chart 15 Profile of Demand by Station, Bray - Dublin - Sligo (westbound), 2016 and 2017



⁹ 'Dunboyne spur' Patronage (M3 Parkway - Dunboyne - Hansfield) represented at Clonsilla

Heuston Commuter Services

Services Included:

Commuter: Dublin Grand Canal Dock/Heuston – Hazelhatch & Celbridge, Kildare, Newbridge, Portlaoise & Portarlington¹⁰

Table 16: Total daily patronage on Commuter Services to & from Heuston/Grand Canal Dock, 2016 and 2017

Line	2016 (ex. Grand Canal Dock)	2017 (incl. Grand Canal Dock)	Annual % Change
From Heuston/Grand Canal Dock	2,898	4,430	53%
To Heuston/Grand Canal Dock	3,130	5,038	61%
Total	6,028	9,468	57%

In January 2017¹¹ Iarnród Éireann carried out a census of patronage on services operating via the newly refurbished Phoenix Park Tunnel. Table 16a below presents a comparison of patronage on these services in January 2017 and census day 2017.

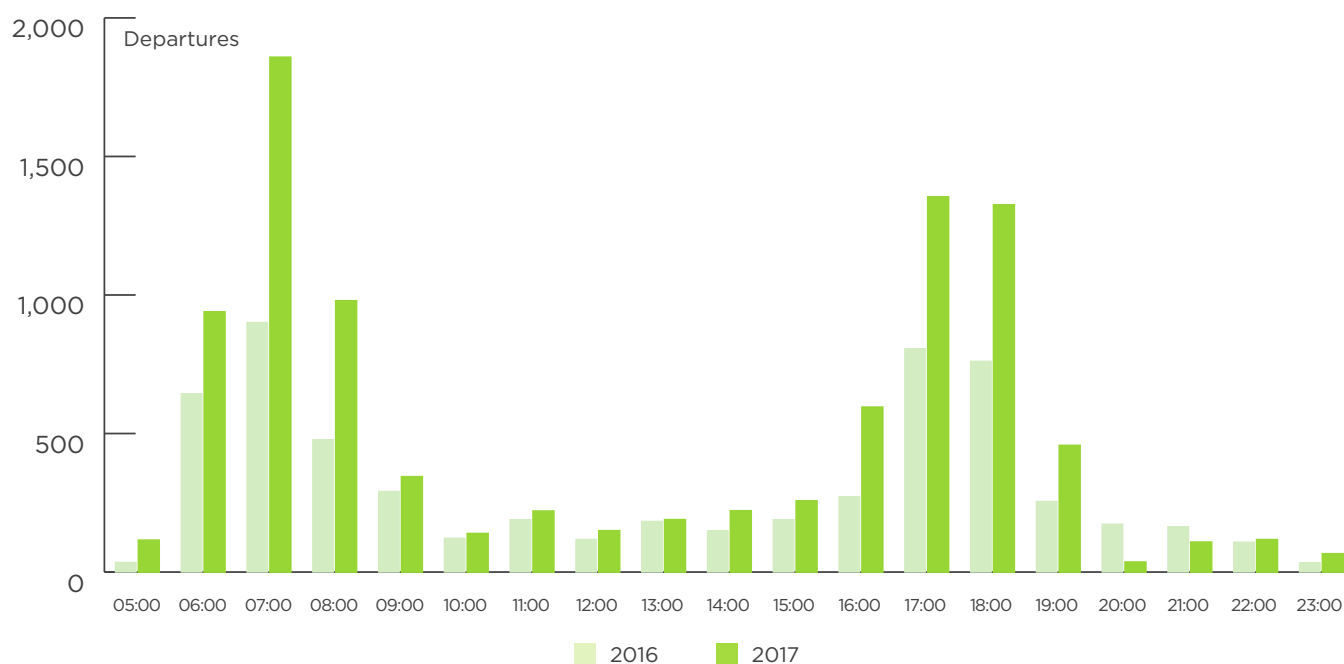
Appendix D provides a list of services introduced in November 2016 operating on the Kildare line to and from Grand Canal Dock via Phoenix Park Tunnel.

Table 16a: Total daily patronage on Commuter Services to & from Grand Canal Dock via Phoenix Park Tunnel in 2017

Line	Jan 2017	Nov 2017	Annual % Change
From Grand Canal Dock	1,010	1,540	52%
To Grand Canal Dock	1,147	1,621	41%
Total	2,157	3,161	47%

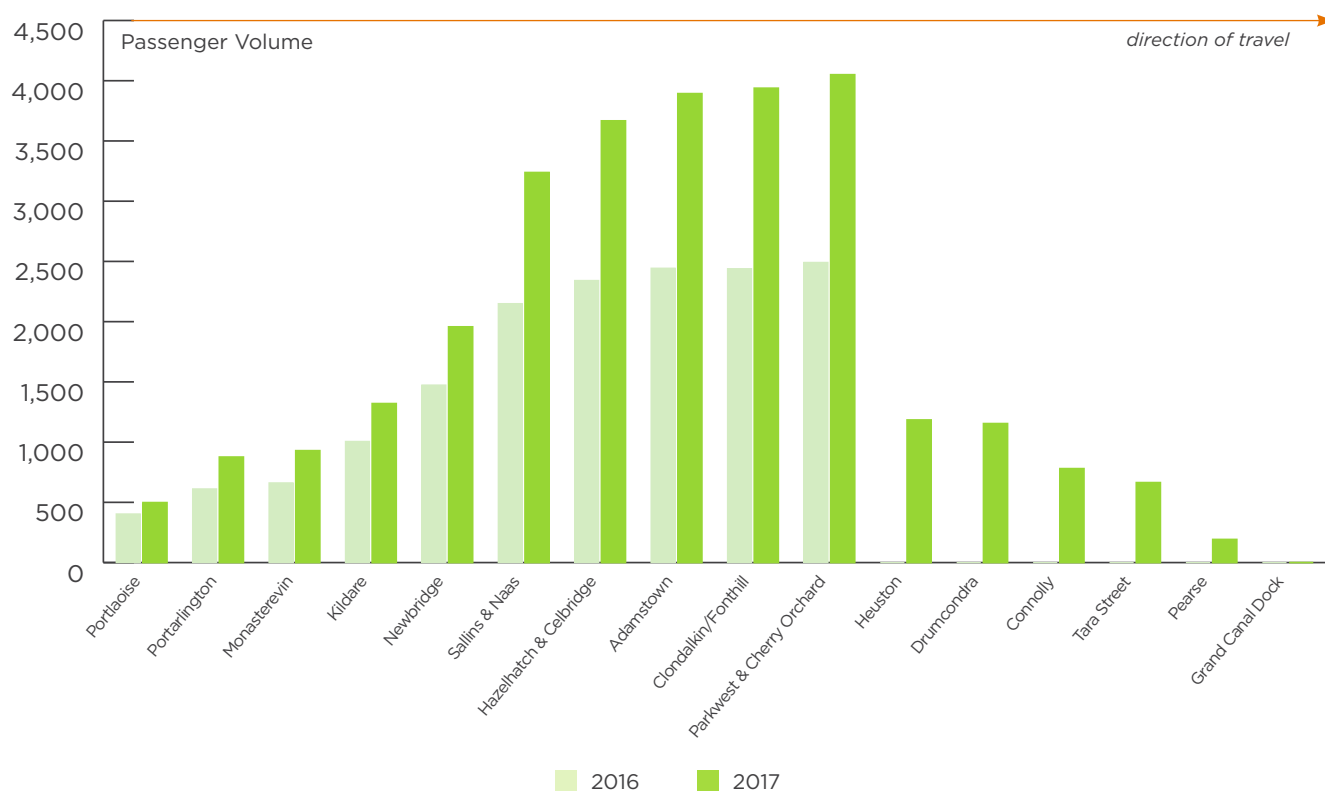
¹⁰ Services from Newbridge/Hazelhatch & Celbridge – Grand Canal Dock (via Phoenix Park Tunnel) were not in operation at the time of the 2016 national rail census

¹¹ Passenger counts were carried out on 12th and 26th of January 2017. An average patronage is presented

Chart 16: Hourly Profile of Demand, Heuston Commuter, 2016¹² and 2017

Profile of Demand by Station

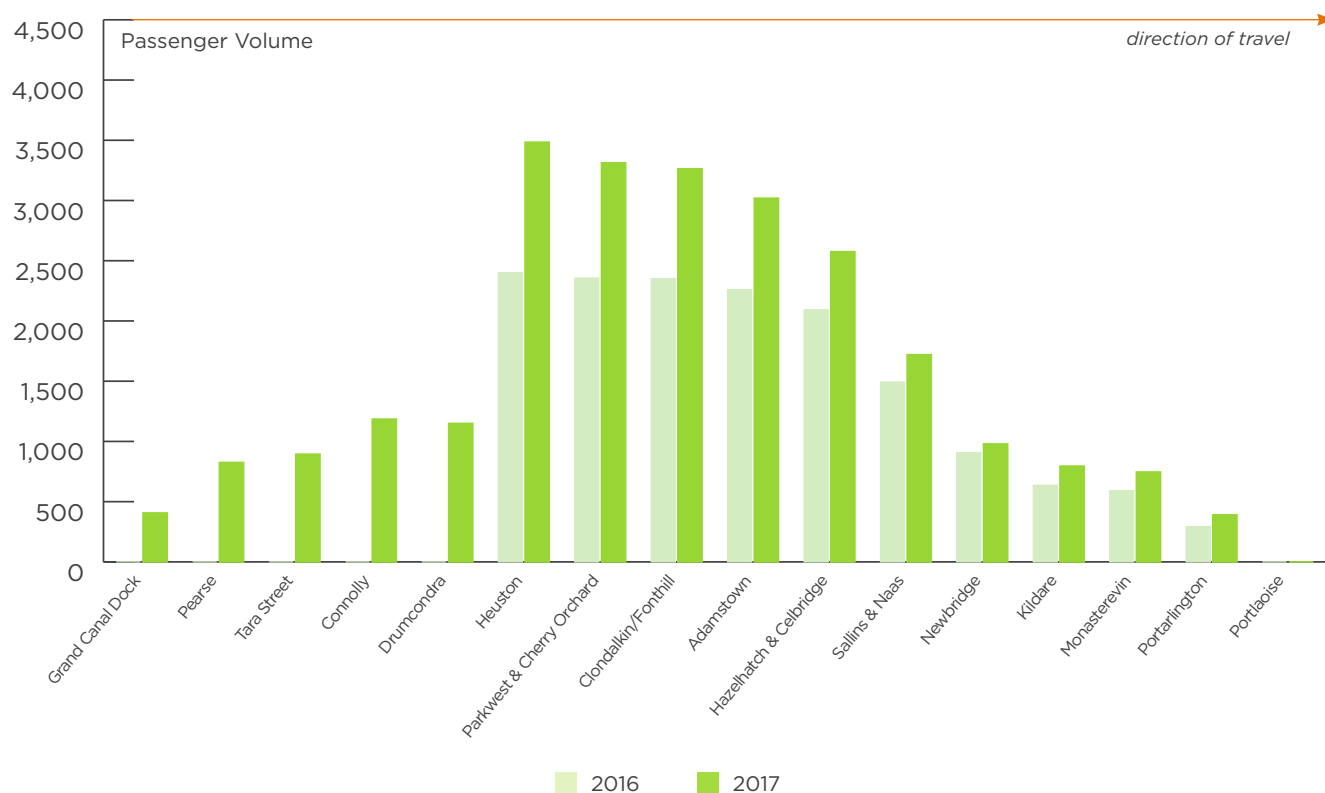
Charts 17 and 18 show the daily patronage build-up on the Heuston commuter line in 2016 and 2017.

Chart 17: Profile of Demand by Station, Kildare Line (eastbound), 2016 and 2017¹³

¹² 2016 data is before the commencement of services to and from Grand Canal Dock

¹³ Patronage at Athlone, Clara and Tullamore represented at Portllington, from Athy and Carlow at Kildare

Chart 18: Profile of Demand by Station, Kildare Line (westbound), 2016 and 2017



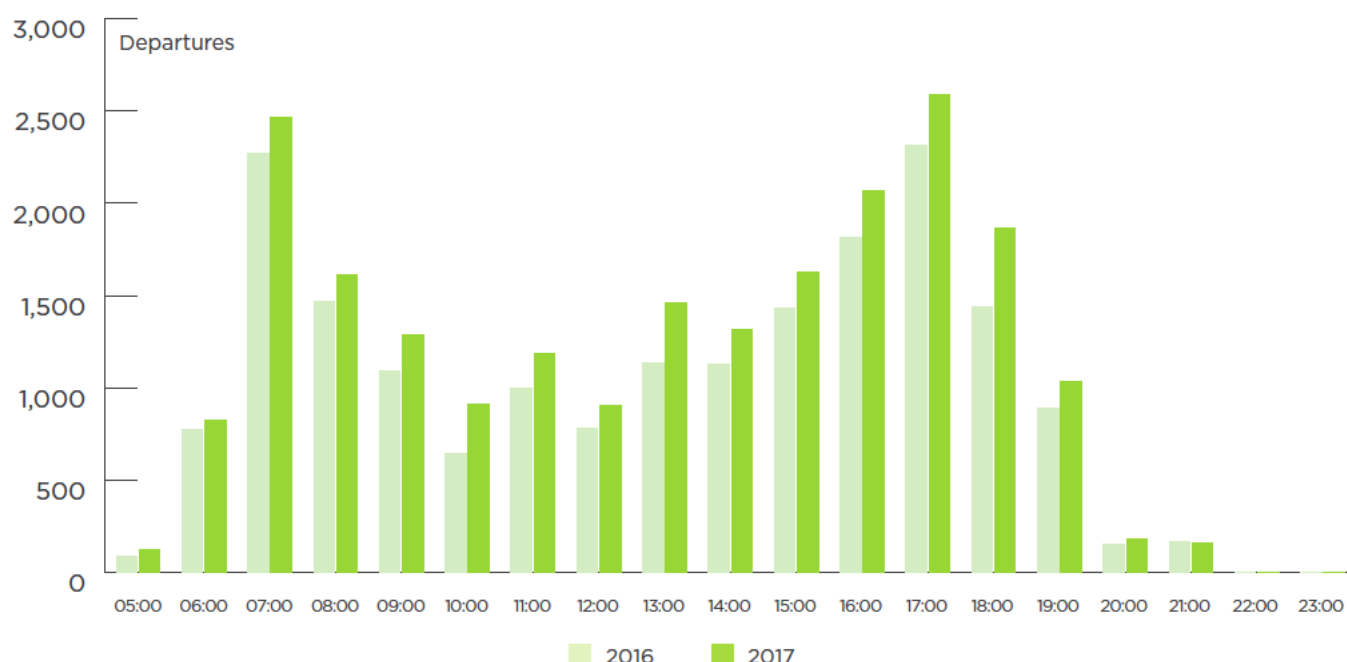
Heuston Inter City Services

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, 2017

Line	2016	2017	Annual % Change
From Heuston	9,031	10,458	16%
To Heuston	9,568	11,158	17%
Total	18,599	21,616	16%

Chart 19: Profile of Demand by Station, Heuston Inter City services, 2016 and 2017



Cork Commuter and Regional

Services Included:

Midleton/Cobh – Cork – Mallow – Tralee

Table 18: Total daily patronage on Cork Commuter Lines, 2017

Line	2016	2017	Annual % Change
To Cork (inbound)	2,840	2,974	5%
From Cork (outbound)	2,751	2,920	6%
Total	5,591	5,894	5%

Hourly Profile of Demand

Chart 20: Hourly Profile of Demand, Cork Commuter and Regional Lines, 2016 and 2017

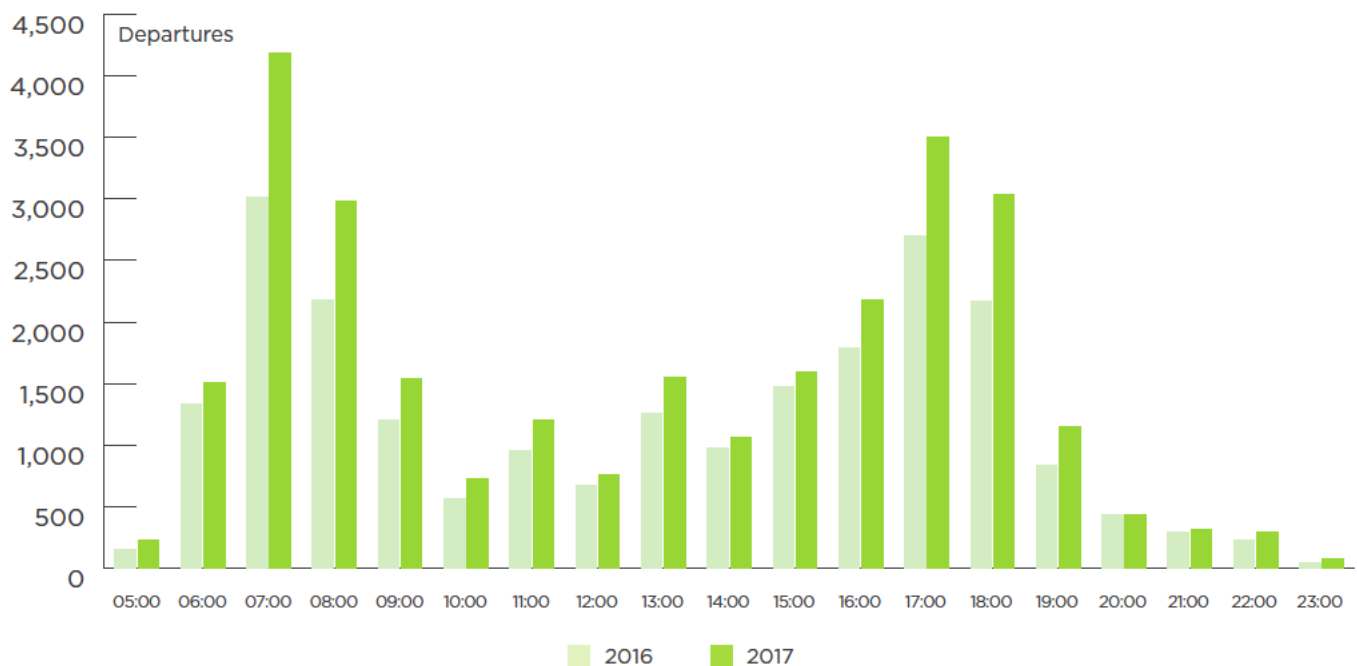


Chart 21a: Profile of Demand by Station, Commuter Services from Cork
2016 and 2017¹⁴

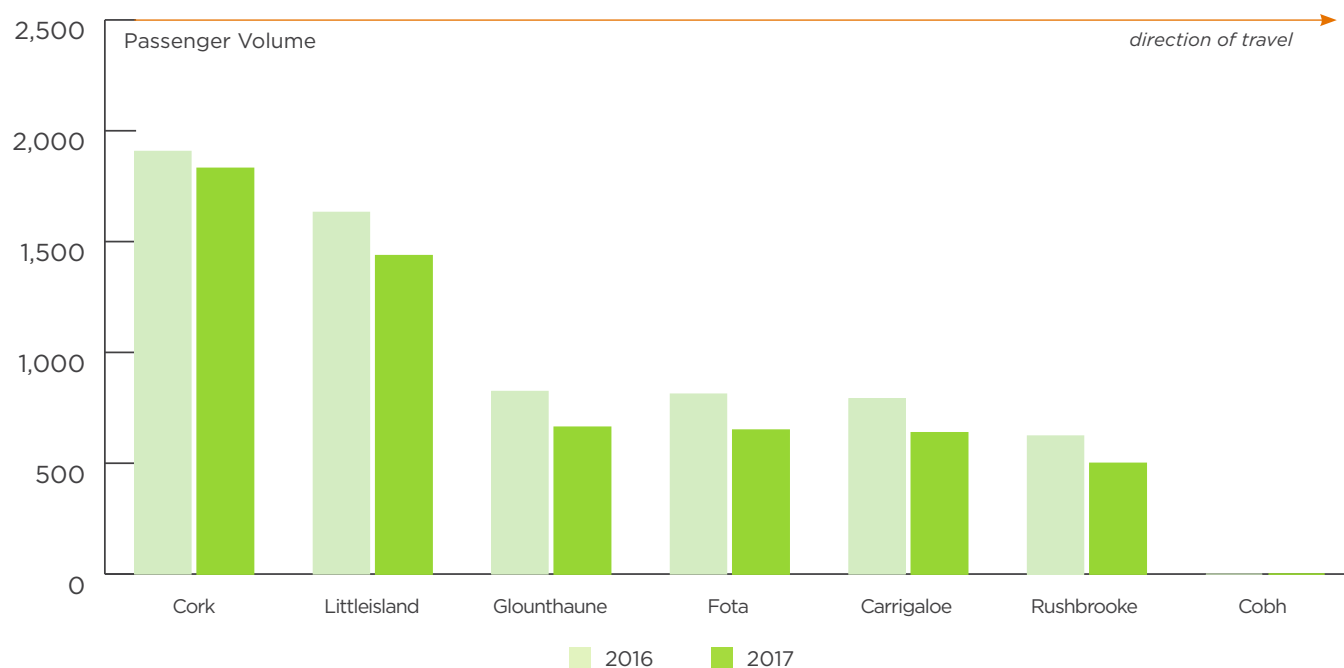
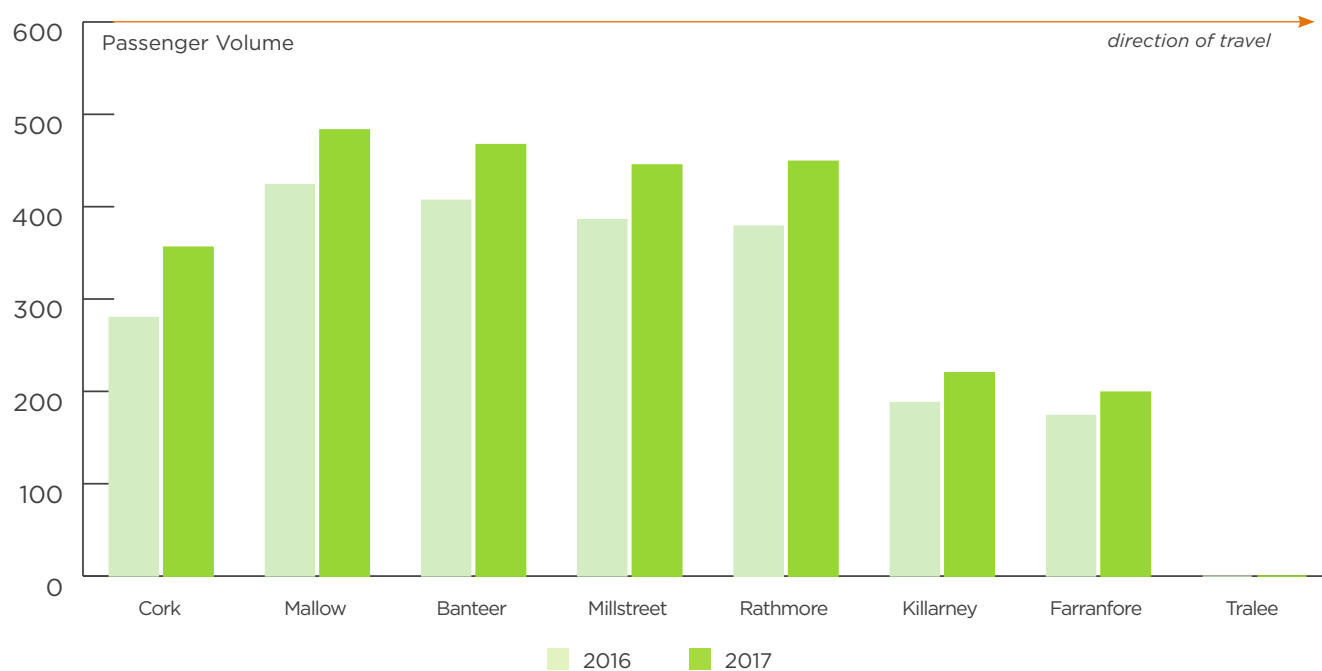


Chart 21b: Profile of Demand by Station, Services from Cork to Tralee
2016 and 2017



¹⁴ Passengers to Midleton and Carrigtwohill counted at Glounthaune

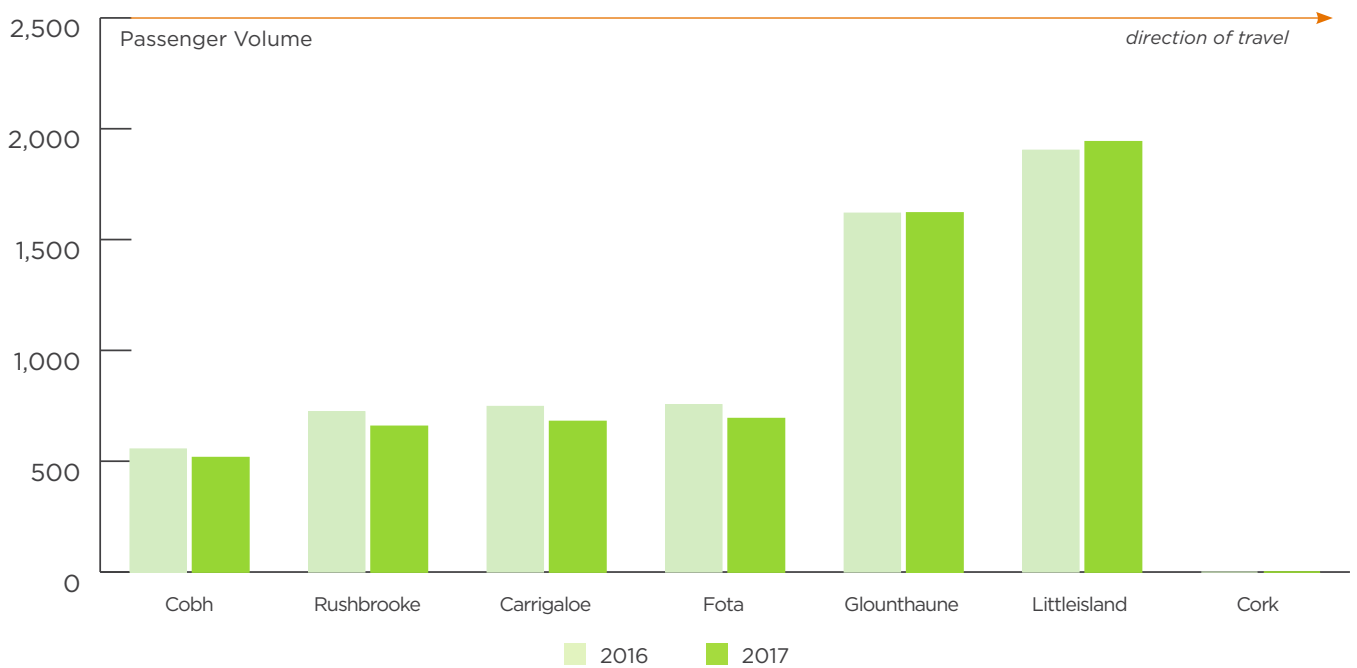
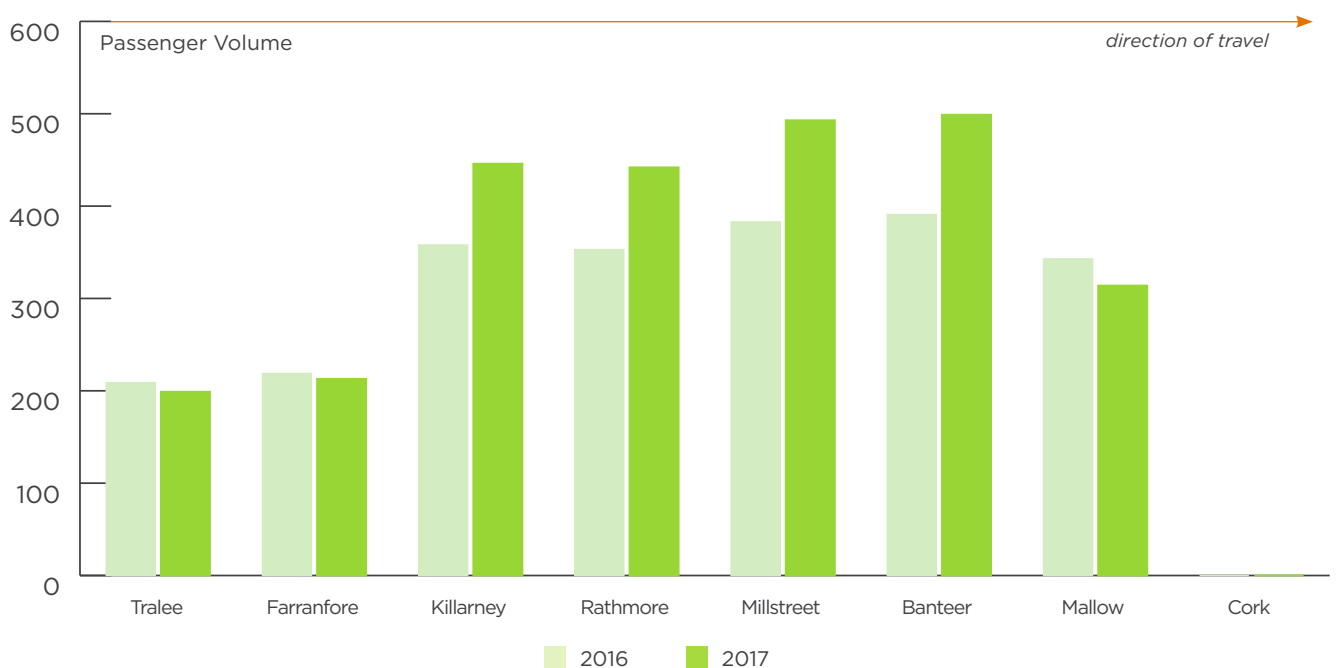
Chart 22a: Profile of Demand by Station, Commuter Services to Cork 2016 and 2017¹⁵

Chart 22b: Profile of Demand by Station, Services from Tralee to Cork 2016 and 2017

¹⁵ Passengers from Midleton and Carrigtwohill counted at Glounthaune

Other Lines

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

Line	2016	2017	Annual % Change
Galway - Athenry/Athlone/Westport	716	906	27%
Galway - Ennis/Limerick/Limerick Junction	2,083	2,329	12%
Limerick - Nenagh/Thurles/Ballybrophy	163	209	28%
Waterford - Limerick Junction	109	119	9%
Total	3,071	3,563	16%



Radial Rail Usage in Dublin

Daily boardings by radial corridor

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

			Boardings					
Radial Corridor	Section	Service	2012	2013	2014	2015	2016	2017
Northern Line	Malahide/Howth -	DART	12,403	11,949	12,160	14,432	16,017	17,158
	Clontarf Road	Commuter	7,064	7,380	7,329	8,103	8,160	9,101
	Dundalk - Howth	InterCity	1,536	1,410	1,167	1,202	1,365	1,728
Total			21,003	20,739	20,656	23,737	25,541	27,987
South Eastern Line	Greystones - Grand Canal Dock	DART	19,667	19,468	18,630	22,081	22,465	24,401
	Bray - Grand Canal Dock	Commuter	817	495	558	521	538	811
	Rosslare - Grand Canal Dock	InterCity	1,180	876	1,521	1,482	1,644	1,885
Total			21,664	20,839	20,709	24,084	24,647	27,097
Heuston Lines	Portlaoise - Heuston/Grand Canal Dock	Commuter	1,737	2,275	2,741	2,887	2,973	5,038
	National - Heuston	InterCity	8,251	8,927	8,576	9,526	9,918	11,182
Total			9,988	11,202	11,317	12,413	12,891	16,220
Sligo Lines	Longford - Drumcondra	Commuter	7,594	7,500	8,151	9,396	9,793	11,513
	Sligo - Drumcondra	InterCity	1,871	1,611	1,635	2,011	1,912	2,218
Total			9,465	9,111	9,786	11,407	11,705	13,731

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	5,034	Clontarf Road - Connolly
	Commuter	2,051	Howth Junction - Connolly
	InterCity	363	Drogheda - Connolly
Total		7,448	
South-Eastern Lines	DART	3,993	Boooterstown - Sydney Parade
	Commuter	-	No Commuter services 08:00-09:00
	InterCity	434	Blackrock - Lansdowne Rd.
Total		4,427	
Heuston Lines	Commuter	863	Parkwest and Cherry Orchard - Heuston
	InterCity	1,557	Kildare - Heuston
Total		2,420	
Sligo Lines	Commuter	4,102	Ashtown - Broombridge
	InterCity	512	Maynooth - Leixlip Louisa Bridge
Total		4,614	

Line	Service	Max. Hourly Passenger Flow	Location of Maximum Flow
Northern Lines	DART	3,396	Connolly - Clontarf Road
	Commuter	1,862	Connolly - Howth Junction & Donaghmede
	InterCity	395	Connolly ¹⁶ - Dundalk
Total		5,653	
South-Eastern Lines	DART	2,634	Sydney Parade - Sandymount
	Commuter	389	Bray - Greystones
	InterCity	-	No Inter City services 08:00-09:00
Total		3,023	
Heuston Lines	Commuter	955	Parkwest & Cherry Orchard - Clondalkin/Fonthill
	InterCity	2,073	Heuston - Kildare
Total		3,028	
Sligo Lines	Commuter	2,153	Navan Road Parkway - Castleknock
	InterCity	539	Connolly - Leixlip Louisa Bridge
Total		2,692	

¹⁶ 1650 Connolly - Belfast, Enterprise

Train Loadings by Radial Corridor

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

Line	Service	Maximum Load Per	Service	Location
Northern Lines	DART	1,077	08:02 Howth - Greystones	Clontarf Road - Connolly
	Commuter	935	07:12 Drogheda - Bray	Howth Junction & Donaghmede - Connolly
	InterCity	441	06:45 Belfast - Connolly	Drogheda - Connolly
South-Eastern Lines	DART	1,046	08.00 Greystones- Malahide	Boooterstown - Sydney Parade
	Commuter	434	05:35 Rosslare Europort - Dundalk	Blackrock - Lansdowne Road
	InterCity	-	No Inter City Services	
Heuston Lines	Commuter	367	07:20 Newbridge - Grand Canal Dock	Drumcondra - Connolly
	InterCity	424	06:05 Waterford - Heuston	Newbridge - Heuston
Sligo Lines	Commuter	1,027	07.55 Maynooth - Bray	Drumcondra - Connolly
	InterCity	512	05.45 Sligo - Connolly	Maynooth - Broombridge

Table 25: Most Heavily Loaded Trains in the Evening Peak

Line	Service	Maximum Load Per	Train	Location of Busiest Service
Northern Lines	DART	938	16.30 Greystones - Malahide	Connolly - Clontarf Road
	Commuter	746	16.50 Bray - Drogheda	Connolly - Clongriffin
	InterCity	395	16:50 Connolly - Belfast	Connolly - Dundalk
South-Eastern Lines	DART	939	17:00 Malahide - Greystones	Lansdowne Road - Sandymount
	Commuter	388	17:36 Connolly - Wexford	Pearse - Dun Laoghaire
	InterCity	-	No Inter City Services	
Heuston Lines	Commuter	340	17.10 Heuston - Athlone	Heuston - Newbridge
	InterCity	491	17:30 Heuston - Galway	Heuston - Sallins & Naas
Sligo Lines	Commuter	758	17.05 Bray - Maynooth	Drumcondra - Broombridge
	InterCity	539	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 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Rosslare Euro Port			7	0			7	11	21	13	20	20
Rosslare Strand			19	0			19	16	24	14	21	25
Wexford			124	23			147	76	115	78	68	81
Enniscorthy			50	15			65	54	57	38	43	61
Gorey			72	4			76	73	86	78	86	105
Arklow			109	12			121	85	88	91	109	119
Rathdrum			64	5			69	68	111	75	98	94
Wicklow			226	43			269	168	155	152	166	180
Kilcoole			83	16			99	39	24	33	31	23
Greystones	1909	340	274	45			2568	1927	1951	1561	1783	1858
Bray	3155	260	336	147	48	0	3946	3144	2974	2573	2909	3029
Shankill	1214	128					1342	1367	1456	1085	1149	1301
Killiney	879	110					989	853	792	731	882	859
Dalkey	1303	445					1748	1621	1634	1301	1531	1544
Glenageary	1689	150					1839	1666	1661	1388	1568	1494
Sandycove & Glasthule	1068	221					1289	1208	1157	1004	1022	995
Dun Laoghaire	2729	919	188	176	115	2	4129	3574	3315	2610	3168	3359
Salthill & Monkstown	1096	227					1323	1387	1379	1065	1168	1041
Seapoint	620	188					808	836	869	682	785	699
Blackrock	2324	610	146	19	54	2	3155	2974	2862	2699	2091	2399
Boooterstown	1009	603					1612	1644	1320	1274	1334	1164
Sydney Prde	1404	622	68	12	83	4	2193	1883	1847	1552	1327	1308
Sandymount	727	353					1080	1044	1243	828	889	975

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Lansdowne	1833	1227	119	23	224	3	3429	3500	3459	2868	2529	2490
Grand Canal Dock	1442	1517	141	32	120	0	3252	2896	2671	2712	2579	2825
Pearse	3772	5566	3114	480	2057	21	15010	14827	13292	13560	12168	11312
Tara Street	2652	4034	1436	430	660	90	9302	7952	7730	6746	6344	6556
Connolly	3374	3296	5031	1099	4692	48	17540	14857	14679	12029	12512	13477
Clontarf Rd	484	1568					2052	1946	1694	1272	1377	1431
Killester	210	1987					2197	2225	1786	1595	1575	1592
Harmonstwn	118	1196					1314	1396	1071	998	1011	994
Raheny	197	1953					2150	2024	1883	1758	1641	1672
Kilbarrack	281	1235					1516	1373	1368	1106	1043	1138
Howth Junc Donaghmede	402	1271	282	208			2163	1818	1715	1613	1667	1730
Bayside	107	1395					1502	1400	1403	1222	1156	1024
Sutton	51	923					974	963	741	669	689	657
Howth	0	1439					1439	1240	1259	875	1073	1285
Clongriffin	62	1068	8	158			1296	1256	1013	830	767	674
Portmarnock	570	999	30	382			1981	1450	1191	1182	1186	1236
Malahide	10	2124	363	827			3324	2626	2604	2086	2177	2318
Donabate			187	1184			1371	1392	1386	1105	1149	1213
Rush & Lusk			110	837			947	972	905	808	920	800
Skerries			159	1426			1585	1424	1446	1314	1365	1279
Balbriggan			134	2104			2238	1782	1872	1757	1753	1778
Gormanston			3	81			84	101	72	87	113	92
Laytown			8	424			432	397	392	305	371	375
Drogheda			95	1024			1119	1086	1264	957	962	1094
Dundalk			70	446			516	579	465	394	492	567
Belfast			0	1322			1322	1011	853	1094	1047	1040
Docklands					1466	0	1466	1326	1064	874	850	811
Drumcondra					857	255	1112	1183	1258	1291	1065	1150

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Broombridge					203	301	504	418	370	221	249	229
Ashtown					149	961	1110	995	928	930	743	743
Navan Road Parkway					36	249	285	323	270	245	232	197
Castleknock					172	716	888	792	781	716	841	840
Coolmine					270	2646	2916	1502	1544	1332	1554	1550
Clonsilla					455	1144	1599	1767	1698	1480	1161	1262
Hansfield					4	207	211	210	143	87	58	-
Dunboyne					5	289	294	279	184	220	171	177
M3 Parkway					0	422	422	400	298	174	206	226
Leixlip Conf.					132	484	616	529	520	416	497	511
Leixlip Louisa Bridge					116	943	1059	1112	1067	1054	834	969
Maynooth					250	2886	3136	2695	2831	2006	2232	2202
Kilcock					32	310	342	237	258	225	233	247
Enfield					14	199	213	137	127	100	110	131
Mullingar					65	468	533	473	509	492	370	451
Edge'stown					12	121	133	116	130	104	122	167
Longford					62	310	372	254	322	266	181	221
Dromod					16	74	90	112	79	124	88	81
Carrick-on-Shannon					48	94	142	105	141	103	95	114
Boyle					28	61	89	67	77	58	54	76
Ballymote					36	51	87	91	131	74	93	69
Collooney					12	47	59	56	56	50	46	41
Sligo					0	482	482	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 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Grand Canal Dock	35	406					441					
Pearse	23	432					455					
Tara Street	49	91					140					
Connolly	96	426					522					
Drumcondra	170	123					293					
Heuston	0	10700					10700	9537	9997	9394	8497	8650
Parkwest & C'y Orchard	292	118					410	255	202	184	155	126
Clondalkin / Fonthill	106	58					164	54	40	54	56	37
Adamstown	249	21					270	134	108	87	71	85
Hazelhatch & Celbridge	464	33					497	299	271	270	260	323
Sallins Naas	1634	149					1783	1026	964	1123	814	916
Newbridge	1151	132					1283	1224	1067	1081	1058	989
Kildare	612	276					888	775	683	612	806	754
Athy	358	106					464	464	442	314	360	446
Carlow	575	193					768	745	593	575	657	565
M'asterevin	97	13					110	101	87	91	72	37
P'tarlinton	544	184					728	565	705	806	677	504
Portlaoise	879	157					1036	825	804	727	721	488
Ballybrophy	115	3			35	0	153	161	121	99	146	84
Templemore	75	21					96	77	106	70	62	67
Thurles	379	206			16		601	563	557	559	483	504
Limerick Junc	925	185			690	36	1836	1501	1562	1409	1109	1334
Limerick	281	0			264	742	1287	1112	1157	1073	963	1221
Charleville	91	11					102	73	84	65	119	78
Mallow	506	157	302	465			1430	1454	1451	1368	1569	1246

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Cork	1885	0	0	2186			4071	3752	3462	2896	3188	3112
Muine Bheag	131	9					140	145	127	146	129	108
Kilkenny	399	74					473	400	355	350	362	328
T'mastown	51	2					53	52	39	39	53	36
Tullamore	522	132					654	470	618	475	452	371
Clara	96	36					132	137	109	83	61	55
Athlone	434	396					830	713	705	560	560	468
Ballinasloe	107	121					228	195	204	68	121	109
Woodlawn	19	49					68	35	38	22	24	10
Attymon	1	13					14	8	7	3	1	1
Athenry	136	160			145	25	466	376	393	266	141	363
Galway	1424	0			0	303	1727	1260	1402	1218	1053	1011
Roscommon	94	27					121	88	75	72	80	63
Castlerea	87	9					96	70	58	60	49	53
Ballyhaunis	90	16					106	80	67	64	45	45
Claremorris	76	12					88	113	86	87	66	54
Castlebar	156	7					163	145	120	114	82	93
Westport	106	0					106	153	135	104	85	90
Manulla Junc	112	111					223	146	119	78	101	138
Foxford	16	3					19	19	5	-	15	12
Ballina	96	0					96	62	50	-	51	65
Banteer	10	0	17	8			35	32	39	19	38	37
Millstreet	20	0	65	13			98	55	91	111	380	43
Rathmore	8	0	10	26			44	30	59	18	42	41
Killarney	57	8	263	28			356	213	224	228	357	240
Farranfore	8	0	16	1			25	21	21	14	32	29
Tralee	27	0	199	0			226	240	236	208	411	281

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Littleisland			418	77			495	432	347	218	316	250
Gl'thaune			232	55			287	229	186	139	203	162
C'twohill			134	23			157	148	95	98	91	83
Midleton			608	0			608	638	461	458	495	422
Fota			19	7			26	14	10	9	82	23
Carrigaloe			28	8			36	40	37	19	31	36
Cobh			516	1			517	555	481	369	517	504
Sixmilebrdg					17	36	53	57	53	55	46	60
Ennis					35	155	190	153	261	173	236	276
Gort					15	1	16	31	19	20	13	18
Ardrahan					2	1	3	5	3	7	8	14
Craughwell					27	6	33	18	13	13	10	27
Oranmore	18	128			96	20	262	70	63	19	23	
Roscrea					27	3	30	6	7	4	19	15
Cl'jordan					2	4	6	9	6	8	15	5
Nenagh					7	17	24	13	17	9	14	18
Birdhill					7	0	7	6	11	6	10	8
C'leconnell					11	2	13	12	15	10	15	9
Carrick-on-Suir					2	2	4	3	1	-	6	15
Clonmel					21	8	29	27	23	20	29	29
Cahir					4	5	9	10	9	5	11	9
Tipperary					1	2	3	13	11	7	9	31

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 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Rosslare Euro Port			0	19			19	25	27	16	21	18
Rosslare Strand			0	25			25	35	42	24	25	30
Wexford			14	226			240	82	137	82	31	64
Enniscorthy			3	98			101	51	53	65	49	55
Gorey			0	150			150	116	85	77	89	107
Arklow			2	149			151	126	93	95	122	117
Rathdrum			11	63			74	52	106	93	88	92
Wicklow			29	205			234	181	187	162	160	145
Kilcoole			28	65			93	9	96	25	26	34
Greystones	0	2011	16	174			2201	1743	1711	1460	1551	1571
Bray	139	3247	88	274	0	10	3758	3220	2870	2997	2818	2867
Shankill	147	1168					1315	1278	1147	1049	1012	1088
Killiney	119	813					932	772	741	734	750	774
Dalkey	466	1310					1776	1742	1650	1258	1594	1586
Glenageary	150	1440					1590	1454	1468	1324	1311	1299
Sandycove & Glasthule	269	823					1092	1084	1067	968	957	999
Dun Laoghaire	869	2669	165	355	6	32	4096	3492	3430	2633	3178	3278
Salthill & Monkstown	215	1045					1260	1182	1084	949	981	990
Seapoint	134	529					663	554	629	514	551	550
Blackrock	776	1971	57	155	10	37	3006	2985	2866	2764	2265	2353
Boooterstown	652	1017					1669	1445	1429	1098	1144	1131
Sydney Prde	713	1411	0	193	0	48	2365	2175	1898	1716	1542	1525
Sandymount	388	719					1107	981	1355	846	836	972

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Lansdowne	1026	1992	111	392	3	133	3657	3888	4089	2722	3328	2906
Grand Canal Dock	1966	1897	2	394	6	145	4410	3958	3759	3355	3051	2833
Pearse	5011	4768	518	2582	83	2166	15128	14221	14127	12021	11238	11271
Tara Street	4349	2960	308	1225	71	701	9614	8461	9645	7513	7473	7971
Connolly	3276	3982	530	4999	125	5410	18322	16109	15220	12931	13311	14128
Clontarf Rd	1501	590					2091	2206	1713	1405	1337	1346
Killester												
Harmonstwn	1163	121					1284	1312	990	897	823	916
Raheny	1788	301					2089	2161	1789	1698	1493	1489
Kilbarrack	1245	307					1552	1331	955	1112	1072	994
Howth Junc Donaghmede	1316	374	288	191			2169	2044	2179	1708	1836	1764
Bayside	1163	118					1281	1250	1113	1091	1048	958
Sutton	842	77					919	662	536	640	616	646
Howth	1560	0					1560	1138	1286	898	1255	1178
Clongriffin	959	46	203	11			1219	985	875	726	567	640
Portmarnock	1137	44	514	34			1729	974	899	940	978	1057
Malahide	1552	0	1187	291			3030	2158	2508	1992	2178	2302
Donabate			1187	160			1347	1598	1161	1057	1051	1029
Rush & Lusk			778	94			872	894	775	795	828	876
Skerries			1381	207			1588	1320	1466	1227	1308	1460
Balbriggan			2154	108			2262	1868	1422	1564	1711	1543
Gormanston			112	0			112	55	82	71	99	85
Laytown			418	12			430	354	367	349	345	367
Drogheda			1027	111			1138	917	1121	1041	979	1040
Dundalk			448	87			535	516	475	453	532	515
Belfast			1477	0			1477	1313	936	1126	1100	1074
Docklands					0	2035	2035	1515	1244	1141	966	1048
Drumcondra					275	1097	1372	1413	1249	1154	1135	1176

Route	DART North Bound	DART South Bound	Rosslare to Dundalk	Dundalk to Rosslare	Bray to Sligo	Sligo to Bray	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Broombridge					319	199	518	440	318	257	215	207
Ashtown					795	161	956	750	787	773	665	660
Navan Road Parkway					232	24	256	303	253	222	202	204
Castleknock					843	158	1001	727	784	694	817	793
Coolmine					1313	321	1634	1527	1682	1406	1317	1392
Clonsilla					1088	431	1519	1477	1470	1126	1202	1173
Hansfield					207	8	215	184	148	101	82	
Dunboyne					325	1	326	228	202	211	138	185
M3 Parkway					427	0	427	344	283	215	231	231
Leixlip Conf.					509	102	611	556	473	436	428	480
Leixlip Louisa Bridge					809	71	880	1097	933	1039	870	932
Maynooth					2901	191	3092	2567	2906	2276	2148	2242
Kilcock					281	24	305	213	258	236	232	225
Enfield					204	19	223	141	144	142	148	145
Mullingar					479	104	583	516	558	564	407	507
Edge'stown					134	22	156	101	149	122	145	169
Longford					267	74	341	292	374	269	212	194
Dromod					93	25	118	96	138	120	86	94
Carrick-on-Shannon					123	47	170	118	140	94	135	122
Boyle					57	40	97	68	70	57	69	100
Ballymote					60	45	105	110	126	64	108	90
Collooney					81	9	90	75	92	74	84	58
Sligo					367	0	367	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 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Grand Canal Dock	227	0					227					
Pearse	495	13					508					
Tara Street	165	22					187					
Connolly	470	135					605					
Drumcondra	200	159					359					
Heuston	11596	0					11596	10007	9753	9273	8686	8515
Parkwest & C'y Orchard	180	291					471	247	265	171	114	140
Clondalkin / Fonthill	62	103					165	64	48	51	48	46
Adamstown	23	268					291	122	114	97	98	107
Hazelhatch & Celbridge	35	512					547	290	276	260	258	325
Sallins Naas	99	1295					1394	1128	1018	1006	908	943
Newbridge	185	1193					1378	1169	1105	1034	999	973
Kildare	286	588					874	739	662	731	733	616
Athy	119	358					477	466	510	408	371	461
Carlow	150	538					688	735	637	582	617	524
M'asterevin	4	80					84	70	71	82	64	56
P'tarlinton	103	583					686	615	705	754	587	528
Portlaoise	126	780					906	793	745	737	583	418
Ballybrophy	6	133			0	24	163	131	139	108	129	129
Templemore	26	61					87	84	80	90	89	81
Thurles	222	389			0		611	574	456	578	463	458
Limerick Junc	201	752			43	796	1792	1488	1552	1435	1263	1571
Limerick	0	259			661	172	1092	1203	1167	1000	849	1192
Charleville	17	66					83	67	82	91	185	79
Mallow	312	407	487	338			1544	1270	1251	1276	1460	1404

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Cork	0	1795	2227	0			4022	3811	3354	2764	3322	3239
Muine Bheag	21	134					155	166	162	153	174	121
Kilkenny	98	401					499	348	285	404	346	263
T'mastown	1	60					61	65	48	41	55	36
Waterford	0	435			0	25	460	373	421	472	414	437
Tullamore	127	419					546	446	678	447	327	412
Clara	32	93					125	119	117	82	75	41
Athlone	305	454					759	589	637	604	575	427
Ballinasloe	119	81					200	151	182	148	69	119
Woodlawn	39	21					60	38	43	25	18	26
Attymon	20	0					20	9	7	8	45	11
Athenry	171	177			35	140	523	368	422	297	133	241
Galway	0	1416			404	0	1820	1199	1162	778	1125	884
Roscommon	24	109					133	75	74	83	84	69
Castlerea	6	63					69	67	63	66	57	61
Ballyhaunis	13	55					68	59	70	48	45	52
Claremorris	7	87					94	95	89	63	128	82
Castlebar	5	173					178	150	79	103	110	128
Westport	0	137					137	101	133	123	124	118
Manulla Junc	115	99					214	151	123	69	15	90
Foxford	5	16					21	23	7	-	21	18
Ballina	0	93					93	62	59	-	72	80
Banteer	0	10	11	24			45	30	22	17	34	26
Millstreet	2	19	14	35			70	38	60	52	34	48
Rathmore	1	8	14	22			45	40	45	33	53	34
Killarney	4	58	30	257			349	308	238	254	328	266
Farranfore	0	12	2	22			36	29	36	24	33	25
Tralee	0	59	0	199			258	223	268	288	405	216

Route	Heuston North Bound	Heuston South Bound	Cork West Bound	Cork East Bound	Region North Bound	Region South Bound	Total 2017	Total 2016	Total 2015	Total 2014	Total 2013	Total 2012
Littleisland			97	471			568	423	378	215	315	288
Gl'thaune			44	215			259	239	246	136	207	196
C'twohill			30	101			131	137	92	93	100	81
Midleton			0	536			536	583	465	488	495	456
Fota			6	20			26	18	9	11	81	30
Carrigaloe			6	20			26	37	13	24	32	41
Rushbrooke			6	160			166	194	180	124	146	204
Cobh			0	500			500	623	455	396	517	492
Sixmilebrdg					26	20	46	55	30	54	28	41
Ennis					184	56	240	211	151	273	199	229
Gort					4	13	17	25	12	17	9	11
Ardrahan					6	2	8	2	8	12	6	3
Craughwell					9	21	30	17	14	28	10	15
Oranmore	52	45			16	47	160	89	73	54	22	-
Roscrea					5	5	10	5	3	5	7	1
Cl'jordan					3	2	5	9	9	5	5	4
Nenagh					40	5	45	15	17	11	5	2
Birdhill					1	7	8	4	10	8	2	2
C'leconnell					2	5	7	5	5	3	2	6
Carrick-on-Suir					5	3	8	6	-	13	4	7
Clonmel					10	18	28	18	17	29	25	46
Cahir					3	5	8	11	2	11	11	10
Tipperary					5	2	7	11	10	17	7	13

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 Rail Car)	640	Seats + Standing Accommodation
8 x 29000	(8 Car Commuter Rail Car)	1280	Seats + Standing Accommodation
1 x 3ICR	(3 Car InterCity Rail Car)	190	Seats
1 x 6ICR	(6 Car Premier Class InterCity Rail Car)	376	Seats
1 x 6HCR	(6 Car High Capacity InterCity Rail Car)	406	Seats
7 x MkIV	(7 Car Mk IV Set)	348	Seats
7 x DD	(7 Car De Dietrich Set)	358	Seats

Appendix D:

Phoenix Park Tunnel Services

Service
06:14 Newbridge - Grand Canal Dock
06:50 Hazelhatch - Grand Canal Dock
07:00 Newbridge - Grand Canal Dock
07:20 Newbridge - Grand Canal Dock
07:25 Grand Canal Dock - Hazelhatch
07:49 Grand Canal Dock - Hazelhatch
08:10 Grand Canal Dock - Newbridge
08:10 Hazelhatch - Grand Canal Dock
08:35 Hazelhatch - Grand Canal Dock
09:12 Newbridge - Grand Canal Dock
15:10 Newbridge - Grand Canal Dock
15:55 Hazelhatch - Grand Canal Dock
16:20 Grand Canal Dock - Hazelhatch
16:40 Grand Canal Dock - Newbridge
17:00 Grand Canal Dock - Hazelhatch
17:00 Hazelhatch - Grand Canal Dock
17:25 Hazelhatch - Grand Canal Dock
17:28 Grand Canal Dock - Newbridge
17:55 Hazelhatch - Grand Canal Dock
17:57 Newbridge - Grand Canal Dock
17:58 Grand Canal Dock - Hazelhatch
18:16 Grand Canal Dock - Newbridge
18:40 Grand Canal Dock - Hazelhatch
19:13 Grand Canal Dock - Hazelhatch

For Further Information:

Media enquiries:

Dermot O’Gara

T: +353 0 1 8798346

National Transport Authority

Dún Scéine

Iveagh Court

Harcourt Lane

Dublin 2

D02 WT20

Document Title: Crowded Control Generic Risk Assessment		Prepared by: [REDACTED]	Checked By: [REDACTED]	Initial Release Date: 30/10/2015	Reviewed & Updated on <- by: 25/07/2017	Checked by: 25/07/2017							
Hazard ID	Date Hazard identified	Asset/Process/System Procedure	Hazard	Consequence	Current Safety Measures	PRIOR RISK L x S = R	Additional Safety Measures	RESIDUAL RISK L x S = R	Risk Owner	Status	Due Date	Haz reviewed on:	Evidence/Ref doc
1		Crowd management at Stations	No Crowd Control Plan in place.	Fatal ties or multiple severe injuries.	Crowd control plans in place in accordance with Ops.SMS 2.3. Monitoring in place.	2 4 Tolerable (6)			Station Manager	Controlled	as per local RA		
2		Crowd management at Stations	Signage not appropriate resulting in confusion and unnecessary crowd build up.	Fatal ties or multiple severe injuries.	Appropriate signage must be provided as necessary with consideration given to the requirements as per Ops.SMS 2.3. Monitoring in place.	2 4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
3		Crowd management at Stations	Major/Rare Events - Insufficient Information & Communication	Fatal ties or multiple severe injuries.	Staff at stations required to use technical systems for crowd control must be competent in the operation of the system used. Planning for major/rare events to include criteria as set out in Ops.SMS 2.3. Crowded control plans in place. Monitoring in place.	Invalid L or S entry		Invalid L or S entry	Station Manager	Controlled	as per local RA		
4		Crowd management at Stations	Congestion due to Train Service Changes.	Fatal ties or multiple severe injuries.	The safe operation of stations must be considered when train services are changed in accordance with Ops.SMS 2.3. Crowded control plan in place. Monitoring in place.	1 4 Negligible (4)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
5		Crowd management at Stations	Congestion due to Train Service Changes. - Excessive Passenger Loading.	Fatal ties or multiple severe injuries.	In accordance with Ops.SMS 2.3 Where reasonably practicable the following measures are utilised: Alternative station access and routes, Utilisation of additional services, Station Announcements, Additional stopping patterns. Media Announcements. Crowded control plan in place.	1 4 Negligible (4)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
6		Crowd management at Stations	Failure in Incident Management.	Fatal ties or multiple severe injuries.	Crowd control plans in place in accordance with Ops.SMS 2.3 detailing arrangements for: a) Providing additional staff to provide information and to control increased numbers of passengers at stations directly or remotely involved through alterations to train schedules and events in the vicinity of the station(s). b) Evacuation from trains or stations with details of how this will be carried out in an orderly manner to avoid overcrowding during the evacuation c) Preventing overcrowding in the area to which people are evacuated d) Preventing people from entering the evacuated areas until it is safe to do so.	2 4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
7		Crowd management at Stations	Failure to review the Effectiveness of the crowd management Plan - lessons not learnt resulting in incident recurring.	Fatal ties or multiple severe injuries.	In accordance with Ops.SMS 2.3 After a crowd control incident or planned events a review shall be carried out to discuss the effectiveness of the Crowd Management Plan, to identify and document any lessons learned and to initiate any corrective actions for the future. After every such review, the findings will be copied and forwarded to the RU Safety Manager who will address relevant issues	1 4 Negligible (4)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
8		Crowd management at Stations	Staff not competent.	Fatal ties or multiple severe injuries.	Staff training, staff briefed on crowd control plans and emergency procedures. Emergency exercises carried out. Monitoring in place.	2 4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
9		Crowd management at Stations	Invalid tickets/tickets not recognised at point of entry/exit. Passengers presenting invalid tickets at barriers, or otherwise delaying at barriers and therefore causing a blockage at a particular gate.	Single Fatal ty or Severe Injury.	Should congestion occur barriers will be set to run free as necessary. Audible warning for failed or invalid ticket. Signage at points prior to exiting to increase customer awareness; additional signing utilised as required to direct crowd flow. Staff assistance provided as necessary. Crowded control plan and mon toring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
10		Crowd management at Stations	Failure of validators may adversely affect entry to exit from platforms resulting in crushing incident.	Single Fatal ty or Severe Injury.	Design of validators is such that they will fail to safe. Addi tional staff deployed as necessary. Crowded control plan and monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
11		Crowd management at Stations	Insufficient ATG's to cater for the maximum number of trains that could arrive co-incidentally at the station resulting in a heavy flow of passengers at once.	Fatal ties or multiple severe injuries.	An analysis is undertaken to determine whether there would be sufficient ATGs to cater for the maximum number of trains (of maximum possible length) that could arrive co-incidentally at the station and discharge al l of their passengers with the ATGs in operational mode so that no person has to wait more than 5 minutes to pass through the ATGs. At those sta tions where the analysis determines there would not be enough ATGs, addi tional control measures to be implemented. Monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
12		Crowd management at Stations	Limited space for gates, leading to congestion at peak periods around 'pinch points' resulting in crushing incident.	Fatal ties or multiple severe injuries.	Gate space designed to facilitate safe throughput for the passengers in accordance with the required levels for the location. Monitoring of passenger levels, increase gate space where reasonably practicable. Station access, Stopping patterns and platform arrangements to be considered when comp ling the crowd control plan. Platform alloca ion plan will be utilised to reduce excessive build up of persons. Mon toring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
13		Crowd Management at stations.	Lack of resources/staff to adequately control crowd resulting in crushing incidents.	Fatal ties or multiple severe injuries.	Station Manager to take account of previous experience in rela ion to special events to ensure that resources are adequate. A crowd control management team will be in place and will mon itor for resource/staffing issues. Additional staff deployed as required. External assistance will be agreed with agencies prior to the event. Crowded control plans/emergency plans and monitoring in place.	2 4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
14		Crowd Management at stations.	Special events and congestion at ATG's.	Single Fatal ty or Severe Injury.	Extensive testing and trialling ensures that a passenger throughput of 30 ppm is achievable. Design of the validators is such that they should reduce potential bottlenecks. Design allows for quick switch to 'free-flow' operation to prevent unsafe levels of congestion. Should congestion occur barriers will be set to run free. The ATG will restrict access to the platforms. Consideration will be given to restricting access to the station itse lf. The ATGs will restrict access to the platforms. Station Manager to be aware of dates for likely events and to apply crowd control plan. Monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
15		Crowd Management at stations.	Poor Underfoot Conditions – Slip, trip, fall	Single Fatal ty or Severe Injury.	Ready for service checks in operation. Trip hazards removed and immediate clean up of any spillage.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
16		Crowd Management at stations.	Installation of additional ATG's adding to congestion/crowding.	Fatal ties or multiple severe injuries.	Signage utilised where necessary. Cordon off areas as necessary. Monitoring in place.	1 4 Negligible (4)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
17		Crowd Management at stations.	Access/Egress / Blocked Entry / Exit Routes	Fatal ties or multiple severe injuries.	Entry and exit routes will be clearly designated and will be kept free of obstructions. Signage in place and additional signage as necessary to direct crowd flow, Announcements as necessary to clear areas. Mon toring in place.	1 4 Negligible (4)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
18		Crowd Management at stations.	Service Provision-Overcrowding of Services.	Fatal ties or multiple severe injuries.	Service provision will be planned to faciliate special events. Access to stations will be monitored to prevent overcrowding. Provision of alternative services e.g. step orders issued as required and bus transport where necessary. Monitoring in place.	2 4 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
19		Crowd Management at stations.	Large numbers of passengers on platforms resulting in unacceptable levels of congestion on platforms exceeding platform capacity.	Fatal ties or multiple severe injuries.	No Defined Platform Numbers Displayed 20 mins prior to departure which will limit number of passengers on platform at any one time. Should congestion occur on platforms, gates will manually be set to egress. Signperson advised to delay arrival or direct train to a tentative platform. Increased levels of supervision in any known peak periods by sta ion staff. Platform allocation plan will be uti lised to reduce excessive build up of persons. Crowded control plan and mon toring in place.	4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
20		Crowd Management at stations.	Customers causing congestion around validators restricting passenger flow of passengers joining other trains.	Single fatal ty or severe injury	Dedicated waiting/queuing areas to be utilised. Dedicated egress from platforms to validators to be utilised. Station announcements to clear congestion, signage in place and additional signage as necessary to direct crowd flow. Should congestion occur barrier will be set to run free. Additional staff to be deployed as necessary. Crowded control plan and monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
21		Crowd Management at stations.	Congestion due to cross flows at ATG's resulting in crushing incident.	Single Fatal ty or Severe Injury.	Configuration of the ATGs to be such that they reduce cross flows so that any cross flows occur in 'open areas' rather than 'confined areas'. Crowded control plans in place. Monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
22		Crowd Management at stations.	Entering/Exiting station/Validators, Large numbers of passengers entering/exiting station at once.	Fatal ties or multiple severe injuries.	Pla form allocation plan will be utilised to reduce excessive build up of persons. Distribution of incoming trains in a manner that reduces crowd density to as low as is reasonably practicable. In the event of excessive build up of passengers at va lidators they will be put to open position. Staff deployed to pinch points to control access/egress where required. The numbers of passengers on platforms will be constantly monitored on the ground and by CCTV. Crowded control plan and crowd management team in place. Station announcements uti lised as necessary. Signage utilised as necessary. Monitoring in place.	2 4 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
23		Crowd Management at stations.	ATG becomes defective and remains in closed position resulting in congestion/crushing incident.	Single Fatal ty or Severe Injury.	The ATG's are designed to fail to safe. Alternative arrangements are Opening of gates, introduction of alternative queuing plan, additional staff. Crowded control/emergency plans in place. Monitoring in place.	1 3 Negligible (3)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
24		Crowd Management at stations.	Access/Egress / Large numbers of passengers using the sta tion	Fatal ties or multiple severe injuries.	Platform allocation plan will be uti lised to reduce excessive build up of persons. Distribution of incoming trains in a manner that reduces crowd density to as low as is reasonably practicable. In the event of excessive build up of passengers at va lidators they will be put to open position. Staff deployed to pinch points to control access/egress where required. The numbers of passengers on platforms will be constantly monitored on the ground and by CCTV. Station announcements utilised as necessary. Signage utilised as necessary. Crowded control plan/emergency plans in place. Mon toring in place.	2 4 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
25		Crowd Management at stations.	Access/Egress Person struck by road vehicle	Severe injury/single fatality	Traffic flow into the station will be monitored. Set down area will be closed off if it presents a risk to safety of passengers. Defined speed limit in place. Station car parks will be restricted to a risk to passenger safety occurs. Announcements and Signage utilised where necessary. Crowded control plan/emergency plans in place. Mon toring in place.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
26		Crowd Management at stations.	Train Failure/Degraded Working	Severe injury/single fatality	Passenger access to the station will be controlled/staggered until such time as an auxiliary train has been provided. Staff to make regular announcements to direct passengers and promote safe behaviour. Advise Gardaí on duty of delays and relay updated information to them as necessary. Contact CTC and advise them of the situation. Crowded control/emergency plans in place. Monitoring in place.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
27		Crowd Management at stations.	Accessing platforms, Large numbers of passengers a lowed onto platform resulting in crushing, person struck by train/Fall from Platform	Single Fatal ty or Severe Injury.	Ye low line painting advising passengers to keep behind the line. Signage in place. PA announcements where necessary advising passengers to stay behind the yellow line and that trains will not depart until they are on board. Passenger numbers on platforms monitored on the ground and via CCTV from booking office and access to platforms will be halted if required. In the event of excessive build up of passengers at va lidators they will be put to open position. Crowded control plan and crowd management team in place. Monitoring in place.	2 3 Tolerable (6)		Negligible (4)	Station Manager	Controlled	as per local RA		
28		Crowd Management at stations.	Persons using station under the influence of alcohol	Minor injuries	Security staff to be deployed where required to mon toring passenger behaviour. Gardaí assistance for major events/disruption will be uti sed where required. "By law " 16. No person in a state of intoxication shall enter or remain upon the railway or in any vehicle and no person who is in an unfit or improper condition to travel by passenger train or whose dress or clothing is in a condition liable to soil or injure the linings or cushions of any carriage, or the dress or clothing of any passenger, shall enter or remain in any lift or vehicle". Persons not fit to travel due to consumption of alcohol will be refused travel. Restriction on the sale of alcohol on trains/ at sta ions where necessary. "At risk behaviour at train stations" safety poster guidance for sta l to be displayed locally for staff usage. Training and monitoring in place.	4 2 Tolerable (8)		Tolerable (8)	Station Manager	Controlled	as per local RA		
29		Crowd Management at stations.	Assaults on staff/Anti-social behaviour	Minor Injury	Front line staff trained in conflict resolution. Security staff will be deployed where required to monitor passenger behaviour Gardaí assistance for major events/disruption will be uti zed. Signage in place. Monitoring in place.	4 2 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
30		Crowd Management at stations.	Passenger falling ill/being injured	Minor Injuries	Emergency service/Ambulance service assistance for major events/disruption will be utilized where required. First aid materials available in station and trained first aiders on s te. First aid facilities pre-checked prior to event to ensure they are adequate. Emergency services details contained in local emergency plans. Gates will be opened to facilitate access for emergency services. Monitoring in place.	4 2 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
31		Crowd Management at stations.	Station Evacuation; passengers may get crushed as people try to exit through validators using their tickets.	Fatal ties or multiple severe injuries.	The operator will be able to open all gates in the case of major incidents/emergencies which will allow for free flow of passengers. The va lidators are linked to the alarm system. Design of validators is such that they will fa il-safe (to open position). Local emergency/crowd control plans in place. Additional staff deployed as necessary. Local emergency/crowd control plans in place. Additional staff deployed as necessary. Monitoring in place.	2 4 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
32		Crowd Management at stations.	Station equipment preventing safe passage throughout the station.	Single Fatal ty or Severe Injury.	A1 equipment to be pos itioned to facilitate safe access/egress. Crowded control plan and monitoring in place.	2 3 Tolerable (6)		Invalid L or S entry	Station Manager	Controlled	as per local RA		
33		Crowd Management at stations.	Failure to adequately respond to an emergency.	Fatal ties or multiple severe injuries.	Scenario based local emergency plans in place and sta l briefed on same including evacuation procedures. Staff training with regard to emergency procedures. Emergency Response Handbook in place for response to major emergencies. Emergency exercises undertaken and lesson learnt recorded. Regular and appropriate evacuation exercises to test crowd control movements in accordance with Ops SMS 2.3. Staff supplied with a copy of the train evacuation booklet. Additional staff deployed as necessary. Monitoring in place.	2 4 Tolerable (6)		Negligible (4)	Station Manager	Controlled	as per local RA		
34		Crowd Management at stations.	Weather Con dions, Staff exposed to inclement or hot weather resulting in heat, cold, stress or dehydration.	Minor Injuries	Staff supplied with appropriate Personal Protective Equipment, Sun Creams and access to water facilities. Monitoring in place.	2 2 Negligible (4)		Negligible (4)	Station Manager	Controlled	as per local RA		
35		Crowd Management at stations.	Weather Con dions, Platforms and access routes not treated to take account of ice or snow.	Single Fatal ty or Severe Injury.	Staff supplied with appropriate Personal Protective Equipment, Sun Creams and access to water facilities. Monitoring in place.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
36		Crowd Management at stations.	Weather Con dions high winds - structures/fitings/Signage not sufficiently secured.	Single Fatal ty or Severe Injury.	Where high winds are forecast structures/fitings and Signage to be checked to ensure they are sufficiently secured.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
37		Crowd Management at stations.	Train dispatch; customer falls between train and platform	Single Fatal ty or Severe Injury.	Staff trained in train dispatch including how to stop a train in an emergency. Train Dispatch. Staff briefed on and receive a copy of the Professional Train Dispatchers Handbook. Passengers instructed to stay behind the yellow line. Mind the gap announcements to be made. Additional staff deployed as necessary. Crowded control plans in place. Signage in place. Monitoring in place.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled	as per local RA		
38		Crowd Management at stations.	Mobility/visually hearing impaired passengers	Single Fatal ty or Severe Injury.	Customer service staff will provide assistance as required. Tactile in place to aid visually impaired customers in locating platform edge. Train Dispatch. Staff briefed on and receive a copy of the Professional Train Dispatchers Handbook. Monitoring in place.	2 3 Tolerable (6)		Tolerable (6)	Station Manager	Controlled			

Request – All relevant documentation relating to:

- Specific legislation or regulations which address or intend to address maximum or safe occupancy or safe Working loads of carriages used for DART services.

The Railway Safety Act 2005 is the national legislation governing railway safety, there is no legislation or regulations to specifically address capacity of trains.

- Maximum occupancy of the different types of carriages used for DART services.

There is no legislation relating to the maximum capacity of different types of DART rolling stock.

- Records (dates, locations, findings where they exist) of DART occupancy monitoring by Irish Rail.

No specific information found in correspondence to the Commission for Railway Regulation or on file.

Attached is Census done on 16th November 2017. Report produced on behalf of the National Transport Authority.

- Records (dates, locations, findings where they exist) of DART occupancy monitoring by any third parties including statutory bodies.

No specific information found in correspondence to the Commission for Railway Regulation or on file.

Attached is Census done on 16th November 2017. Report produced on behalf of the National Transport Authority.

- Records which pertain to decisions determining the capacity to allocate to individual scheduled DART services.

Attached is Census done on 16th November 2017. Report produced on behalf of the National Transport Authority. Capacity on DART services are based on census results.

- Records of any cost benefit analysis and / or risk assessment pertaining to the allocation of capacity to individual DART services.

Please find attached crowd control risk assessment which is live on Ops risk register.

- Records of correspondence between Irish Rail and the Health and Safety Authority since January 2014.

We had had no correspondence from the HSA since January 2014 relating to capacity or crowding issues.

Freedom of Information Request:
Schedule of Records for IE_FOI_192 : Summary for Decision Making

Record No.	Date of Record	Brief Description	No. of Pages	Decision: Grant/Part Grant/Refuse	Section of Act if applicable	Record Edited/Identify Deletions
1		Crowd Control Risk Assessment	1	Part Grant	S37	Personal information
2		FOI_192_DART Capacity	1	Grant		
3		National_Heavy_Rail_2018_V8_Web	56	Grant		

Signed



Freedom of Information / Data Protection Executive