

# PUBLIC TRANSPORT CAPACITY ASSESSMENT

BLAKE'S & ESMONDE MOTORS SITE,  
STILLORGAN, CO DUBLIN.

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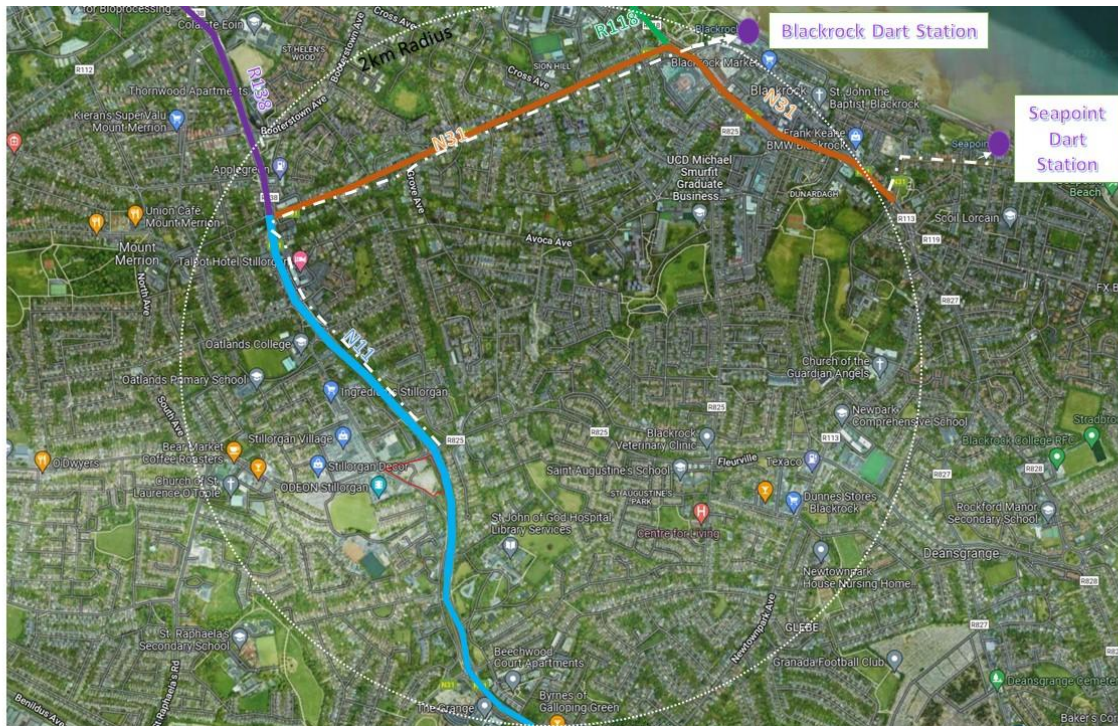
## **1. Introduction.**

Cairn Homes Properties Limited intend to apply to An Bord Pleanála for planning permission for a strategic housing development (SHD) at the former Blake's and Esmonde Motors site, Stillorgan, Co Dublin. This report, by Derry O'Leary, Transport Consultant, has been commissioned by Cairn to estimate the available spare capacity in the current public transport network. The author, a Civil Engineer, qualified as a Traffic Engineer and has over 40 years experience in both the public and private sector. He has spent nearly 30 years in both planning and operations in Dublin Bus. This report should be read in conjunction with the Traffic and Transport Assessment (TTA) undertaken by Waterman-Moylan's (MW) on the subject site.

## Site Details

The subject lands comprise a substantial brownfield site in Stillorgán District Centre occupying the former Blakes and Esmonde Motors lands. The site area is approximately 1.416 hectares and is situated at the junction of the N11 and the Lower Kilmacud Road. The site is bound by the Lower Kilmacud Road to the north, The Hill to the south and west and the N11 to the east.

The site benefits from excellent connectivity, located approximately 7km from Dublin City Centre and is well served by public transport links. A high frequency Quality Bus Corridor (QBC) runs along the N11 linking Stillorgán to Dublin City Centre and Bray and Dún Laoghaire to the south.



The site is located opposite the former Leisureplex site currently being redeveloped and to the north west of Stillorgán Village Centre. A number of small single and two storey former cottages now occupied by retail/ commercial uses are located along the Hill to the south and west of the site. Stillorgán Shopping Centre is located further to the west of the site and is a key focal point in Stillorgán located on the junction of Lower Kilmacud Road and Old Dublin Road. The centre accommodates a large number of retail operators, both convenience and comparison, and is supplemented by a range of services and facilities, including banks, cafes and restaurants.

## **2. Background to Dublin's Public Transport Network**

2.1 While the customer-facing bus network serving the Greater Dublin Area has been relatively stable in recent years, the organisation of these operations has undergone significant structural change in the last decade or so. The National Transport Authority (NTA), established in 2009, is now the public transport Regulator. The overall planning of bus and rail services nationwide has moved from the CIE Group of companies to the NTA. Responsibility for the network and individual route designs, frequency, fares and timetable details, etc. now lies solely with the Regulator. Under this new regime even the smallest modification to any bus route or timetable must be agreed with the NTA in advance of implementation. The NTA also allocates State funding to meet the Public Service Obligation (PSO) benefits provided by the public transport network. The NTA also approves and allocates licences to commercial bus operators, subject to agreed routes, timetables and conditions. Irish Rail operations also come within the ambit of the NTA, but these services are not relevant here.

2.2 In 2015, the NTA commenced a fundamental review of the efficiency and effectiveness of the Greater Dublin Area's (GDA) bus network, branded as Bus Connects. In parallel, it also began a Bus Market Opening (BMO) process to open the Irish bus market to competition. These are now briefly outlined below.

### **3. Bus Market Opening (BMO)**

3.1 In order to open the Irish bus market to competition to more than the incumbent State-owned operators (Dublin Bus and Bus Eireann) the NTA first tendered a package of orbital bus routes operated by Dublin Bus in 2016. The group of 24 routes, and total fleet of 125 buses, represented 10% of the bus market in the Greater Dublin Area (GDA). Following the competitive tendering process, the Go-Ahead Group (a largely UK-based bus and rail operator with large overseas businesses) was selected to operate these routes. The seamless transfer of routes, in stages, from Dublin Bus to Go-Ahead Ireland (GAI) took place over a 12-month period in 2018/2019. The switch was barely noticed by the general public and passengers alike, as the new operations were introduced under the NTA's Transport for Ireland (TFI) brand. The bulk of the routes operating on the N11 near this site are still operated by Dublin Bus but orbital route 75/A, which passes this site on two sides, is operated by Go-Ahead Ireland, also on behalf of the NTA.

3.2 All PSO operators, whether commercially or State-owned, operate bus services under contract to the NTA and must meet a set of key performance indicators (KPIs) covering reliability, timekeeping and vehicle maintenance. Similar standards are expected of all contracted operators and failure to meet the targets will result in fines or contract cessation. Both the performance standards expected of contractors and the level of fines exacted for not meeting those standards are in the public domain.

3.3 The NTA owns the fleet deployed by GAI to operate its routes in the GDA. It appears that, over time, the entire public transport fleet will be owned by the NTA as the fleet is renewed and the Authority obtains the capital funding to buy and replace buses for use in the PSO networks across Ireland. The next batch of buses ordered by the NTA for the Dublin urban market are fully-electric traction. The delivery of the first of these EV buses is expected in 2024.

## 4. Bus Connects Project Overview

4.1 This fundamental re-design of the urban bus network in the Greater Dublin Area (GDA) was commenced by the NTA in 2015. In tandem with the now agreed service re-designs, the key bus route alignments, including the very successful N11 QBC, adjacent to the site, will be upgraded to radically enhance bus priority measures. This investment is required to protect the enhanced operation from the adverse impacts on reliability caused by traffic congestion. These Core Bus Corridors (CBCs), along which the high-frequent Spine routes will run, and the revised routes themselves have been through a series of extensive consultation phases with the general public and key stakeholders. Local Authorities have been directly involved in both the bus route and CBC design process. The final route network, modified following the review of thousands of submissions by members of the public and key stakeholders, has now been agreed. The CBC proposals, a key part of the NTA strategy, will shortly enter the State's planning process. The Blake's site is on Corridor 10 (Bray to City Centre) in Figure 1 below.

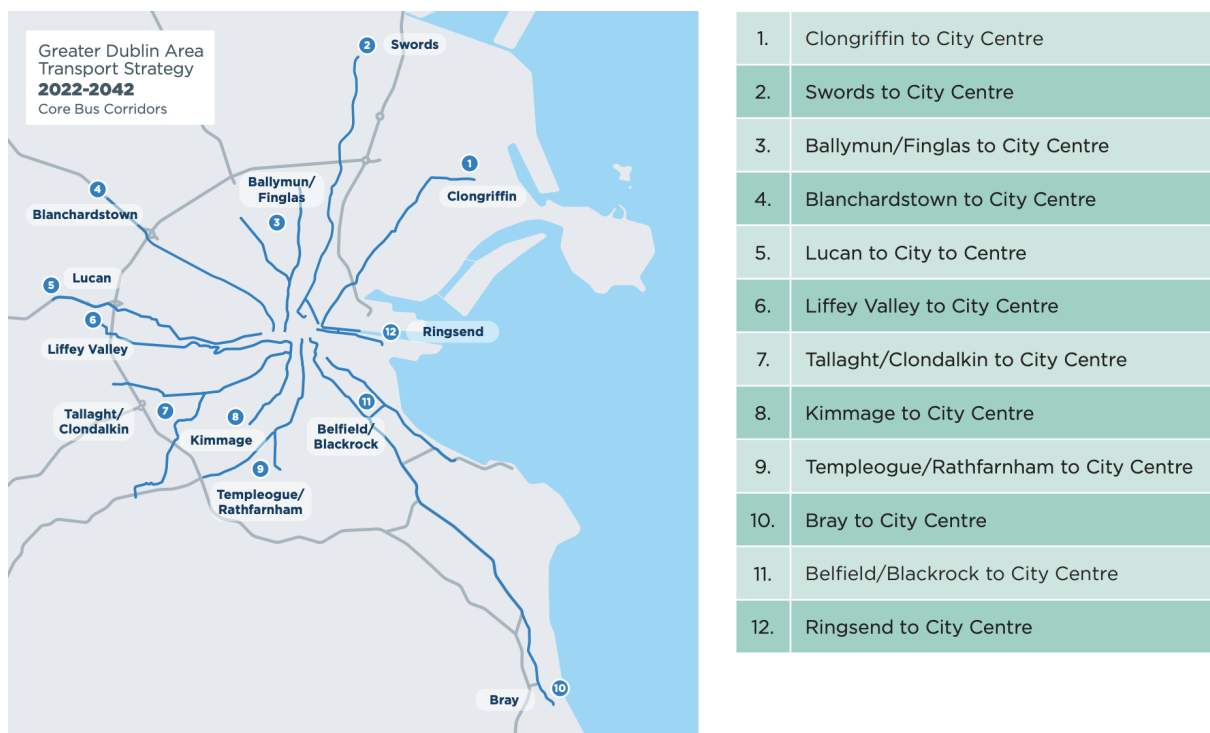


Figure 1. NTA's Core Bus Corridors (CBCs). Stillorgan Road is on corridor 10.

4.2 Phased implementation of new Spine routes has started. To date, only two of the phases required to modify the bus network in the Greater Dublin Area have been launched. The C-Spine and H-Spine changes have been introduced in parts of the west and north suburbs of Dublin. Further phases have been designed and planned but will take a number of years to implement. The whole network of services is expected to be completed by 2024. No planned Bus Connects changes to the bus services on the N11 corridor have yet taken place, and the specific bus route changes earmarked for the N11 corridor are outlined later in section 7. The timescale for the implementation of the CBC corridors is unclear at this point. The existing Stillorgan Quality Bus Corridor (QBC) already functions extremely well in protecting radial citybound bus services from congestion and ensuring reliable journey times in both the peak and off-peak periods.



## **5 Existing Public Transport Network Serving the Blake’s Site**

5.1 The Blake’s site is extremely well-located immediately adjacent to the existing very high frequency/high capacity Stillorgan (N11) QBC corridor as well as the orbital route (no. 75/75A). The key bus routes serving the site are best summarised in Table 1 below:

<b>Route</b>	<b>Origin</b>	<b>Destination</b>	<b>Peak Frequency (mins)</b>
<b>46A</b>	Dun Laoghaire	Phoenix Park	7-8
<b>145</b>	Ballywaltrim (Bray)	Heuston Station	10
<b>84X</b>	Newcastle/Kilcoole	City Centre	10 (peak only)
<b>155</b>	Bray Station	Ballymun (IKEA)	20
<b>7B</b>	Shankill	City Centre	15 (peak only)
<b>75/A</b>	Dun Laoghaire	Tallaght	30
<b>47</b>	Belarmine	City Centre	30
<b>46E</b>	Blackrock	City Centre	2 trips only
<b>7D</b>	Dalkey	City Centre	1 trip only
<b>84A</b>	Bray Station	Vincent’s Hospital	2 trips only
<b>116</b>	Whitechurch	City Centre	1 trip only
<b>118</b>	Kilternan	City Centre	1 trip only

Table 1. Routes on N11, Northbound AM Peak.

The Stillorgan Road QBC, on the N11, is one of the major bus corridors in Dublin. It has a combination of high bus patronage and significant peak traffic congestion, even if the level of each has diminished somewhat post Covid-19. Two high frequency routes, 46A and 145, dominate bus flows here as Table 1, above, and survey data below show. Other routes with significant bus patronage include the 155 and, in the peak only, 84X. The combined strength of these four routes is reflected in the surveys. They are the backbone of the bus service along virtually the entire length of the N11 QBC. Route 47 (from Belarmine, Stepside to City Centre) can be accessed from the site in Stillorgan village before it joins the N11 northbound. Similarly, route 75, an Orbital service between Dun Laoghaire DART Station and The Square, Tallaght,

operated by Go-Ahead, leaves the N11 as it passes the site and turns left to stop 4637 on Lower Kilmacud Road, which forms the northern boundary for the Blake's site. The minor route 75A variant provides a convenient link into Sandyford Industrial Estate/Business Park in peak periods. All of the remaining routes on the N11 are peak-only, minor variants of these or other routes, designed to meet very specific demands and access the QBC corridor at different points. Routes 7B, 7D and 46E access the N11 from Stillorgan Park Road (R825) at the Kilmacud Road Lower junction.

5.2 The key existing northbound bus stops on the N11 available to future residents of the Blake's site is stop 4727 on the Stillorgan by-pass. It is approximately 350m from the planned site entrance. The well located southbound stop number 4571, is opposite the site, just past the Stillorgan Park junction. Both N11 stops are well within acceptable walking distance of the site.

5.3 The frequency, quality and scale of bus services available to future residents at this location shortens the perceived walk distance. In modelling the behaviour of travellers, whether by car, bus or rail, traffic engineers and transport economists use the concept of "generalised cost" which uses the "value of time" in broadly determining modal split. The modellers break down the components of alternative possible trips into their constituent parts. In this instance it breaks down the overall bus trip into three basic components. Firstly, the walk to the target bus stop. Secondly, the wait time for the bus. Thirdly, the bus journey itself and, finally, the walk to the destination. The impacts of fares, etc. are ignored in this brief outline. Each element of the bus trip is assigned different weightings, depending on their relative attractiveness. While there is debate over the values of these weightings, extensive research has shown that travellers dislike both the walking and waiting elements of the journey more than the in-vehicle journey time. On this basis, the walk element is usually assigned a value somewhat greater than 1. The weighting assigned to waiting for buses typically has a higher value, normally 2 or greater. This reflects the degree of relative discomfort or uncertainty associated with the often unknown arrival time of the urban bus. The weighting value of the actual bus trip itself is close to 1 if it has a very predictable and repetitive journey time.

5.4 One outcome of this modelling based on behavioural research conducted over decades is that the trade-offs that travellers use in determining what mode they use can be assessed. In practice this means that the likelihood of commuters from the Blake's site using the buses on the N11 is extremely high for two reasons. Firstly, the bus frequency, especially to and from Dublin city centre, is very attractive and, secondly, average bus speeds are relatively high. The strong frequency results in a much lower weighting for the "wait element" of the journey. At the same time, the good bus speeds lower the "journey time" weightings. Collectively they overcome any possible negatives associated with any walks at either end of the journey. The outcome here is a "generalised cost" of travel that is much reduced by a combination of high bus frequency and fast, predictable QBC, and, in time, CBC, bus speeds. The benefits of bus travel on QBC corridors is further enhanced if high levels of congestion are also present, making travel by car even less attractive.

## **6. Public Transport Capacity Assessment**

6.1 The purpose of this analysis is to determine whether or not the demand for public transport, in this instance bus services alone, generated by developing the proposed site can be catered for by the existing bus services. A survey was undertaken (early March 2022) to demonstrate that the additional demand will not burden the existing levels of public transport services. More details in 6.3 below.

6.2 The demand profile for public transport services, like road traffic, is quite seasonal in nature. For example,

- Demand for bus and rail services, in general, is materially lower in the Summer and school holiday periods.
- Demand tends to be somewhat higher in the late Autumn and in the run up to the busy Christmas holiday. Surveying in the none-holiday weeks in the opening four months of the year, and early Autumn, represent a reliable indication of base-level pre-development expressed demand for transport.
- Demand also varies by day of the week, with traffic demand generally lower on Mondays and Fridays, with some exceptions. Public transport usage on Saturdays and Sundays (in particular) are materially lower than mid-week demand.
- Demand for travel varies throughout the standard weekday but morning peak- hour levels are shorter but higher than the corresponding evening peak flows.

In determining whether spare capacity is available to meet increasing demand from any development site it is best to undertake surveys and evaluate the mid-week morning peaks prior to the Summer period when schools are open.

## Bus Survey on N11 QBC

6.3 The nearest northbound bus stop to the proposed site, northbound towards Dublin, is stop 4727, located on the Stillorgan by-pass, roughly 150m past the junction with Lower Kilmacud Road. The survey was undertaken, mid-week, in the first week of March, 2022. Table 2 below shows the demand profile by time bands for the morning peak in question.

<b>Timeband</b>	<b>Bus Numbers</b>	<b>Passenger Nos</b>	<b>Average Passengers/Bus</b>
<b>07.00 - 07.15</b>	5	117	23
<b>07.16 - 07.30</b>	7	149	21
<b>07.31 - 07.45</b>	5 (4)	197	49
<b>07.46 - 08.00</b>	6	322	54
<b>08.01 - 08.15</b>	10 (9)	495	56
<b>08.16 - 08.30</b>	8 (7)	344	49
<b>08.31 - 08.45</b>	8 (7)	362	52
<b>08.46 - 09.00</b>	6	216	35
<b>Total</b>	55 (51)	2,202	43

Table 2. Bus numbers and passengers at Stillorgan Road (STOP 4727), AM peak hours..

In terms of the overall bus network this would be seen as a busy bus stop, with many passengers accessing the whole range of bus services here. This summary of bus passengers by 15 minute time band indicates that the peak hour at stop 4727 (c. 350m from the subject site) on the Stillorgan by-pass occurs between 07.45 and 08.45. The busiest period, in terms of passenger loadings, is shy of 500 passengers and occurs between 08.01 and 08.15. Overall patronage levels, from both observations on the day and the data above, were lower than anticipated. Buses passing this stop in this time band still have sizeable spare capacity (see table 3 below) and will deliver their customers to city centre destinations well in advance of a 09.00 start.

Route Number	Bus Numbers	Passenger Nos	Average Passengers/Bus	Spare Capacity %
46A	15	660	44	34
145	13	675	52	22
84X	8	338	42	37
155	5	217	43	36
7B	4	142	36	46
46E	2	42	21	69
7D	1	14	14	79
84A	1	15	15	78
116	1	48	48	28
118	1	50	50	25
133/X	3 (SDO)	0		
Wexford Bus	1 (SDO)	0		
<b>Total</b>	51	2202	43	36

Table 3. Surveyed passenger by Bus Route, Stillorgan Road (STOP 4727) Northbound

There are a total of 10 routes that passengers from the subject site can board at this stop. (Routes 47 and 75/A do not pass the survey stop). They all serve the city centre, with the larger routes extending across the city to other key destinations. For example, route 46A serves UCD, Trinity and DCU (Grangegorman) before terminating close to the Phoenix Park Route. Route 145 also serves the Liffey Quays and ends at Heuston Station. They are all double-deck routes, with a seated capacity of 67 passengers. The 133/X and Wexford Bus service are set-down only (SDO) as they are restricted in their licences with the NTA in that they are not permitted to pick up passengers beyond a certain point in their respective routes, beyond Loughlinstown Roundabout on the N11 in practical terms. So while they were surveyed, for the record, stopping at the surveyed stop, these two routes are not an option for city bound commuters.

6.4 The Stillorgan Road Quality Bus Corridor (QBC), on the N11, is one of the higher demand corridors in the city. And stop 4727 (c. 350m from the entrance to the application site) is one of the busiest northbound stops along the corridor. The survey shows that two high frequency routes, routes 46A and 145, dominate bus flows here. The 15 x 46A's observed over the course of the two hour survey represents an average frequency of 8 minutes. The equivalent 145 frequency was a bus every 9 minutes. Other significant routes, in capacity terms, include the relatively new

155 and, in the peak only, 84X. The strength of these four routes is reflected in the surveys where they account for over 80% of buses and nearly 86% of passengers. They are the backbone of the service along virtually the entire length of the N11 QBC.

The remaining routes serving this stop are minor variants of these (or other) services, designed to meet very specific demands. They access the QBC corridor at different points. For example, routes 7B, 7D and 46E access the N11 from Stillorgan Park Road (R825) at the Kilmacud Road Lower junction, approximately 150m from the survey bus stop. Many of the minor routes have only one bus in the morning peak, as Table 2 above demonstrates. Indeed, route 118 is a single trip, with no return service. Immediately adjacent to the subject site, on the Lower Kilmacud Road, route 75 (and its 75A variant) serve stop 4637. These orbital routes commence in Dun Laoghaire DART Station and traverse the same routing as the 46A as far as the junction of the N11 and R825, Lower Kilmacud Road. They continue west serving Sandyford Business Park (in the case of the minor variant 75A), Dundrum, Ballinteer, Rathfarnham and Tallaght. This 30 minute frequency service offers potential residents the option of travelling to many of the key Southside suburbs and businesses areas. Capacity is not an issue on this route at this location.

#### Spare Capacity of Existing Bus Routes

6.6 Bus capacity for the purposes of this analysis is taken, conservatively, as the seated capacity only, which understates the ultimate true capacity of buses by approximately 20%. Allowing for a proportion of standing patrons, double-deck bus capacity rises to 80 passengers/bus. The average spare seated capacity of routes serving the city over the survey period, from Table 2 above, is 36%. Only route 145 of the key routes has materially fewer seats available to passengers at this point. The highest average loadings occur in the 15 minutes periods either side of 08.00 hours at this stop. Over this 30 minute period average spare capacity reduced to half of the overall average at 18%. This still represents an excessive level of spare capacity. There was no evidence of any bus customers failing to board during the course of the survey. Some passengers were observed leaving specific buses pass by in order to board others following behind. This relates more to their likely ultimate destination around the city centre than any lack of capacity. The presence of the real-time passenger information (RTPI) units at the stop facilitate this trip management and increase satisfaction and customer confidence in the services generally.

The significantly higher levels of spare capacity on the minor routes that just accessed the N11 at this point offers additional opportunities for potential passengers from the subject site. The average spare capacity of the routes 7B, 7D and 46E combined is 57%. From the survey observations it is clear that these express routes (that act as feeders to the N11 QBC corridor) are experiencing much diminished patronage, most likely as a result of the impacts of Covid-19.

Observations of route 75 in the area also suggest no issues with capacity, in keeping with its busier radial routes past the site. Equally, buses in the opposite, southbound, direction serving Stop 4571 (directly opposite the subject site) have solid frequencies (such as on the key routes identified here). Southbound bus services have much lower patronage levels, except in the evening peak. Even then, the pm peak is materially lower than its am equivalent as the evening peak around Dublin is relatively well spread as most returning schoolchildren head home well ahead of the commuter peak.

#### Spare Capacity analysis post Generated Trips

6.7 It is important to determine what impact the potential new residents will have on the existing bus services at this location on the Stillorgan QBC. To assess the impact of the extra bus patronage from the Blake's site it is necessary to take a view on the likely number of bus trips generated by the development of the site. To do so this report draws heavily on the TRICS analysis undertaken by WM in their TTA for this site. Their review of the TRICS rates of other SHD sites in Dublin suggest in 10.2 (Table 13) and 10.3 (Table 14) that car traffic amounts to 96 persons trips out of the site in the AM peak. This traffic level relates to the 377 residential units and the associated other retail shops and facilities, such as creches.

Given the site's location

- Immediately adjacent to the existing high frequency Stillorgan QBC,
- the proposed Bus Connects network for the corridor (as outlined in section 7 below)
- the Core Bus Corridor (CBC) proposals for the N11 (see 4.1 earlier).
- the residential mix proposed

it is assumed, for the purposes of this analysis, that the level of generated public transport trips (bus only in this instance) equals those of car traffic. While optimistic in terms of increased modal



split for buses, this assumption gives rise to an additional 96 bus trips in the peak hour. This assumption might be viewed as somewhat onerous, but it does reflect the strategic value of the site's location on the future CBC.

6.8 The surveyed bus patronage in Table 3 has been amended to reflect the generated bus trips, based on the WM analysis, and allocated to the routes on the basis of the above assumptions. It is important to note that Table 5 below reflects passenger loadings of the “peak within the peak” and represents the busiest buses, with higher average carryings. The adjusted peak hour passengers by route, allocating the extra assumed generated trips, from the proposed development are reflected in Table 5 below:

Route	Bus Numbers	Passengers	Passengers/Bus	Spare Capacity %
46A	7	468	69	(3)
145	8	541	68	(1)
84X	6	290	48	28
155	3	185	62	7
7B	3	124	41	39
46E	2	48	24	64
116	1	51	51	24
118	1	53	53	21
<b>Total</b>	31	1,760	57	15

Table 5. AM Peak Hour Passenger Numbers, including Generated Trips, by Route on Stillorgan Road (STOP 4727) Northbound.

The peak hour in the raw survey data occurred between 07.40 and 08.40. A total of 31 bus trips were recorded in this peak hour, or a bus, on average less than every two minutes. Few corridors can match these high levels of service. The impact of the generated trips was to increase patronage on these buses by three+ passengers to match the targeted increase of 96 generated trips. Table 5 shows the new passenger numbers, post the generated trips allocated. The three busiest buses were allocated four passengers, the balance three each to achieve the planned total increase.

6.9 Prior to the extra allocation the 31 AM peak hour buses surveyed carried 1,664 passengers or 54 passengers per bus. Their combined revised total, with generated trips, increased to 1,760 as can be seen in table 5 above. This represented an increase of under 6% in patronage in the peak hour. The passengers per bus increased to 57 passengers as expected as three, on average, were allocated to each bus.

The data in Table 5 reflects two effects. The first is the “peak within the peak” in that only buses in the busiest hour have been included in the table. The passengers volume of the shoulders of this period are materially lower. The second impact is from the “optimistic” level of generated trips arising from the TRICS data. This adds three passengers per bus. The final column (% spare capacity) in Table 4 indicates that two of the key routes, services 46A and 145, are marginally above seated capacity of 67 per bus. While it varies by bus type, the full capacity of modern double-decker buses can be conservatively taken as 80 per bus. So while seated capacity is marginally exceeded, bus capacity is well able to cater for these loads. All the other routes have more than adequate capacity.

6.10 In examining the data in Table 5 it is crucial to bear in mind that the vast majority of passengers at the stop surveyed can use any of the buses to reach their destination. The buses all access the city centre, while some go even further. The arrival pattern of the buses is a mixture of all of these services, by design. This is why the most relevant level of spare seated capacity is the average over the hour, or 15% in Table 5 as the routes effectively function as one service to the city centre. The level of spare capacity of full buses, seated and standing, is appreciably greater. On this basis, even taking an arguably onerous assumption about modal split, the planned development at Blake’s site can be easily accommodated by the existing high capacity, high frequency bus network past the site.

Seen in broad summary form, Table 6 below indicates the theoretical capacity (seated and standees) of the 51 buses surveyed and the scale of the passenger loadings observed. The newly generated passengers are added to the original total.

Bus Nos.	Total Bus Capacity (51 buses x 80)	Passengers Surveyed	Passengers (+ Generated)	% Spare Capacity with Generated
51	4,080	2,202	2,298	44%

Table 6. Comparison of Surveyed Passengers to Total Bus Capacity in survey period.

Table 6 illustrates that, taken over the whole of the morning peak survey period, there is an excessive amount of spare capacity in the bus network, heading northbound, towards Dublin City Centre. The generated trips from the proposed development add only 4.4% to surveyed volumes. It is clear that including other adjacent sites that are being developed, in particular

- the Part VIII Scheme at St. Laurence's Park, Stillorgan, Co. Dublin and
- the nearby Leisureplex site now under construction,

that the increased number of bus passengers that these too will generate will not cause issues with overall bus capacity.

## 7. Bus Connects Project Implications

7.1 Figure 2 below shows the proposed Bus Connects network for the subject area. The NTA proposals are for the “E-Spine” with an upgraded QBC to Core Bus Corridor (CBC) status with higher levels of bus priority. The latest NTA Bus Connects Frequency Table shows two major routes forming the backbone of this key cross-city spine of services.

- **The E1** (from Ballywaltrim in Bray, via the N11 to the City Centre and North to Northwood in Santry), effectively replaces the existing route 145
- **The E2** (from Dun Laoghaire via the N11 to the City Centre and Charlestown in Finglas) mirrors much of the renowned 46A route.

The planned frequency for both routes is a bus every 8 minutes in the peaks, going to every 10 minutes off-peak during each weekday. This would represent a small increase on the observed volumes of buses indicated earlier.

The E-Spine routes above are supplemented by a number of “Peak-Only/Express Routes” that are seen as direct replacements for most of the other surveyed routes.

- **X1 and X2** are direct replacements in the peaks for the popular 84X services. They operate from Newcastle and Kilcoole in Co Wicklow via the E-Spine to the city centre with 9 AM peak services.
- **P11 and P12** are direct replacements for routes 7B and 7D respectively but with additional trips in each peak. The current 7B has only 5 AM peak departures but 7 under Bus Connects.
- **P13** is a new peak-only route from Kiltiernan via Stepside to UCD
- **P16** from Whitechurch to UCD is seen as a direct replacement for existing route 116
- **L13** is a local route from Kiltiernan to Ringsend via the N11 and UCD that replicates much of the existing route 47 (that currently routes via the Old Dublin Road in Stillorgan village) and does not serve the surveyed stop.
- Finally, the “Local Route” **L25** replaces the existing orbital route 75 service. The new route operates on a new, more orbital, alignment between Dun Laoghaire, the Monkstown Ring Road (R825) and past the subject site to Dundrum where it interchanges with the LUAS and other Spine and orbital routes.

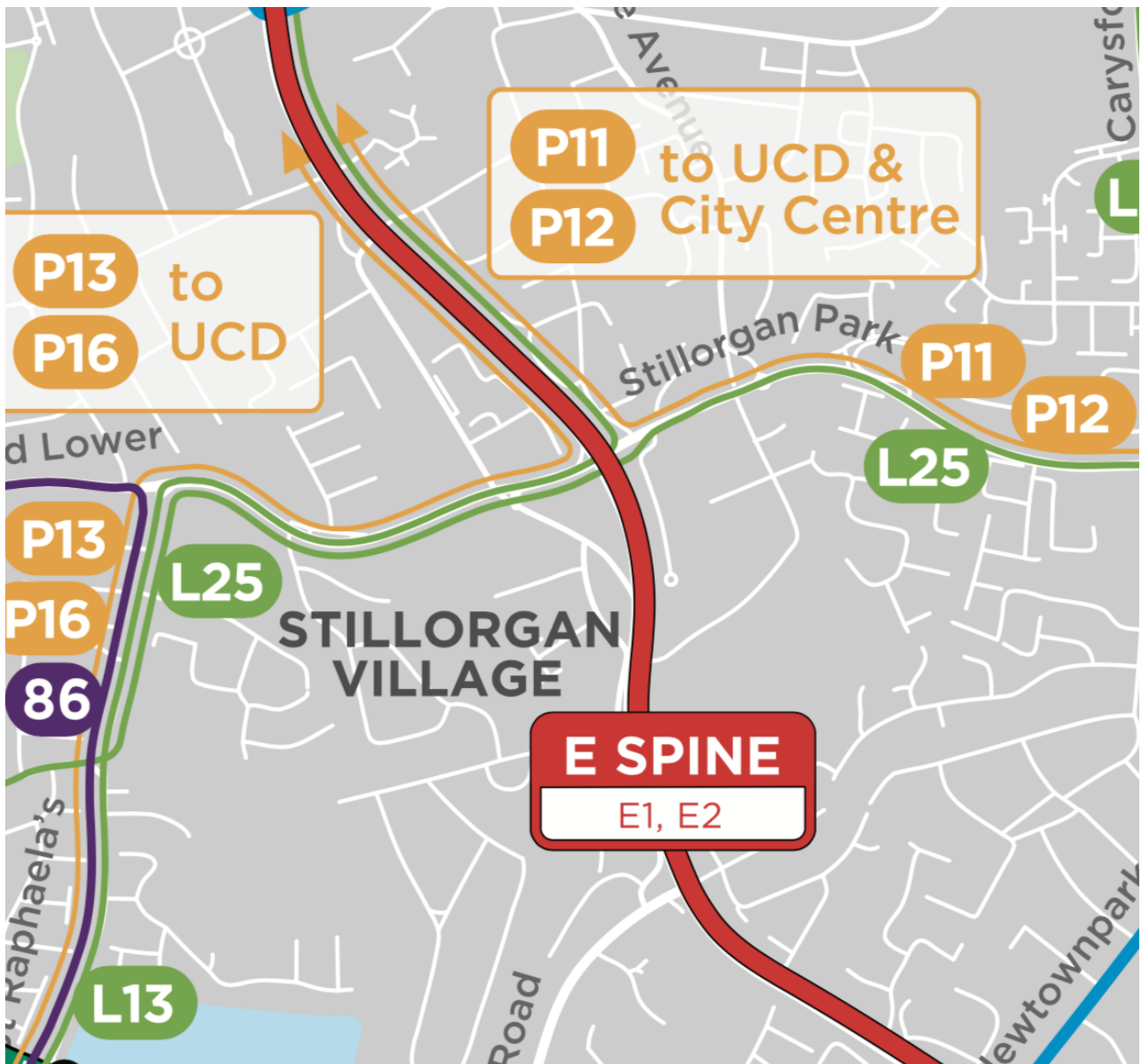


Figure 2. Bus Connects Proposals for Stillorgan Area.

7.2 The resultant Bus Connects network for the subject site can be viewed as more or less a direct replacement of the existing bus network. The design suggests that a ramp up of services, if required, would happen through a combination of increased E-Spine frequencies and/or additional X1 or X2 services in the first instance. The modal split objectives of the NTA envisage such changes in time as demand increases.

The NTA's Greater Dublin Area Strategy 2022-2042 clearly indicates that "demand for bus services in 2042 would require routes additional to those set out in the network review" (Bus Connects). It proposes that "periodic reviews will be undertaken during the period of the Transport Strategy to evaluate the impacts of changing development and transport patterns, and to implement appropriate additions or adjustments to the overall bus system to accommodate the changing arrangements". This forms the basis for what the NTA calls "Measure Bus5" to continually monitor the bus network and enhance or amend it accordingly. This provides a comfort blanket for passengers committing themselves to long term use of this key CBC corridor.

## 8. Conclusions

The following are the key conclusions of this paper.

1. The AM peak surveys of bus patronage undertaken in March 2022 and the subsequent analysis clearly indicate that the subject site is located on an existing high frequency, high capacity bus route. They confirm that there is more than adequate spare capacity, both pre- and post-development, in the existing bus network on the N11 QBC past the subject site in Stillorgan.
2. The additional demand for bus service generated by the development site will result in manageable increases in passenger volumes on the N11 bus routes. At the same time, a full “return to normal” level of commuting, post-Covid, is unlikely. The analysis above indicates that a combination of both of these increases is within the capacity of the local routes to handle. However in the event of an increase in patronage, the NTA, through “Measure Bus5”, will respond to increased demand by higher bus frequencies.
3. The NTA plans for the Bus Connects E-Spine, within the overall redesigned network, increases confidence that it will stay ahead of likely growth in future demand. The assurances from the NTA regarding monitoring of demand and enhancements/amendments to bus services on the E-Spine, as required, offer a high degree of confidence that the proposed development is well located and future residents will lead to increased use of public transport in the achievement of national climate change objectives.
4. No capacity constraints in the bus network, either current or planned, are anticipated, based on the analysis and research undertaken on the existing QBC above.

END.

