

BusConnects Cork Volume III: New Bus Network

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Prepared by Jarrett Walker & Associates and SYSTRA on behalf of the National Transport Authority.

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1 Introduction and Summary

BusConnects Cork Network Redesign

BusConnects is the NTA's programme of bus service improvement in Irish metropolitan areas. It is funded by Project Ireland 2040. It includes nine measures which will transform Cork's bus system, illustrated below.

The review and redesign of the bus network is a key component of the overall BusConnects Cork programme. The new bus network will be implemented

starting in 2023 and 2024.

The scope of the network redesign includes:

- Public Service Obligation (PSO) routes. Each year NTA makes funding available to public transport operators for socially-necessary public transport services. In Cork, Bus Éireann provide

these PSO services, under contract to the NTA.

- The Cork Metropolitan Area (CMA), of which a simple map is shown on the next page. A handful of PSO routes extend beyond the CMA, but the focus of this redesign is on routes and areas within the CMA.

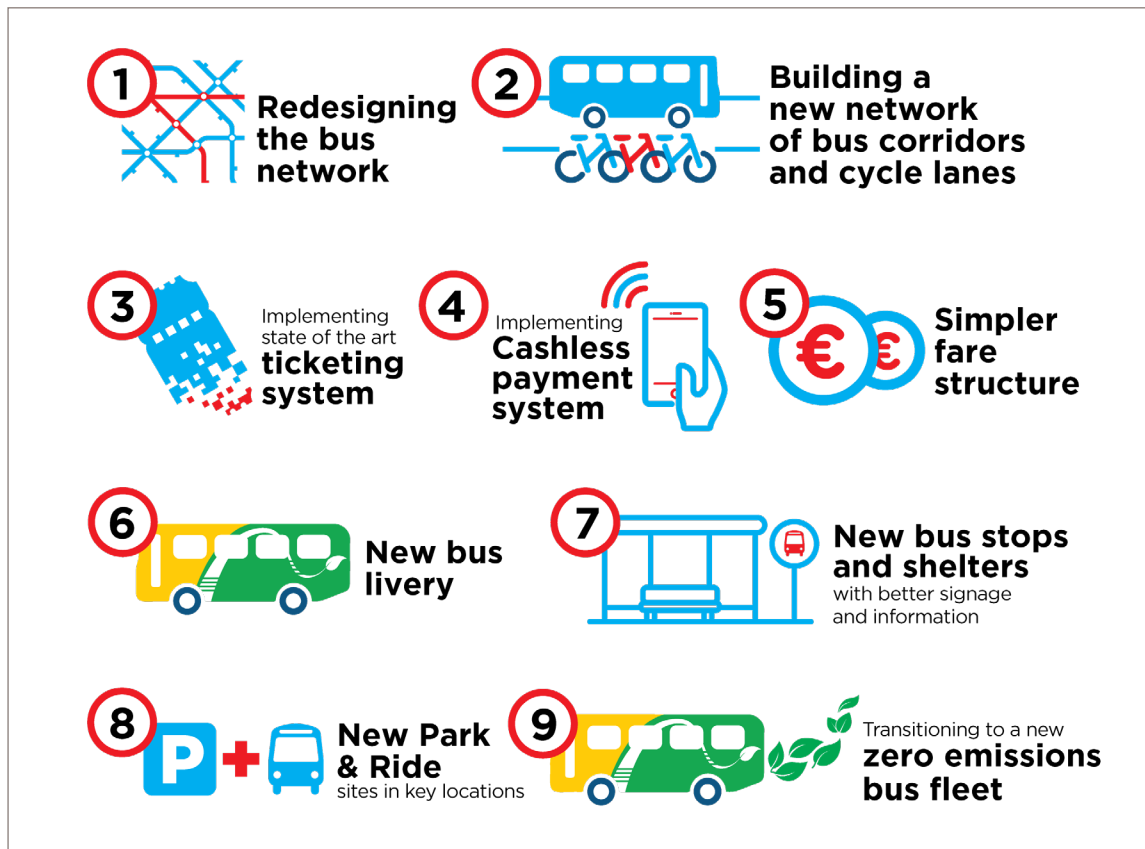
Jarrett Walker + Associates (JWA), specialist public transport network designers, and SYSTRA, Ltd., transport planners, have supported the NTA in reviewing and revising the bus network.

Public Input

In July 2021 the NTA held an initial public consultation to give the people of Cork an early opportunity to shape the principles by which the bus network would be redesigned.

In November 2021 the NTA held a second public consultation on the proposed redesigned network, called the Draft New Network.

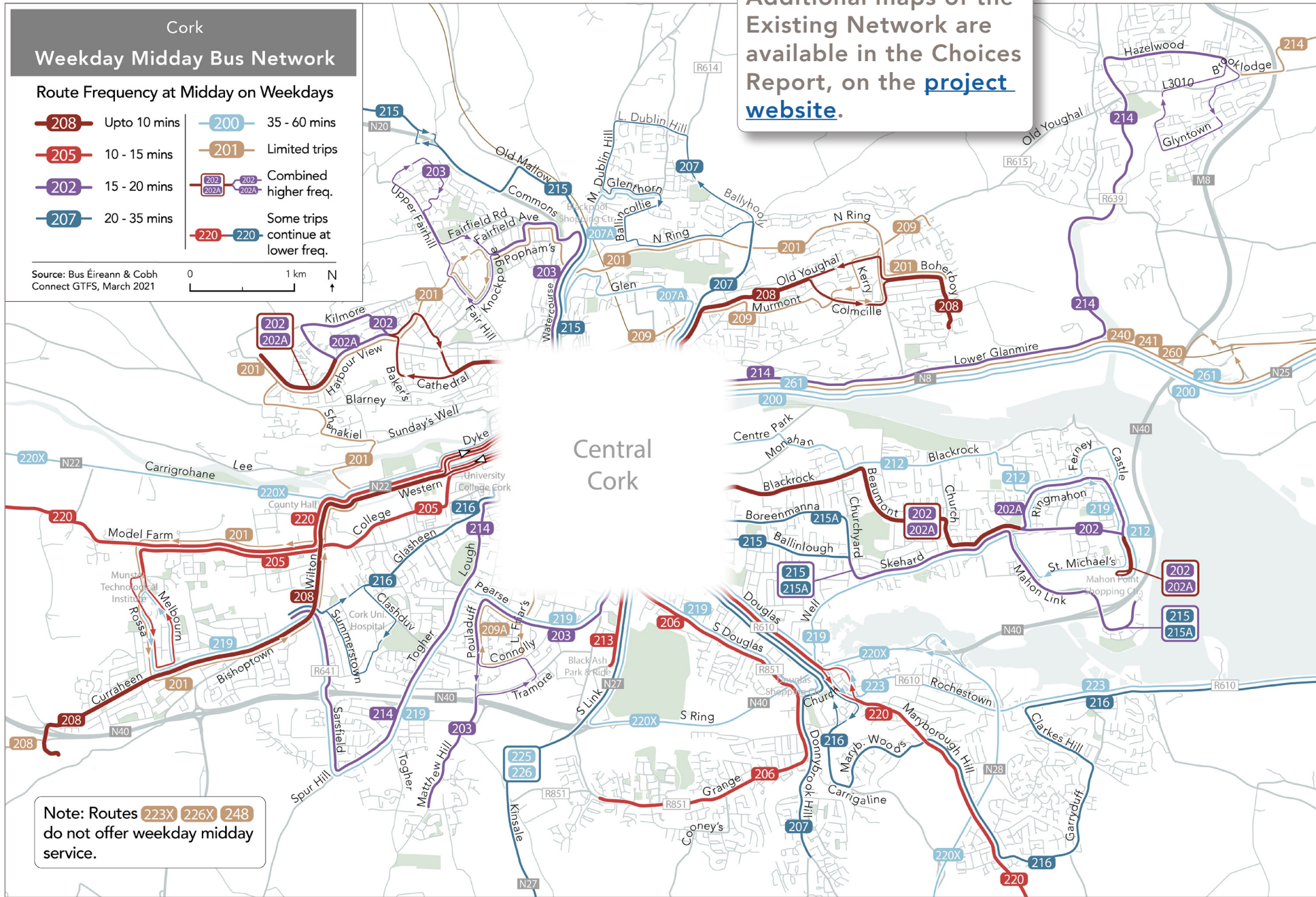
Public input from both phases has informed the New Network presented in this report. Bus Éireann, Cork City Council and Cork County Council were also involved in developing the New Network.



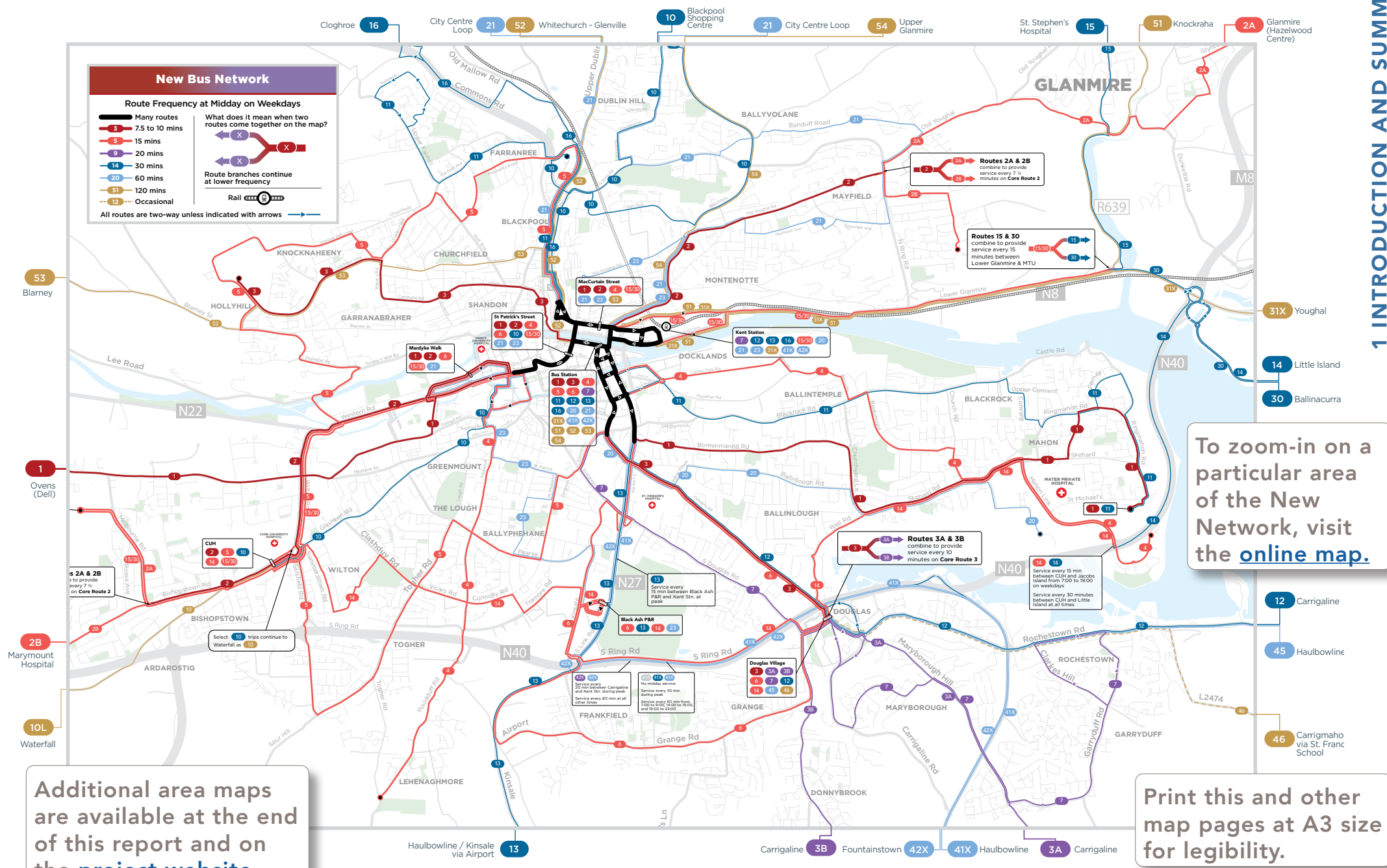
Map of the Cork Metropolitan Area (CMA)



Map of the Existing Network



Map of the New Network



What Will Change with the New Network?

This New Network is a complete redesign of the Cork bus network. Every route will change to some degree.

More Bus Service

Overall, the New Network, when fully delivered, will represent a **53% increase in service**, as measured by revenue kilometers, compared to the Existing Network.

This significant increase in service supports Cork's growth as a dynamic, competitive, and connected European city.

Greater Access to Employment Areas

Changes to routes, interchange locations and frequencies will bring more major employment areas within reasonable commute journeys of more residents. On average, residents will be able to reach 13% more jobs within an hour's commute (including all waiting time), and 18% more within a half-hour's commute.

The largest employment areas that will gain access to more workers are Little Island, Hollyhill, Mahon Point, the airport, Blackpool and Cork City Centre.

Increased Access to Schools

By improving frequencies and making routes more direct, the New Network will shorten journeys to school for many students.

The number of education places the average young resident can reach within an hour's journey (including all waiting time) will increase by 11%, and the number reachable within a half-hour's journey will increase by 23%.

Frequent Service Near More People and Jobs

The New Network will provide high-frequency service in the places where the most people live and work. As a result, more residents, students and workers will find themselves near buses coming every 15 minutes or better.

Frequent service makes public transport faster relative to car travel by reducing waiting time. When frequent service is provided to large numbers of people efficiently, high patronage tends to result.

At most times of the day and week, the New Network will get frequent service

within 400 m walk of more residents. For example:

- The number of residents near frequent service will grow by 38%.
- For households without cars, those near frequent service will grow by 37%.
- Unemployed residents near frequent service will grow by 49%.

Charts showing how many residents and jobs will be near routes of various frequencies are in the chapter beginning on page 74.

New Coverage in the City and County

The New Network will expand public transport coverage in the developed parts of the Cork Metropolitan Area (CMA).

Little Island, Cobh, Carrigaline, Ringaskiddy, Upper Glanmire, Ballincollig, Kerry Pike, Carrigtwohill and Blarney are among the areas with new routes providing new coverage.

In some cases this new coverage is unlikely to attract high patronage because the areas have low-density or car-oriented development. Yet the public transport service provides inclusion for the people

living or working there. Including all developed areas of the CMA, regardless of patronage, was given second-highest priority by survey respondents in the Phase One consultation.

The expansion of coverage will increase the number of residents and jobs in the CMA that are within 400 m walk of public transport, as shown in the graphs on page 16.

A Luas-Ready Network

The New Network includes a revision to the pattern of cross-city through-routing for the most frequent routes. This change is necessary to prepare for Luas.

In the existing network, a route from the west (Ballincollig) is through-routed to the south (Carrigaline); whilst a route from the north (Hollyhill) is through-routed to the east (Mahon Point).

In contrast, the future Luas line will connect west (Ballincollig) and east (Mahon Point).

It is necessary to build patronage and development *now*, using frequent bus service, before the Luas is built. This means providing frequent east-west bus service around which employers can build businesses, developers can build housing, and

people can build their lives.

In order to prepare for Luas, the New Network will change the bus through-route arrangements. It will link Ballincollig and Mahon Point with an east-west route, whilst linking Hollyhill and Carrigaline with a north-south route.

This will have the effect of lengthening some journeys made by existing passengers. However, because of the higher frequencies, the negative impacts on those journey times are avoided or kept modest.

This new through-route arrangement will also have the effect of shortening journeys that people are currently making between east and west, or between north and south.

Overnight Service

Cork is home to the nation's first 24-hour bus route, and the New Network will double the overnight service. In addition to 24-hour routes to Carrigaline and Ballincollig (which are on the overnight route today), service will also be provided between Hollyhill and Mahon Point.

Easier Interchange

The New Network will make interchange between many pairs of routes easier:

- More routes will offer high frequency all week long, so interchange between them will require only a short wait.
- Some routes will be scheduled to “pulse” together, with coordinated arrivals and departures, at Kent Station. This is particularly important for the infrequent routes serving small towns and rural parts of the County.

Both of these improvements to interchange depend on improvements to reliability, speed and technology. Some of those improvements are within the control of NTA, whilst others require actions by Cork City and County Councils.

Making interchange easier for passengers in certain busy places – such as Cork City Centre, Carrigaline town centre, Blackpool, CUH and Douglas – will require more space for bus stops as well as bus-only lanes and other priority measures.

The New Network will be delivered using existing road operations, but NTA is working with the City and County Councils on the optimisation of streets to support the new network.

What Won't Change?

Some features of the existing network will be maintained:

No one who is close to bus service today will lose all access to service. Every home, workplace or school that is covered by some type bus service today will continue to be covered, though the frequency of service or the pattern followed by the route may be changed.

Frequent service between Carrigaline and Cork City Centre will continue.

Service between Carrigaline and Cork City Centre will become **more frequent** - with departures on local every 10 minutes, Monday-Saturday, and every 15 minutes on Sunday¹, in addition to express routes.

Assumptions

The New Network is designed with some assumptions about other changes that will

¹ Frequency will increase on other routes as well, but the high frequency between Carrigaline and Cork City Centre is less obvious on maps because the proposed new route will use alternating paths.

come as part of the BusConnects Cork programme:

- A simpler fare structure, and no additional cost to interchange.
- Faster and more reliable bus service.
- New two-door buses, phased-in over the next decade.
- Real-time arrival information.
- Improved waiting areas and signage.

These changes affect the design of the network. They make it possible to plan for a Cork bus network that is more frequent, allows passengers to reach more destinations quickly through interchange, and offers more reliable journey times.

Bus Speeds

In our analysis of how the New Network will affect residents' access to jobs and school, we have used bus speeds from September 2021. These speeds are slower than what can be expected once priority measures are in place to speed up bus service.

The access results reported on page 13 and shown on maps on later pages are therefore likely an underestimate. Additional gains can be expected in

proportion to the improvement in bus speeds, which will be arrived at through collaboration among NTA, Cork City Council and Cork County Council.

Improving speeds over future years may also allow for some additional improvements to frequency or hours of service. Faster bus routes cost less to operate, and the resulting savings can be reinvested into better frequencies or longer hours of service.

Waiting Time

Throughout this report, whenever we refer to a public transport journey time, it includes the average amount of time passengers spend waiting at every stage of their journey.

Waiting doesn't just happen at the start of one's journey, it also happens at the end, especially on infrequent routes. For example, if you must arrive at work by 8:00 am, but your once-hourly bus passes by your work at 8:12 am, you are forced to arrive at 7:12 am – 48 minutes too early.

People who are able to decide their own work or school hours can schedule around an infrequent bus schedule, but most people do not have that privilege at their work or school. A trip to a doctor's

Estimating Journey Times

Often when people describe public transport journey time they focus on the time spent on the bus or train. Public transport journeys also include time spent walking and waiting, which can exceed the time spent on the vehicle itself.



Walking to and from the stop

Most public transport journeys begin and end with walking.



Waiting for the next bus or train

Waiting doesn't always happen at the start of your journey, it can also happen at the end. You may leave home only a short time before your bus departs, but if your bus comes infrequently you often have to choose between arriving at your destination very early or too late.

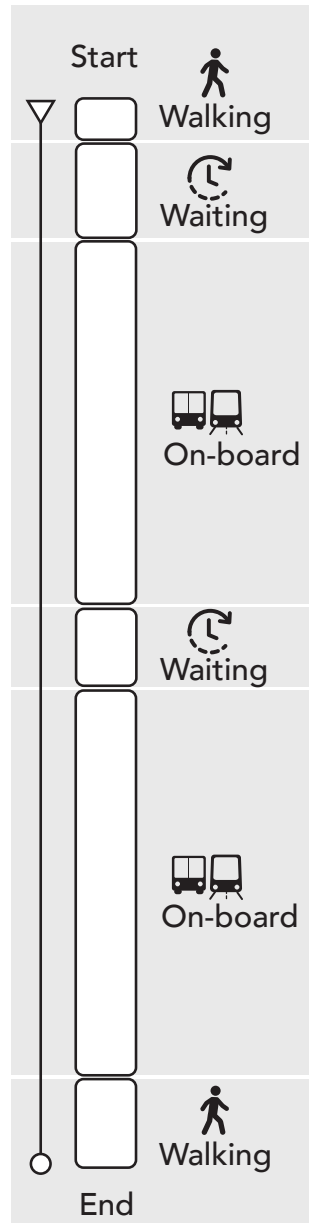
If you're interchanging, you'll have to wait a second time.

On average, across all passengers, both of these forms of waiting will require about one-half the frequency of the routes in question.



On-board the vehicle

Time spent on the vehicle is affected by the distance you are traveling and the speed of the vehicle. Our analysis of the Draft New Network used conservative (slow) speed assumptions. Improvements in speeds will result in greater job and school access for more people.



appointment, a film or another scheduled event can similarly require an early arrival that feels like a waste of time.

The extra time that a route's passengers spend waiting will be, on average, one-half of the frequency of the route. When we talk about a 30- or 60-minute public transport journey, we are including an average wait of one-half of the frequency of each route used.

Including this average wait time can make the journeys described in this report sound quite long, compared to how bus passengers would describe them. Yet it is essential to account honestly for waiting time. One of the ways public transport fails to compete with cars is by forcing people to start their journey earlier than they want to and to therefore waste time at their destination.

The diagram on the left explains how average journey times were estimated for the New Network.

Measuring the New Network

This report contains measures of the potential performance of the New Network. These measures speak to the network's delivery on two main goals:

- Competing with car travel for more peoples' journeys, in order to reduce vehicle use and carbon emissions. These goals were given the highest priority (out of five) by participants in the Phase One survey.
- Including all developed parts of the CMA, regardless of the potential for patronage or the level of need in those areas. This goal of geographic inclusion was given second-highest priority by participants in the Phase One survey.

The measures are:

1. **Access:** The number of jobs or schools that the average resident will be able to reach within a 30- or 60-minute public transport journey.
 - o Access speaks to the possibility of high patronage, effective competition with cars and reduced emissions.
2. **Proximity to Frequent Service:** The percentage of residents and jobs within 400 m of buses or trains coming every 15 minutes or better.

- o Like Access, Proximity to Frequent Service speaks to the possibility of high patronage, effective competition with cars and reduced emissions.

3. **Proximity to Any Service:** The percentage of residents and jobs within 400 m of public transport offering any frequency.

- o Proximity to Any Service speaks to the coverage of more areas and people by at least minimal public transport service.

The New Network will deliver a 53% increase in service over the existing network. Some of that increased service is used to increase peoples' access to jobs and schools; get frequent service close to more people; and in other ways make public transport more competitive with cars.

Yet some of that additional service has been used to provide service close to more areas and people, without adding much access to jobs and schools within short commute times.

For example, buses serving lower-density or more dispersed areas have to travel longer distances to pass a significant number of jobs, so they do not add much

to the number of jobs the average resident can reach in a 30- or 60-minute commute. They do serve the distinct goal of geographic inclusion.

Change in Access to Work and School

The table on the right summarises the way access to jobs and schools will change with the New Network.

The number of jobs and education places most people could reach within a reasonable commute time will increase, especially within a short commute of 30 minutes or less (including all waiting time).

Young and unemployed residents will gain the most access to jobs and schools within a 30-minute journey.

A few notes about this table:

- This summary is for weekdays at midday. A few routes offer better frequencies during peaks, but frequencies at midday are typical of what is offered all day, Monday-through-Saturday, on nearly every route, in both the existing and the New Networks. The midday condition therefore represents the network that is offered most of the time.
- “Education places” refers to the available enrollments at all schools, from primary through university.
- Retired residents may have little need for access to jobs for the purpose of working, but jobs are a geographic proxy for shops, hospitals, restaurants,

Change in Access, on Weekdays at Midday				
	Change in Jobs Reachable...		Change in Education places Reachable...	
	Within a 30-minute Journey	Within a 60-minute Journey	Within a 30-minute Journey	Within a 60-minute Journey
All residents	+ 18%	+ 13%	+ 20%	+ 9%
Unemployed residents	+ 19%	+ 11%	+ 22%	+ 8%
Young residents	+ 20%	+ 16%	+ 23%	+ 11%
Retired residents	+ 19%	+ 11%		

and other destinations that are important to retired people.

- As noted previously, the journey times referenced here include all average waiting time, since most people cannot decide on their start time at a job or school based on when the bus arrives.

Peaks and Weekends

How are these numbers different for weekday peaks (7:00-9:00 am and 3:00-6:00 pm)? They are very similar, varying by one percentage point or less.

How are these numbers different for Saturdays and Sundays? They are also very similar, varying by two percentage points or less.

Change in Proximity to Public Transport

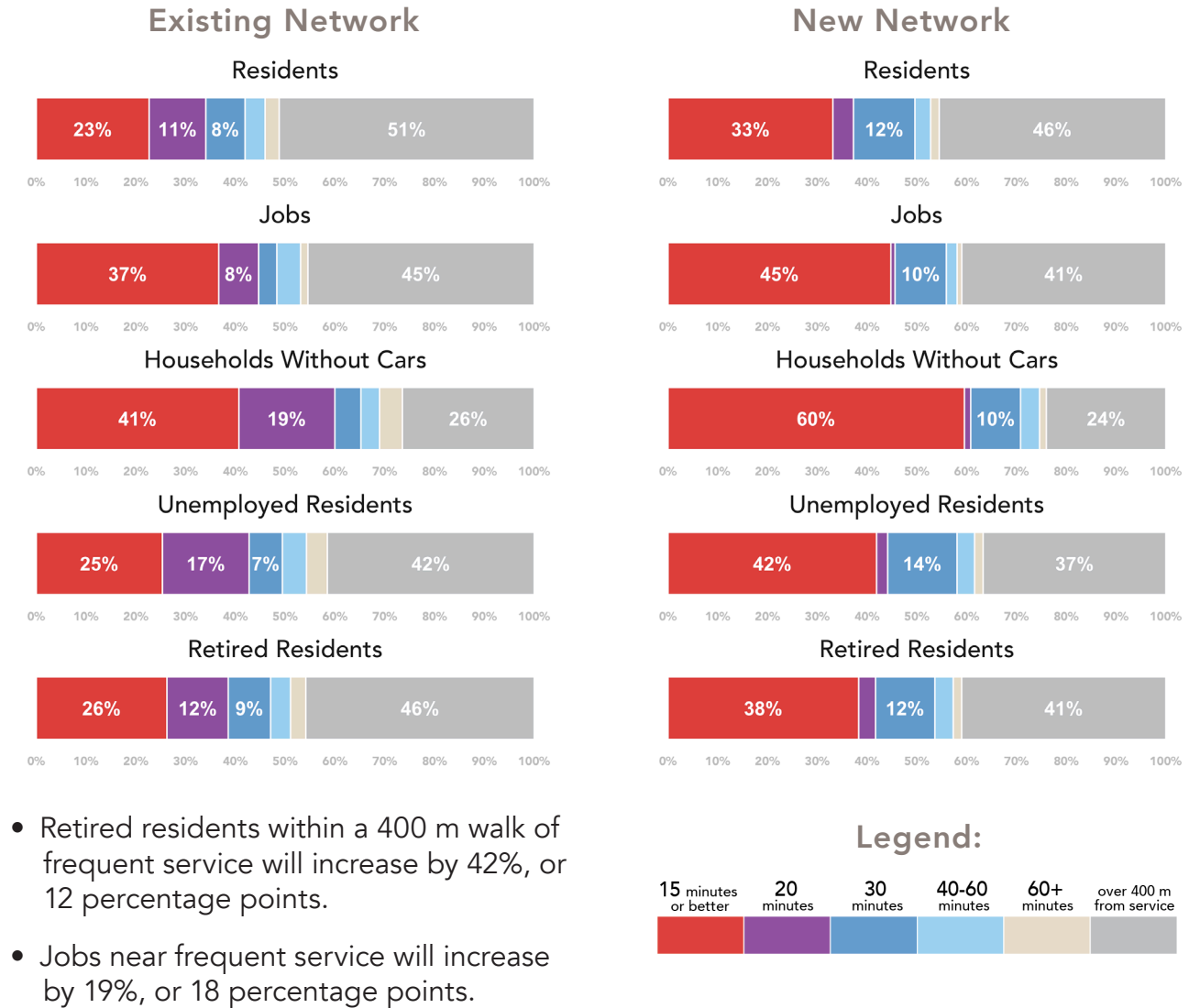
The graphs on the right show the percentage of residents and jobs in the Cork Metropolitan Area (CMA) that will be within a 400 metre walk of service of various frequencies, on weekdays at midday.

The New Network will send public transport close to more residents and jobs:

- Residents (including retired or unemployed residents) living near bus routes will increase by 10%, or five percentage points of the CMA population.
- Households without cars near service will increase by two percentage points.
- Jobs that are close to service will grow by four percentage points.

Major improvements will be made to the percentage of jobs and residents near **frequent service**:

- The number of residents near frequent service will grow by 39%, or 10 percentage points of the CMA population.
- Households without cars near frequent service will increase by 43%, or 19 percentage points.
- Unemployed residents near frequent service will increase by 64% over existing, or 17 percentage points.



Frequent service tends to attract the most patronage, even relative to its higher costs, because it is so easy for busy people to use often.

Similar graphs comparing proximity to service at other times of day and week are shown starting on page 74.

Change in Geographic Coverage

The New Network covers more of the developed parts of the CMA with public transport service than the existing network. The map on the next page highlights those areas that will be newly-included in the New Network.

The number of people within 400 m walk of bus stops in low-density areas will naturally be low. In order to get bus service close to a certain number of people, more kilometres of bus routes must be provided in a low-density area, compared to a high-density area. This is one of the reasons that routes designed to promote geographic inclusion in dispersed or low-density areas can't contribute much to job access within a 60-minute commute, nor to increasing the percentage of people who are near frequent service.¹

The new coverage services in the New Network (shown on the map on the next page) add only modestly to the total number of people and jobs near service, despite adding many additional kilometres to the network. This is a result of those areas' lower densities, more circuitous street networks and longer distances between developed areas.

Put another way, as the network is expanded from the dense parts of the CMA to less-dense parts, getting bus routes close to each additional resident or job will come at a higher marginal cost.

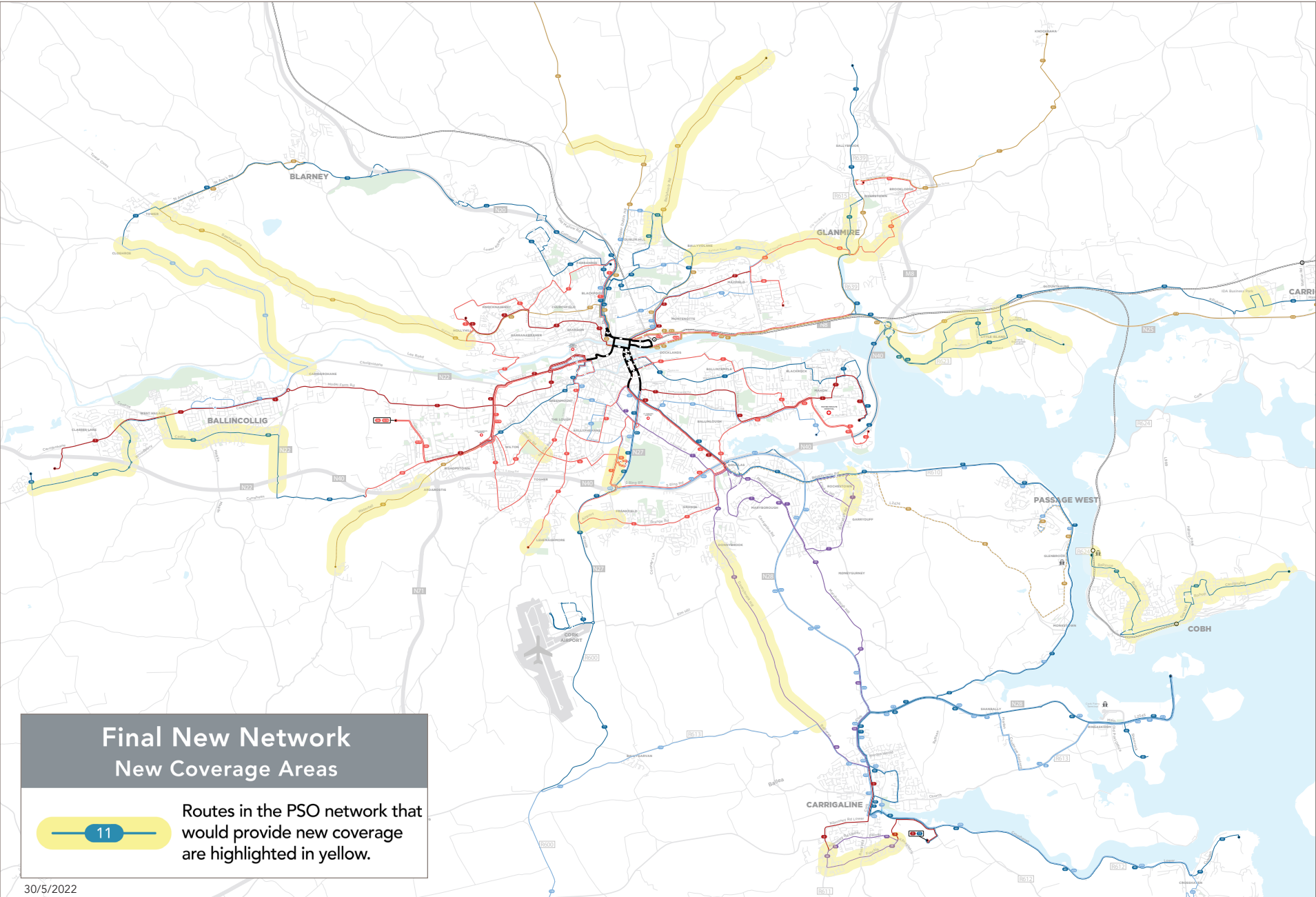
The areas that are most efficient to serve are already covered by the existing network. Expanding coverage to promote geographic inclusion means spending more to reach smaller numbers of people.

Based on 2016 Census data, the New Network will cover approximately 17,400 more residents and 5,600 more jobs.

The network was designed not only for development that existed in 2016 (at the time of the last Census) but also recent developments and those under construction. These coverage calculations, and access calculations, were made using 2016 Census data, so the actual increases are sure to be higher.

¹ For more about the way that frequency and distance affect public transport costs, and trade off against one another, see the Choices Report.

Map of New Coverage Areas



More Information About the New Network

In this Report

This Report is one source of information about the New Network. Within this Report you will find:

- Maps showing the draft routes, colour-coded based on their midday frequency. A map showing the central part of the service area is on the next page and maps of the other parts of the CMA appear starting on page 88.
- A large table showing proposed frequencies and approximate hours of service for each route. This table starts on page 81.
- Snapshots of the network at sample times of the day and week showing how many residents and jobs will be near service of various frequencies. These begin on page 74.
- Analysis of how residents' access to jobs and schools will change under the New Network. This was summarised on page 13.
 - Access changes are also shown by

area in the online map, and for the central CMA in static maps starting on page 101.

All of the routes in the New Network have been given new numbers and names. Our purpose in using all-new numbers is to avoid confusion as people compare existing and new routes.

The route numbers presented at this time may not be the final route numbers used when the new network is implemented.

Online Map

To explore what the New Network will mean for your area and for your own journeys, visit the [online map](https://corknewnetwork.s3.amazonaws.com/index.html) at <https://corknewnetwork.s3.amazonaws.com/index.html>

The online map allows you to:

- Zoom in and see detailed routing.
- Look at towns across the CMA (which are difficult to show on these small pages).
- See how average job access will change in your area.
- Create an “isochrone” comparing how far you will be able to travel in 30 or 60 minutes using the New Network compared to the existing network.

All routes in the New Network have new numbers!

1 INTRODUCTION AND SUMMARY



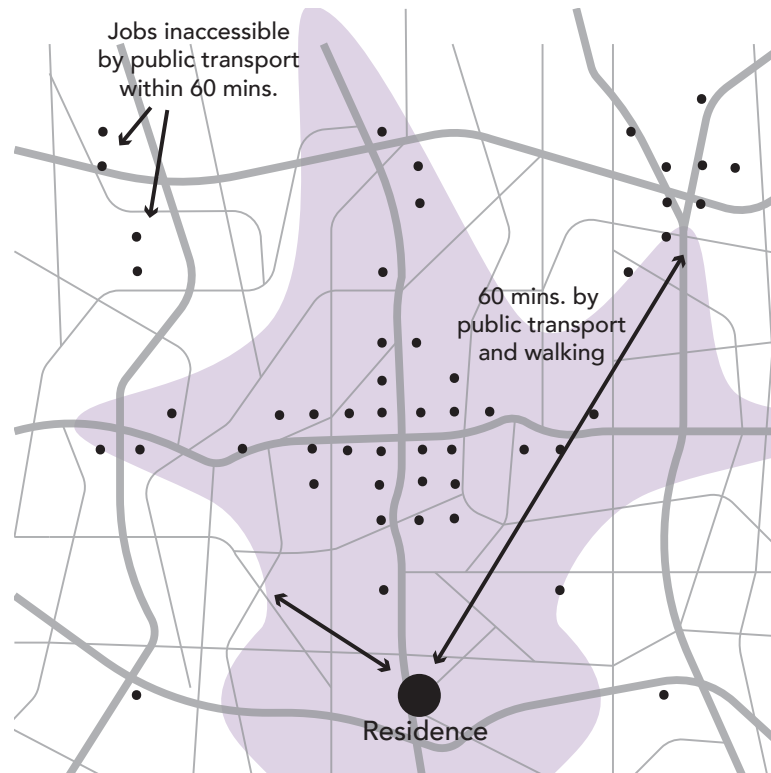
Isochrones: Visualizing Transport Access

Isochrones show the area a person could reach, in a given travel time, by a given mode of transport. The diagram on the right shows a 60-minute isochrone for an imaginary place – it illustrates how far someone could travel in all directions from their residence, within an hour, and how many jobs are located in that space.

The [online map](#) of the New Network allows you to make isochrones for yourself, starting in most parts of the Cork Metropolitan Area.

You can see how the New Network will change the places you can go, and how many jobs and residents you will be able reach within that journey time.

Job access changes for each person, starting from the place they live, will vary: many people will see a positive change in the New Network, some will see no change, and a few people will see a negative effect. On average, across the entire CMA population, the New Network will make most people's isochrones bigger, increasing most people's access.



An imaginary isochrone. The purple areas are reachable within 60 minutes of travel from the residence. The small dots are jobs.

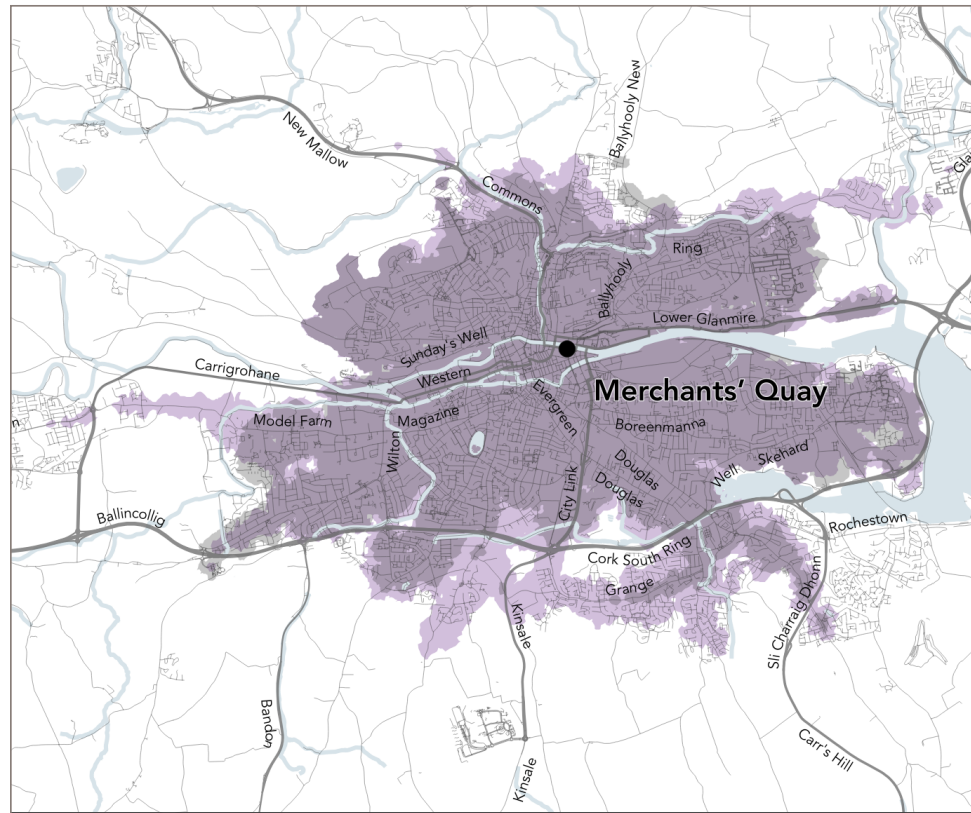
The isochrone on the right shows how access to and from Merchants' Quay within 30 minutes journey will change:

- The light **purple** areas are the places from which someone will be able to reach Merchants' Quay, by public transport, in 30 minutes or less.
- The **grey** areas are places that are reachable within 30 minutes in the existing network that will take more than 30 minutes to reach in the New Network.
- Where the two colours overlap, people's ability to reach Merchants' Quay within 30 minutes won't change.

The four isochrones on the following pages show 30- or 60-minute examples from Blackpool, Ballincollig, Mahon Point and Carrigaline.

Using the assumption that all passengers wait one-half of the route frequency, isochrones showing 30- or 60-minute average journey times are appropriate in urban and suburban settings. They do not reflect the way public transport works in a rural setting.

In a rural setting, residents' proximity to service, the times service is offered each day, and the timed interchanges between services are more important than average

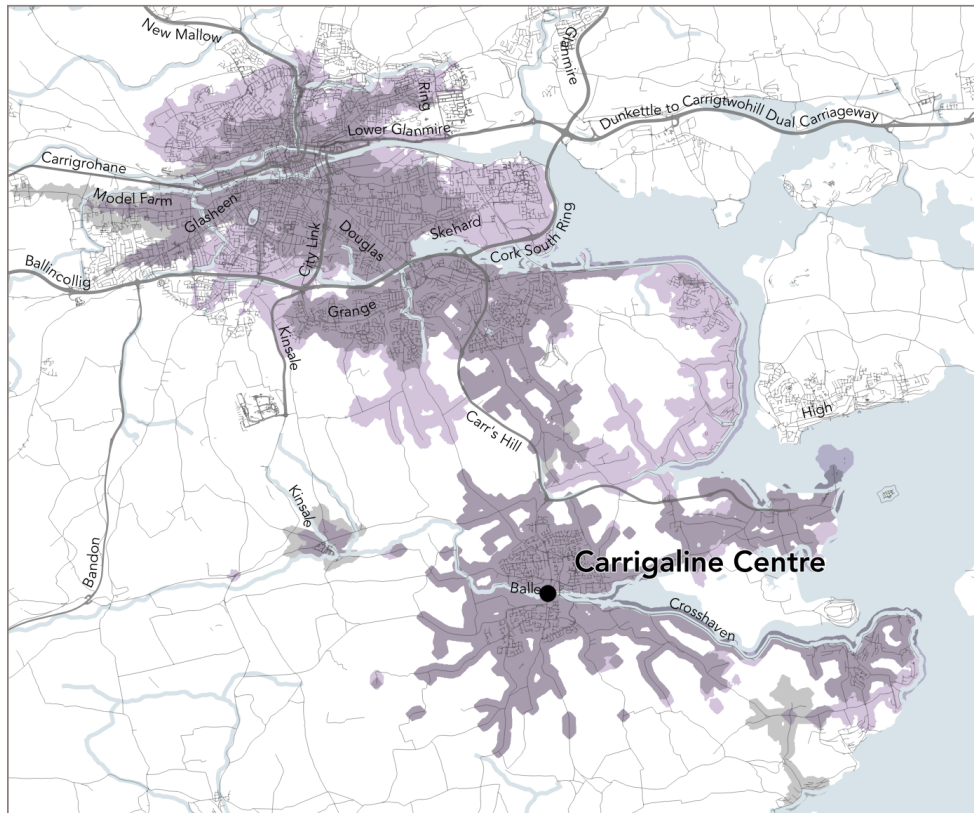


15% more residents will be a 30-minute journey or less from Merchants' Quay.

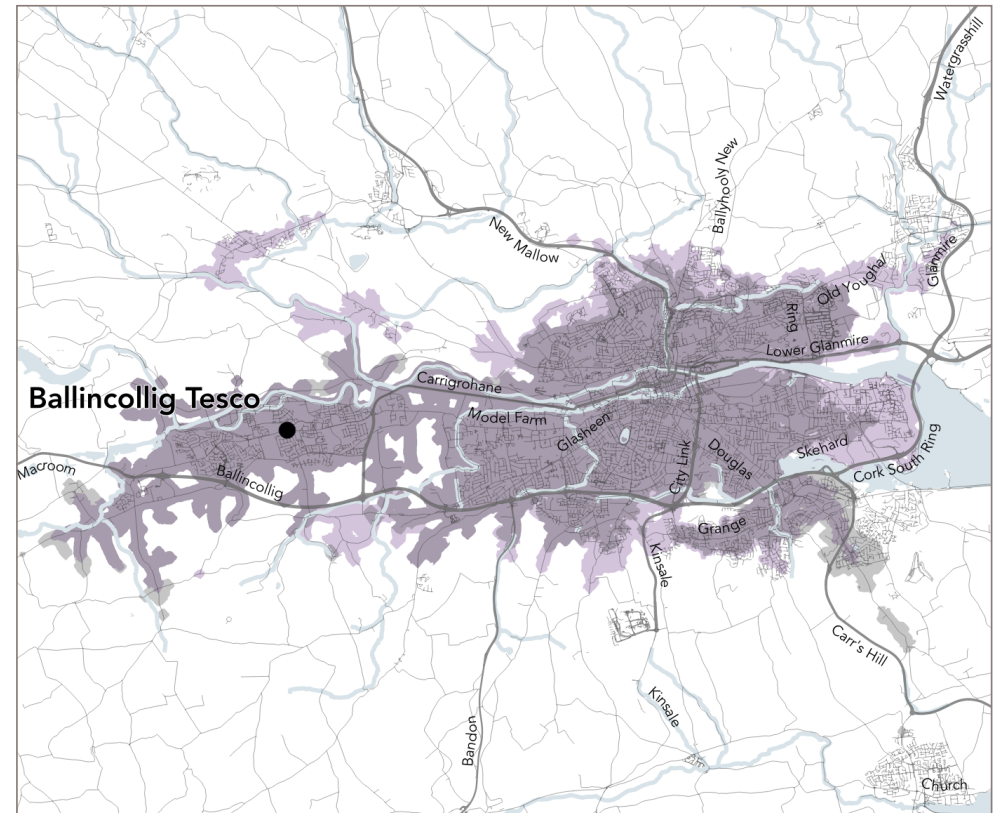
access starting at a random departure time.

For this reason isochrones are only available in the online map in towns where routes come every 60-minutes or better today.

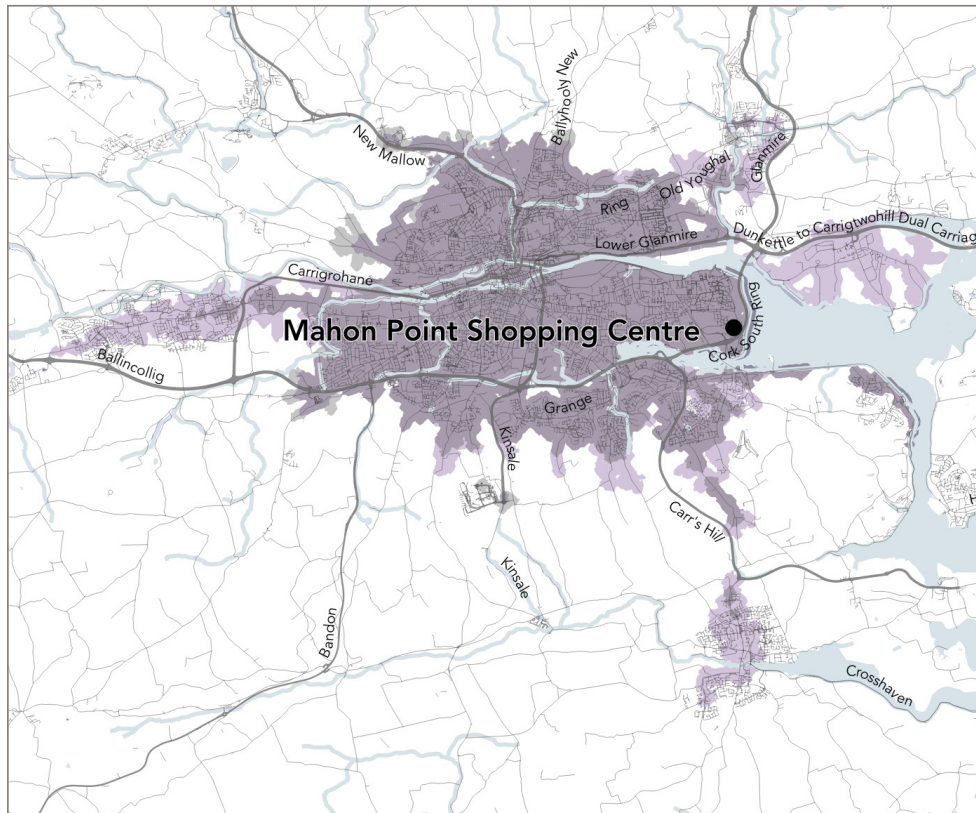
You can visit the [online map](#) to make your own isochrones and see what the New Network will be like in your area.



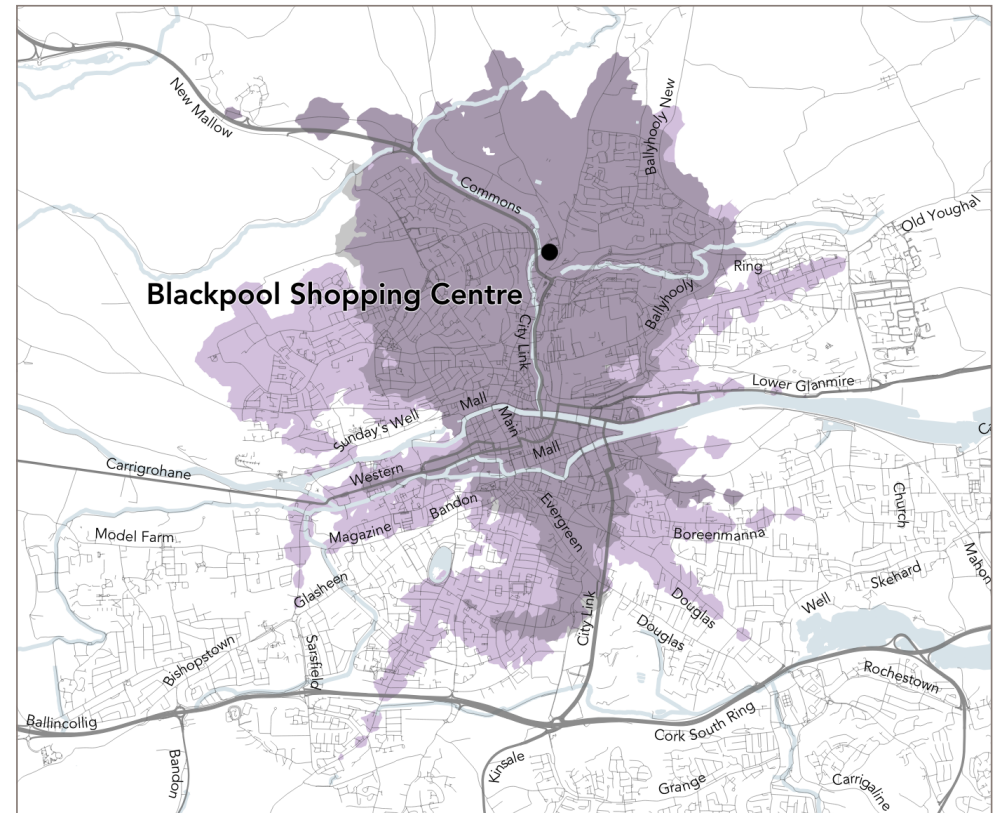
Residents near Carrigaline centre will be able to reach 32% more jobs within 60-minutes (including all waiting time) in the New Network.



The Ballincollig Tesco (and nearby businesses) will be within a 60-minute journey of 13% more residents.



The Mahon Point Shopping Centre, and nearby offices, will be within 60-minutes of travel time for 15% more residents.



50% more residents will be able to reach Blackpool Shopping Centre by bus in 30-minutes or less, including all wait time.

Implementation of the New Network

As the network is implemented and the new routes are put in place, there may be slight modifications made to ensure efficient service delivery. The NTA and Bus Éireann will monitor the performance of the New Network and make adjustments as necessary.

In the future, subject to demand and funding, some services may be enhanced with greater frequencies and spans than presented in this report.

Bus Priority Measures

As part of the BusConnects program, the NTA, Cork City Council, and Cork County Council are also investing in bus priority measures. These measures will help buses maintain their on-time performance and may address concerns about congestion articulated during the Phase Two engagement.

More details on these priority measures will emerge as Sustainable Transport Corridors are planned throughout 2022.

Ancillary Issues

Numerous issues related but ancillary to the design of the New Network arose during this planning process. Some were

raised by people who provided feedback on the Draft New Network, and others were flagged by members of the planning team, Cork City Council, Cork County Council or Bus Éireann.

These issues relate to bus stop amenities, bus stop placement, footpaths, street crossings, signals needed at junctions, space needed to layover buses at route termini, and more.

A separate report will soon be issued which details these issues and describes how they relate to implementation of the New Network. Addressing these ancillary issues will involve collaboration among NTA, the City and County Councils, Bus Éireann, universities and major employers.

2 Public Input on Design Choices

About the Phase One Consultation

To inform the Cork Network Redesign, the NTA, JWA and SYSTRA undertook an initial round of public consultation in July 2021.

Rather than start the planning process with a revised bus network, the process began with this initial consultation. A “Choices Report” was published, which reviewed the existing network and introduced choices that needed to be made in order to redesign the bus network. Cork residents’ feedback about these choices informed development of the Draft New Network.

The first consultation took place between the 1st July to the 21st July 2021. The consultation was publicised through local and national media, as well as NTA and local social media channels. A virtual public meeting was held on July 6th, comprising an information session followed by a Q&A with the planning team. The Choices Report was made available to the public through the [BusConnects Cork website](#). During a three-week period, the public were invited to complete an online survey.

Submissions

1,121 completed, or partially completed, surveys were submitted to the NTA over the three-week consultation period, including a small number of responses completed on paper and submitted by post. In addition, 79 emails were sent directly to NTA.

Key Findings

- 1,200 total submissions
- 76% of respondents expressed a strong or very strong appetite for changes to the network that maximise benefits.
- Reducing vehicle travel and carbon emissions emerged as the most commonly stated goal, with nearly half of respondents selecting it.
- When given the choice between short waits or short walks to public transport, those who stated a preference for “short waits” or “whatever gets me to my destination soonest” represented 77% of the respondents (853). 19% of respondents chose “short walks.”
 - o “Bad weather” was the most commonly stated reason for preferring short walks
 - o However, “bad weather” was also seen by many others as a reason for preferring shorter waits or getting to their destination as quickly as possible.
 - o Large numbers of respondents who prefer short walks were concerned about the availability and safety of walking infrastructure.
 - o In comments made by those favouring “short waits”, many people mentioned that poor reliability makes it difficult to time their arrival at bus stops to minimise waits.
- The majority of respondents (76%) said they would accept more interchange if it would result in greater access and faster journeys for most people.

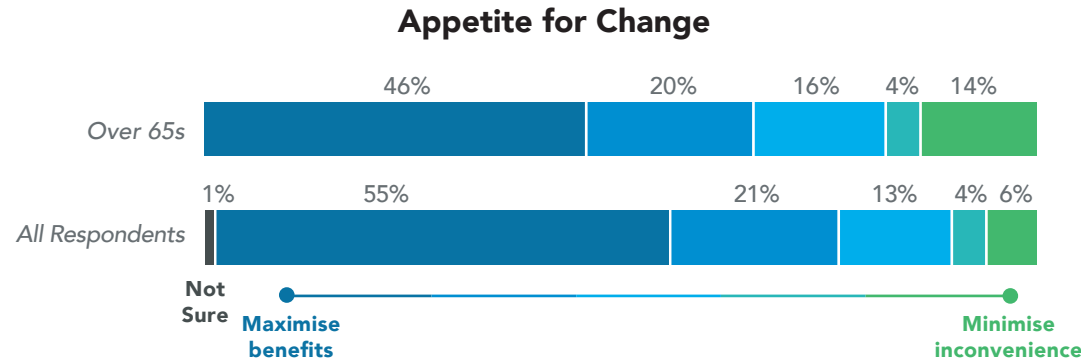
Appetite for Change

The respondents were asked to consider the level of change that is desirable and tolerable, given that any change to the network would be disruptive and cause inconvenience to some existing passengers. They were asked to respond on a scale from 1 (minimise inconvenience to existing users) to 5 (maximise benefits to large numbers of people).

The results show a very strong appetite for change with over half of respondents stating a preference for maximising benefits. 75% of respondents expressed a strong or very strong desire to maximise benefits.

10% of respondents expressed a strong or very strong preference to limit change if it were to result in possible inconveniences including having to walk a little further, or having to change buses for trip on which it's not required now.

Older respondents expressed more of a desire to minimise inconvenience than others. However, the majority (66%) stated a strong or very strong desire to maximise benefits rather than avoid inconveniencing existing passengers.



"The new bus and PT system in general will not only need to serve the increased transport demand resulting from the City's planned growth in population and employment, but will also need to replace considerable amounts of today's car traffic..."

"Routes need to be revised; every bus does not need to take the longest route to reach everyone."

Defining “Success” for the Cork New Network

The public was asked what would it mean for a new Cork bus network to be “successful.” Given a choice among five potential goal statements, the respondents could choose the two they considered to be the most important.

Reducing vehicle travel and carbon emissions emerged as the most commonly stated goal with nearly half of respondents selecting it as being important.

The second most-important goal for respondents was inclusion of all developed areas, regardless of patronage and regardless of need. This goal is in tension with the goal of reducing vehicle car travel (which requires increasing patronage).

The fact that these two goals were ranked #1 and #2 illustrates the challenge of a network redesign conducted within a limited budget. It is not possible to maximise progress towards both of these goals simultaneously – within a limited budget, even a growing budget, they must be balanced against one another.

Defining Success

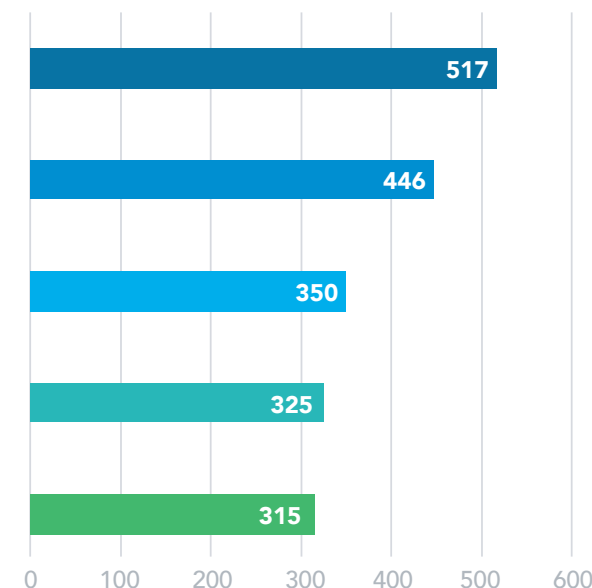
Reducing vehicle travel and carbon emissions - Fewer people traveling fewer kilometres by car, with the resulting reduction in harmful emissions.

Inclusion of all developed areas - Provision of transport in all developed parts of the Cork Metropolitan Area, regardless of the needs of people in each area and regardless of patronage.

Limiting congestion - Continued growth of Cork’s population and economy without more growth in congestion.

Inclusion of people with severe needs or disadvantages - Provision of bus routes that help people in situations of disadvantage be independent and participate in society.

High patronage - Large numbers of people using transport.



“Taking the bus would be more convenient and help reduce carbon emissions.”

“I for one would much rather use a bus and reduce my emissions.”

“It is important to be able to get to more destinations by bus so that people don’t have to use a car.”

“With an ever growing population and large scale developments planned this would seem like an opportune time to have a regular bus service for the area. There will be serious congestion issues if all of these new residents are to drive into the city for work.”

Shorter Walks or Shorter Waits?

A key choice in the design of the Cork bus network is the balance between coverage and frequency of the network within an acceptable level of resource (buses). The respondents were asked to consider situations where some parts of the Cork network operate on nearby parallel roads, with the result that many people are close to two routes that are heading in the same direction. Focusing service on key corridors to make some routes more frequent can actually make people's trips faster, despite requiring longer walks.

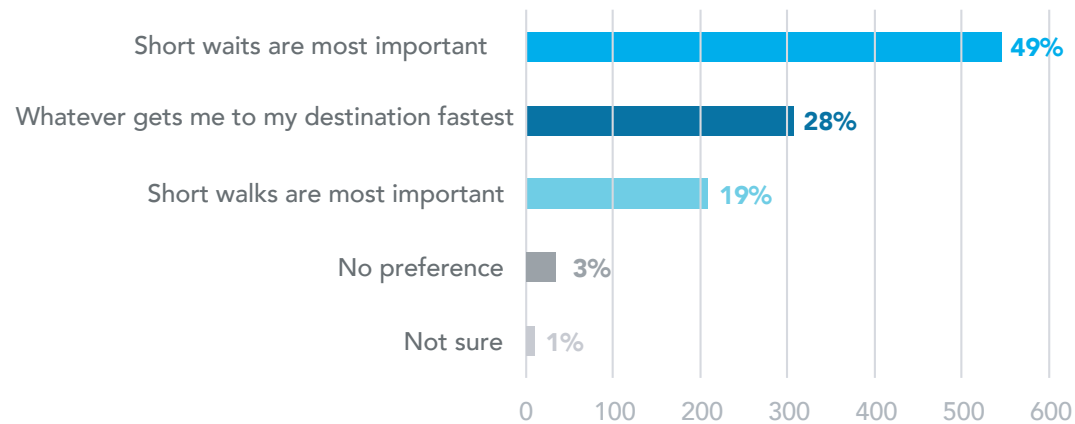
The respondents were asked about walking and waiting, and given a range of possible responses. The responses to this question are summarised in the chart to the right.

49% of respondents stated that short waits are more important to them compared, whereas 19% of respondents expressed a preference for short walks.

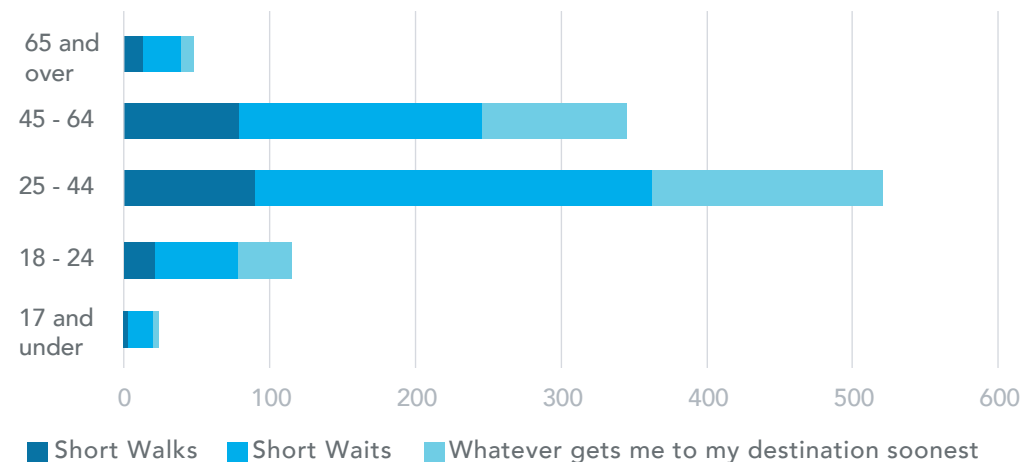
28% of respondents stated that they'll do whatever gets them to the destination soonest. This would include short waits where a consolidation of the network concentrates buses within higher frequency routes resulting in overall shorter journey times despite longer walks for some.

Very few respondents (only 4%) expressed no preference or were unsure.

Short Walks vs. Short Waits



Short Walks vs. Short Waits (by Age Group)



77% of respondents said "short waits are more important" or "I'll do whatever gets me to my destination soonest" (top). Older respondents were slightly more likely to choose "short walks," though a majority of them still preferred "short waits" or getting to their destination as soon as possible (bottom).

Of those aged over 65, 69% who answered this question picked either “short waits are more important” or “I’ll do whatever gets me to my destination soonest” (as shown in the chart on the previous page, at bottom). However, participation by older persons was low. Additional effort was made during Phase Two to engage those over the age of 65.

There was no discernible variation in responses to this question by geographic location.

Reasons for wanting short walks or short waits

Subsequent to answering the question on short walks or short waits, the respondents were asked why they chose their response. A set of potential reasons was presented.

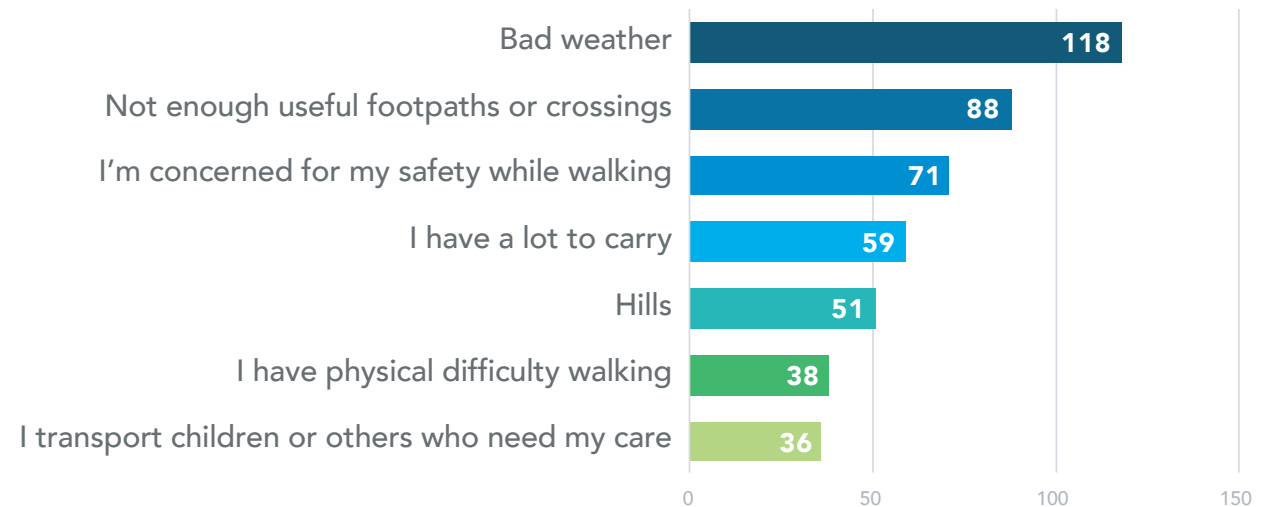
Those said they prefer having short walks represent 19% of the respondents (208). The top three reasons selected (as shown in the chart on the right) are:

- ‘Bad weather’ (118)
- Safety concerns: ‘Not enough useful footpaths or crossings’ (88), ‘I’m concerned for my safety whilst walking’ (71).

In additional comments, some respondents expressed that they are able to time their

journey to the bus schedule, which gives them a short wait as well as a short walk.

If “Short Walks”, why?



“If the service is reliable, it may not be frequent, but you can plan ahead, and limit your travel time from home by walking a short distance just before you know the bus will arrive.”

“With online bus times available I can time when I leave.”

Short walks are important “for the elderly, people with a disability.”

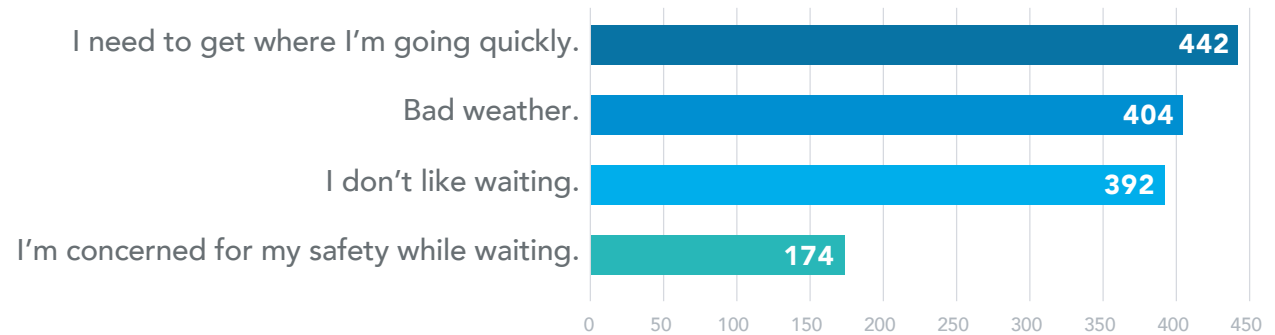
Those who stated a preference for short waits or “whatever gets me to my destination soonest” represented 77% of the respondents (853). Therefore, most of the respondents expressed that the new network should be designed for faster journeys and shorter waits, even if that meant some journeys require a longer walk.

Three main reasons were almost equally given for those who chose either of these answers (as shown in the chart on the right): ‘I need to get where I’m going quickly’, ‘Bad weather’, and ‘I don’t like waiting’.

In additional comments, many respondents mentioned that poor reliability makes it difficult to time arrivals at bus stops to minimise waits. The impact of cancelled or missed buses is perceived as being worse when waits between buses are longer.

Others expressed a preference for spending time walking rather than spending time waiting.

If “short waits” or “whatever gets me to my destination soonest”, why?



Interchange or Complexity?

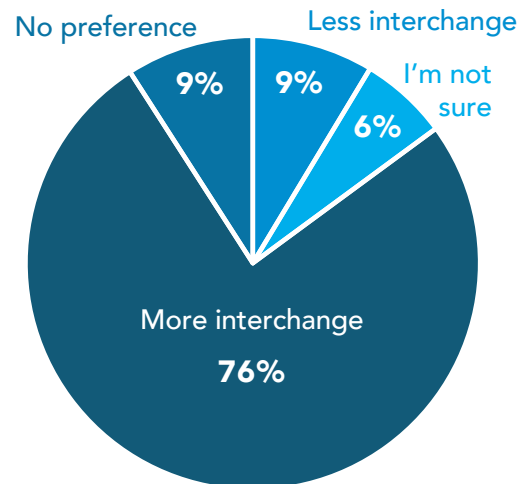
There is a trade-off between interchange and complexity that arises in many transport networks. The more a public transport network is designed to avoid interchange, the more complex it must be, and the poorer the frequency of many routes.

Respondents were asked to consider whether it would be worthwhile to incorporate more interchange if it resulted in greater access and faster journeys for most people. They were made aware that, as part of the BusConnects programme, the additional charge to interchange will be eliminated in Cork, bus stops will be improved and bus arrivals will be made more reliable.

The overwhelming majority of the respondents (76%, 836 respondents) agreed on designing a network with more interchanges to reduce journey times.

When asked why they would accept more interchange, the two main reasons mentioned were "I want the network to have higher patronage..." (415) and "I need to get to where I'm going quickly" (406).

More interchange for faster journeys?

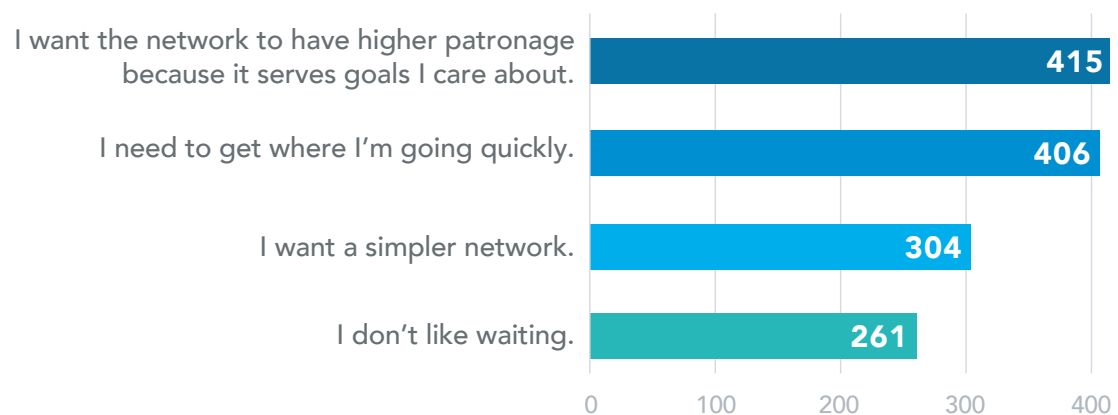


"If buses are more frequent and you're not charged for 2 separate buses then it makes sense."

"I don't want my trips to be longer than they have to be."

"I have lived in other European cities, where interchange WORKS! Bus/Metro/Tram and Bus to Bus."

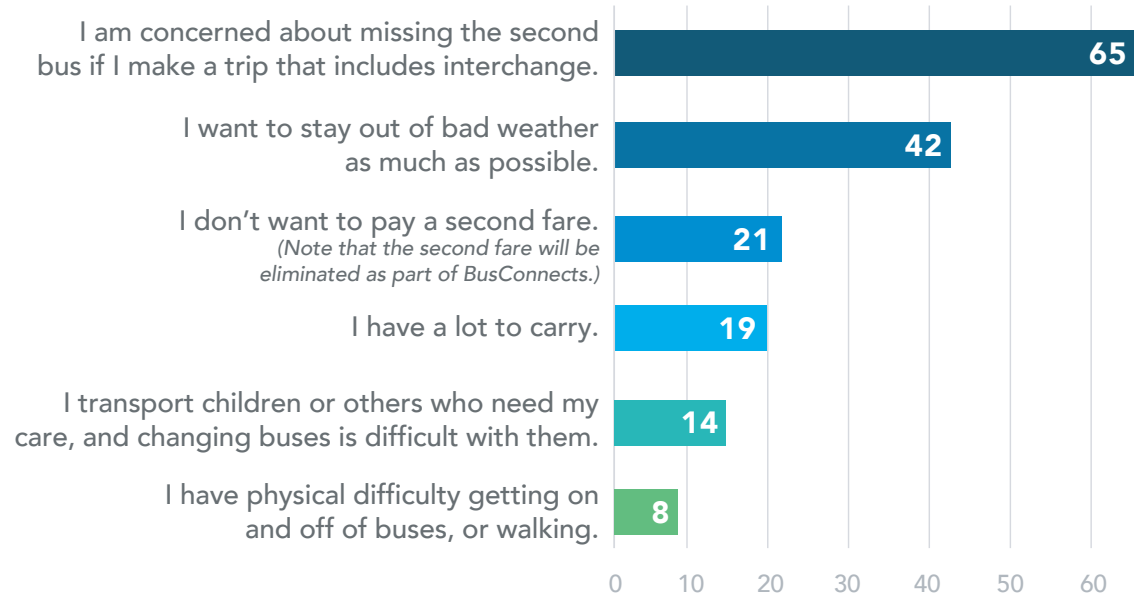
If "more interchange", why?



Those who said that they would prefer less interchange were also asked why, with a set of responses to choose from. The most frequently stated concern was fear of missing the second bus if a trip included an interchange (65). A desire to stay out of bad weather was the second-most cited concern (42).

In additional comments, a number of respondents mentioned the disruption caused by interchange and the way it impacts their ability to make use of their time whilst travelling by bus. The stress and confusion of having to interchange mid-journey were also mentioned.

If “less interchange”, why?



“With multiple buses coming and going I can get confused as to which bus is the correct bus for me.”

“Will there be seats on the second bus?”

“I like to read or get work done on the bus. I don't want to have to pack and unpack my belongings mid journey. I'd prefer an uninterrupted journey.”

General Conclusions

Overall, the majority of respondents expressed support for major changes to the bus network, and for a network designed to compete better with the use of cars, to provide shorter travel times for the most people, through more direct routes, and higher frequencies.

This support was expressed despite an awareness – expressed in free-form comments – about the disruptions and drawbacks associated with such changes.

People seemed ready to accept longer walks to more frequent services, and more interchanges between the routes as long as the network maximises the benefits to the many, reduces vehicle use and tackles the climate challenge.

3 Public Input on the Draft Network

About the Phase Two Consultation

The NTA, JWA and SYSTRA undertook a second round of public consultation in Autumn 2021, to review the Draft New Network.

The consultation took place between the 2nd November to the 17th of December 2021. The opportunity to comment on the Draft New Network was publicised through local and national media, as well as NTA and local social media channels.

A virtual public meeting was held on 30 November, comprising an information session followed by a Q&A with the planning team. The Draft New Network maps, report and other materials were available on the [BusConnects Cork website](#). During the seven-week period, the public were invited to complete an online survey.

Submissions

1,253 surveys were submitted to the NTA over the seven-week consultation period, including a small number of responses completed on paper and submitted by post. In addition, 42 emails were sent directly to NTA.

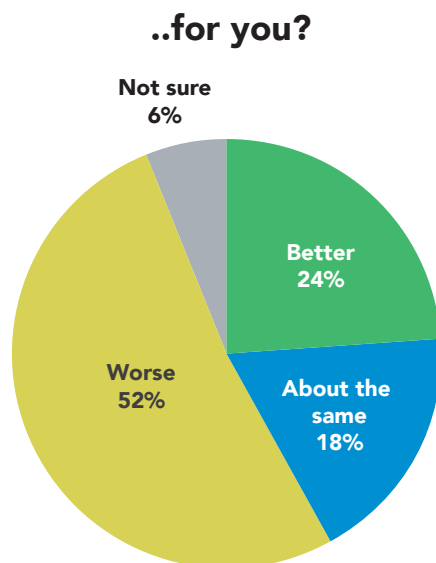
Key Findings

- 1,277 total submissions.
- 82% of respondents were regular users of the Cork bus network.
- Most respondents stated that they lived in the South West or South East suburbs of Cork City.
- A majority of respondents (52%) had concerns about the network's effects on them individually.
 - A smaller proportion (35%) believed that the network would actually be worse for the Cork area overall, while nearly the same proportion (34%) believed that the network would be better for the Cork area overall.
- 36% of respondents mentioned access to Cork City Centre.
- Many respondents mentioned access to education, either to a specific institution (like UCC or MTU) or to school/college broadly

How Did the Draft Network Compare to the Existing Network?

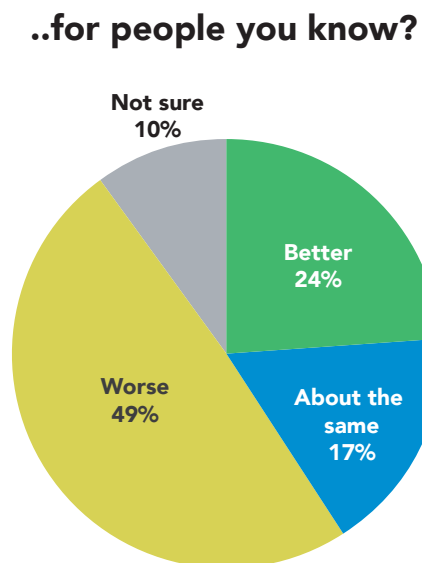
...For you?

About half of respondents stated that, for themselves, they considered the Draft New Network worse than the existing network. Around one quarter thought the Draft New Network would be better for them.



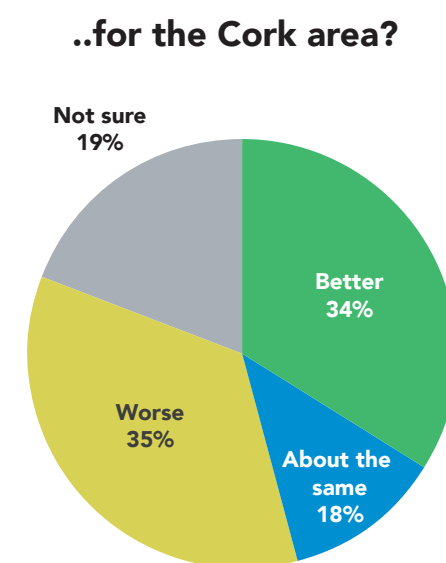
...For people you know?

When asked about how the network would perform for people they know, about half considered the Draft New Network to be worse than the existing network.



...For the Cork area?

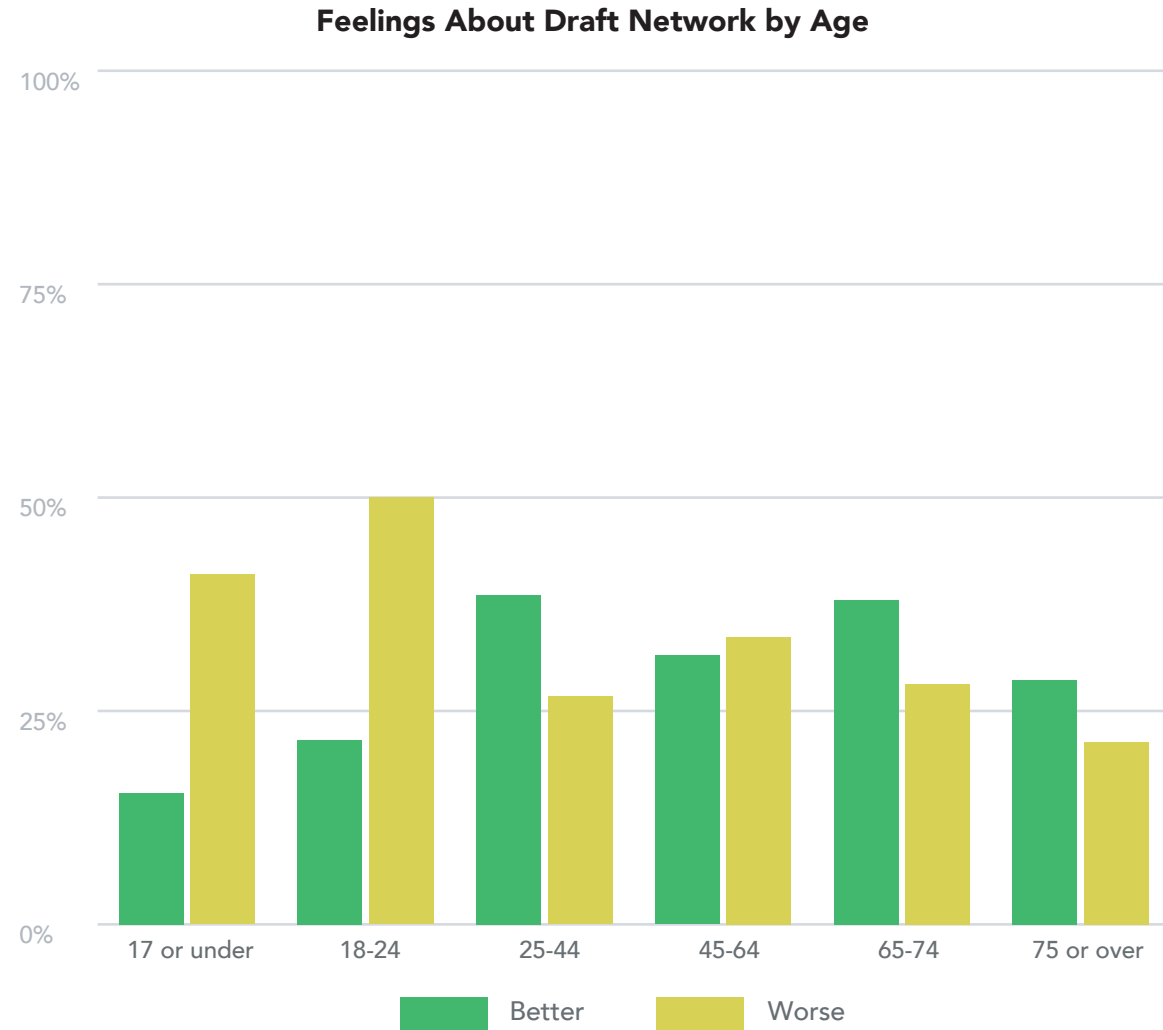
When respondents were asked how the Draft New Network would perform for the Cork area as a whole, 34% thought it would be better than the existing network.



Sentiment By Age

There was variation across the age groups in response to whether the Draft New Network was viewed as better or worse compared to the existing network.

People over the age of 65 were slightly more likely to consider the Draft New Network better than the existing network. In contrast, the majority of respondents under 25 considered the Draft New Network to be worse. This likely relates to the large number of submissions relating to bus trips to school and college, especially one-seat-ride bus service between Kent Station, UCC and MTU.



General Feedback and Responses

Convenience and Interchange

The concern most frequently raised in submissions was that journeys people are accustomed to making with no interchange or with no walk will become less convenient, comfortable, or reliable.

20% of responses mentioned issues with interchanges or lack of direct bus routes providing a “one-seat-ride.” The other type of inconvenience commonly mentioned was longer walks to reach bus stops. Some respondents expressed fear that a lack of coordination of services or poor reliability will result in long waits to interchange and longer journeys.

These journeys cited most often were to schools and colleges, Cork City Centre, CUH and Kent Station.

One important example is the journey from Crosshaven or Carrigaline, through Cork City Centre, to UCC or MTU. The existing cross-city through-route patterns of the network link Crosshaven and Carrigaline

“Personally, for me living in Crosshaven and working in UCC it means I need to take 3 buses to get to work.”

“For students in MTU, the 205 bus [Kent Station–UCC–MTU] is an invaluable service in order to get to the train station. It would put many at a huge disadvantage if this service was stopped.”

directly to MTU (and Ballincollig) via Route 220, but that (and other) cross-city through-routes are planned to change in the New Network and with the addition of Luas.

Another important example which was raised by a great many MTU students is the one-bus, short-walk link currently offered between MTU and Kent Station. In the Draft New Network, a great deal of frequent bus service would be offered between the City Centre and UCC or MTU, but the walk from Kent Station to that service would be longer than in the existing network. Avoiding the walk within the City Centre would be possible with an interchange, but some students are already making two interchanges as part of their bus-train-bus journey to university.

NTA Response

Redesigning any bus network will result in some inconvenience to existing passengers, no matter how much it increases the usefulness of the network to a large

number of people overall.

The NTA team was aware that changing the existing cross-city through-route patterns in Cork would impact those people who have built their lives around the existing routes. That said, asking people to interchange not just once but *twice*, for a journey within the CMA, should be avoided if possible. Some commenters were pointing out that flaw in the Draft New Network.

The new network is designed as an integrated set of routes to offer better frequencies and greater simplicity. Interchange will be faster and more reliable. The better frequencies and the faster interchanges will result in an increase in access to destinations by bus throughout the day, from a wider range of origins across the CMA. But improving access *on average overall* is not the same as improving access for *every single person* or every single existing bus user.

The NTA received a mixture of positive and negative feedback on each specific proposed route in the network. Changes to the cross-city through routes generated

“Increased frequency between Glanmire, the City Centre and UCC/MTU is a large positive.”

many comments, most of them negative but some positive. For some people, the revised cross-city patterns will necessitate an interchange, whilst for others the new cross-city patterns will remove an interchange that is necessary today.

Whilst overall accessibility is improved within the Draft New Network, the feedback challenged the team to examine cases in which existing one-seat-ride connections would be changed, and confirm that improvements in frequencies or route directness will ameliorate the inconvenience and waiting time of the interchange.

People who submitted feedback on the Draft New Network challenged the team to restore some of the one-seat-rides offered by the existing network. NTA was able to make design changes or increase the quantity of bus service in the network to address some, though not all, of these concerns.

Extensions and New Coverage

18% of submissions made reference to areas that are not within the CMA or were considered to be poorly served by the Draft New Network. These mainly related to areas of new development, outlying

villages or areas that are not served at all today.

NTA Response

Expanding coverage to provide geographic inclusion means spending more to reach smaller numbers of people. Reaching people in the smallest villages of the CMA, at the greatest distance from the rest of the bus network, will always be a challenge.

The new coverage services in the Draft New Network add only modestly to the total number of people and jobs within the catchment of the bus network. This despite adding many new kilometres that will be driven by bus to reach these new coverage areas.

The feedback received challenged the team to review the basis for inclusion of

“The major flaw is that there is still no route for White’s Cross and Upper Glanmire.”

Route 14 serves the western-side industrial estates [of Little Island] but does not serve the eastern side.”

some villages in the bus network whilst others are not served. Some villages were served due to long tradition, whilst other larger and closer villages were not served. Services to Waterfall and Upper Glanmire were added to the network after this review.

The new Cork bus network will be implemented in 2023 and 2024 and whilst areas of planned development have influenced the network *structure*, no routes have been drawn to serve new development areas that do not yet have residents or businesses in them. The feedback did highlight some areas where plans are well progressed and/or construction underway, such as on Little Island, and the need to serve such areas was reexamined by the team.

The new network is not expected to provide coverage of every resident or job in the CMA. There are some areas inside and outside of the CMA where services will be supplemented by the Local Link bus network.

Capacity and Crowding

The issue of capacity of bus services was raised within 5% of responses with references to current crowding on buses or

concerns that the revisions to the network will increase crowding on services.

"I am concerned that the new route servicing Donnybrook will be full by the time it reaches Donnybrook Hill coming from Carrigaline."

NTA Response

It is hoped that the New Network will attract more bus patronage. Monitoring and providing enough capacity will be important in the future development of Cork's bus network.

Especially as bus patronage continues to evolve following the COVID pandemic, the BusConnects Cork Network Implementation Group will revisit route frequencies and provide additional capacity before and after implementation if it is needed.

Longer Hours of Operation

There was a mixture of issues raised in relation to the hours of operation of the bus network. Most commonly, concerns

were raised that having a different route overnight (Route 81) than during the day (Routes 1 and 3) would cause confusion. Commenters mentioned that there was a missed opportunity to create a more extensive night bus network. There was some support for more 24-hour service to support workers and for minimum hours of service on all routes to be longer, such as from 6 am to midnight.

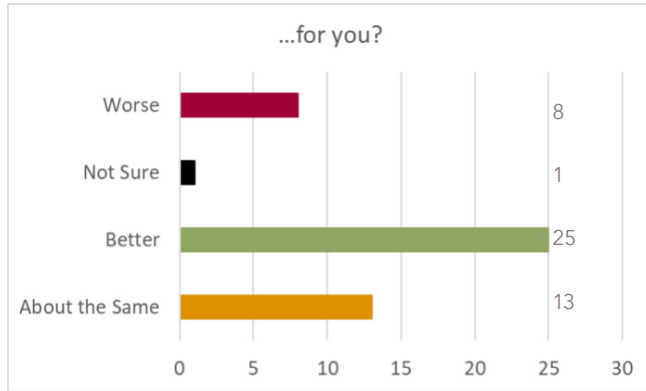
NTA Response

Whilst extending hours of operation has major cost implications, the feedback challenged the team to consider providing additional service overnight and simplifying the overnight offering so that people can learn it and remember it more easily. NTA decided to add overnight service to the north and the east, as well as to the west and the south. Route 1 (Ballincollig–Mahon Point) and Route 3 (Carrigaline–Hollyhill) will both operate 24 hours a day, seven days a week.

Feedback By Area

Cork North West Area

Overall, residents in the North West Area considered the network positively.



The map of the North West Area of the New Network, with the changes described in this section, is shown on page 90.

Concerns from residents in Farranree/Fairhill that the frequency of Route 11 is poorer than the current Route 203.

Concerns that Route 11 is too long and that it will be unreliable.

Concerns about insufficient frequency or capacity on the proposed Route 11, as well as potential problems with reliability, were examined by the team.

Route 11 will overlap with other routes as it enters Cork City Centre, and thus along most of its length there will be ample frequency provided by other routes, including near Fairfield Ave in the North West area. An increase in frequency above what was proposed would be hard to justify at this time given how few residents are near only Route 11 and no other (more frequent) route.

Some commenters noted that the existing Route 203, with a frequency of every 20 minutes, is sometimes very full and that offering only 30-minute frequency on the proposed Route 11 would lead to crowding. Yet some residents who today use Route 203 will likely use the high frequency Route 5 along Popham's Road. Accounting for both Route 5 and Route 11, the Fairhill area will have considerably more service and capacity compared to the existing network.

It is possible to improve the directness of Route 11 from Farranree to the City Centre by removing the loop to Kent Station. This will shorten journey times and partly offset the reduction in frequency for Farranree residents. No positive comments were received welcoming the Kent Station deviation proposed on Route 11.

Action Taken

Maintain Route 11 frequency as proposed but improve directness for journeys to Cork City Centre or Mahon Point by removing deviation to Kent Station.

Loss of a one-seat-ride between Mahon and Hollyhill, as the journey on the Draft New Network will involve a transfer.

As described in earlier reports, and envisaged in CMATS, introduction of an east-west light rail in Cork will necessitate changing the through-route pairings of many routes. This will inconvenience some existing passengers, whilst improving journeys for other existing passengers. It is worth doing because it allows the overall network to become more useful to a larger number of Cork residents.

It will be important to support fast and easy interchange between Routes 1 and 3 to minimise the inconvenience and additional journey time for those people who use Route 202/202A to travel between Mahon Point and the North West area at present.

Action Taken

No changes to the network.

Impressions of a loss of a direct route between Hollyhill and North West Cork as currently provided by existing Route 201.

Some commenters were under the impression that there would no longer be a route traversing Hollyhill and North West Cork. Today Route 201 operates at a very low, sporadic frequency of worse-than-hourly. In the Draft New Network, Route 5 was proposed to follow nearly the same path as Route 201 from Hollyhill to Blackpool, across North West Cork, at a vastly better frequency.

There are a small number of residents in the North West who are very close to Route 201 who will not be equally close to Route 5. For these people, nearly all of North West and North East Cork will still be faster to reach on the New Network, compared to the existing network, even with a new interchange in the City Centre or Blackpool Shopping Centre.

Action Taken

No changes to the network.

Suggestion that Route 3 be moved from Cathedral Road to Sunvalley Drive to improve directness.

A suggestion was received that Route 3 should be moved from Cathedral Road to Sunvalley Drive to provide a more direct link from Hollyhill to the City Centre. Cathedral Road has many residences and is where the existing Route 202/202A runs. Considering where the greatest numbers of residents and jobs are located, what trips are currently made within the CMA, and existing patronage patterns, the team decided that removing a frequent and high-patronage service from Cathedral Road would likely raise many objections from existing passengers and would reduce the usefulness of the network to residents overall.

Action Taken

No changes to the network.

Suggestion that Route 5 be adjusted to operate along Mount Agnes Road rather than Knockfree Ave, to serve more jobs and shops.

Some people suggested that Mount Agnes Road has more activity (including shops) than Churchfield Hill/Knockfree Ave and that Route 5 would be useful to more people and for more journeys if it used Mount Agnes Road.

Action Taken

Alter Route 5 to follow Mount Agnes Road instead of Churchfield Hill/Knockfree Ave.

Enthusiasm for Route 52 and the provision of service to Whitechurch with requests for frequency improvements.

Requests to extend Route 52 to Glenville during midday as well as peaks.

Multiple residents of Glenville wrote to request more frequent bus trips to Cork City on weekdays as well as weekends. In the existing network and on the proposed Route 52, bus trips are offered only during weekday peaks and twice on Saturdays.

NTA considered whether serving a village of Glenville's size, outside of the Cork Metropolitan Area (CMA), at such a long distance from the rest of the bus network, can be justified given high cost of covering all of that distance. Other villages of similarly small size at a similarly long distance from Cork are not included in the PSO bus network at all, even a few such villages inside the CMA. NTA therefore decided that the low level of service proposed to Glenville is all that can be justified at present, and is fair in the context of other similar villages.

Whitechurch is a small village inside the CMA, and considerably closer to other busy places, and as a result it is planned to receive a greater frequency of service than Glenville. NTA reflected on whether the number of residents in Whitechurch can

justify a greater frequency than was shown in the Draft New Network, and concluded that it cannot, and that what was proposed is fair in comparison to villages of a similar size and a similar distance from the city, elsewhere in the CMA.

Action Taken

No changes to the network.

Requests that Kilcully be served by adding a deviation or loop to Route 52.

Consideration was given as to how Kilcully might be served by bus. A few Kilcully residents requested that the proposed Route 52 serve St. Catherine's cemetery and residences on Kilcully Road en route to Whitechurch and Carrignavar. They proposed a one-way loop service, but a one-way loop would require Kilcully residents (and others) bound for the city centre to reach it via Carrignavar (or, during rush hours, via Glenville), a rather indirect journey.

Instead, the NTA team determined that a deviation along Kilcully Road bound for Whitechurch and then Carrignavar would be sensible. This will make the route slightly longer and slightly less direct for people in Glenville, Whitechurch and Carrignavar, but will benefit residents of Kilcully and city residents who wish to visit the cemetery.

Action Taken

Lengthen Route 52 to connect Carrignavar and Kilcully via Old Whitechurch Road.

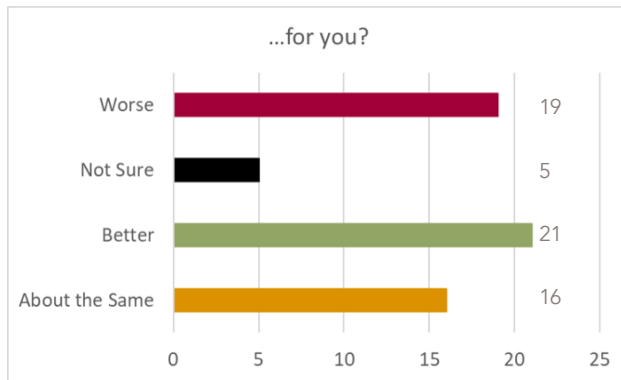
Summary of Changes for the North West Area

The following changes have been agreed by the NTA team as an outcome of the 2021 Consultation Process:

- **Route 3:** Operation extended to 24 hours.
- **Route 5:** Minor route alteration to serve shops and job areas along Mount Agnes Road.
- **Route 11:** Directness of route to City Centre and Mahon Point improved through removal of loop around Kent Station.
- **Route 52:** Route alteration to serve Kilcully before following Old Whitechurch Road to Whitechurch and Carrignavar.

Cork North East Area

There was a mixture of responses from residents in the North East Area (those who listed 'Cork North East Suburbs' or 'Glanmire' as where they live). Those who considered the Draft New Network to be better numbered slightly more than those who considered the network worse or about the same.



The map of the North East Area of the New Network, with the changes described in this section, is shown on page 91.

Suggestions that Route 15 as opposed to Route 2A should be the higher frequency service between Glanmire and Cork City.

Concern that roads used by Route 2A are not suitable for high volumes of buses.

Many positive comments on the increase in frequency and improvement in link-ages between Glanmire, the City Centre and UCC/MTU, but concerns about journey time delays through Mayfield.

The suggestion to change the route of the 2A was examined by the team. Three factors make Route 15 a worse candidate for high frequency than Route 2A:

- There are housing, shops and other activities along the corridor of the proposed Route 2A that warrant the increase in frequency over what exists today.
- Between the city centre and Glanmire, Route 15 passes close to many fewer residents than does the proposed Route 2A. It passes close to employment areas, but poor pedestrian infrastructure (especially around the N8) depresses demand for bus service in those areas.

- By integrating with the Route 2B to Mayfield, a very high frequency can be provided efficiently along Summerhill North. That combined frequency would be lost if Route 2A had reduced frequency in favour of Route 15 as suggested by some respondents.

However, within Glanmire, Route 15 can serve a greater number of residents by running through Castlejane rather than along the R639, for the short distance between Church Hill Road and the R615.

Bus Éireann and City Council consider that Route 2A is operable as shown in the Draft New Network. Overall there is a significant increase in the level of bus service to Glanmire proposed compared to the existing network and, along with future bus priority proposals that will be part of the BusConnects programme, this will offset some of the concerns about delays for journeys through Mayfield.

Action Taken

Maintain frequencies planned for Routes 2A and 15. Modify Route 15 slightly to pass through Castlejane.

Requests that a direct bus link should be provided between Glanmire and Little Island, or that trips are better facilitated through interchange than what was proposed.

In relation to the request for a unique route linking Glanmire and Little Island to one another directly, while there are people who travel between those two areas there are unlikely to be the very *high numbers* of journeys needed, all day and all week, to sustain an additional route linking the two directly. This may change as both Glanmire and Little Island develop further.

Route 30 serves Little Island and Route 15 from Glanmire operates on the same roads towards Kent Station and the City Centre. Whilst passengers will have to travel back on themselves to interchange between the routes to travel between Glanmire and Little Island, priority measures should make those movements fast, and Route 30 represents a significant improvement on bus service to Little Island compared to the existing network.

These investments in frequency and speed on high-demand corridors will improve the overall the connectedness between Glanmire and Little Island compared to the existing network, whilst also improving connectedness between both places and

other areas in Cork.

Improvements to pedestrian infrastructure on and alongside the N8 (which is currently impossible to cross on foot) would allow some passengers to make an interchange there, which at times would make someone's journey between Glanmire and Little Island faster.

Action Taken

No changes to the network.

Requests that bus services be extended to Upper Glanmire and/or White's Cross.

The suggestion to extend services to Upper Glanmire and White's Cross was examined by the team. It was considered that there was merit in providing a new service to Upper Glanmire and White's Cross. The team determined that six daily trips, on weekdays, would be proportionate to the number of existing and planned residents in the area, and fair in consideration of the level of service provided to other CMA villages of similar size and distance from Cork.

Action Taken

Introduce Route 54 operating between Upper Glanmire and Cork Bus Station via White's Cross, with six daily trips on weekdays.

Desires to serve new growth areas in North Cork such as Kilbarry and Ballyvolane.

Concern at the loss of a one-seat-ride between North Cork and Douglas as provided by the existing Route 7.

In response to this feedback, the network in the North and North East suburbs of Cork was reviewed.

This is a very challenging part of the network to design, as the road configuration and the low-density development do not lend themselves to central bus corridors, nor to concentrating service into frequent routes, as is possible elsewhere. There are many cul-de-sacs and natural barriers created by topography and water courses which prevent people from walking to nearby service. This lack of pedestrian connections forces bus routes to be more circuitous, longer, and as a result more costly to operate at any given frequency.

A small number of submissions raised concerns on the loss of direct bus links between the area and Douglas.

In the Draft New Network, Route 10 was proposed to connect Ballyvolane, Dublin Hill, Blackpool, Kent Station and the City Centre, and to then go onwards to CUH. The route to the City Centre to interchange

with other services, such as routes to Douglas, would be circuitous.

The team decided to modify Route 10 to provide for more a direct route to the City Centre and to shorten peoples' journeys from existing and new housing developments in Ballyvolane and Dublin Hill to the centre, as well as to all other routes they may want to interchange with, such as the very frequent Route 3 to Douglas.

To make Route 10 more direct, the deviation to Kent Station was removed, and more frequent service between the City Centre and Kent Station was added as well to make that interchange easier for Kent-bound residents.

For those wishing to avoid a walk or an interchange, Route 21 will serve Kent Station from both Ballyvolane and Dublin Hill. However, Route 21 in the Draft New Network included a deviation to provide coverage to the Barracks area on Old Youghal Road. To improve the directness of service on Route 21 between Ballyvolane and Kent Station, this deviation of Route 21 has been removed and replaced by the new Route 23.

There were several submissions in relation to areas served by the existing Route 207 which operates a large one-way loop

around Ballyvolane and Dublin Hill. The proposed Routes 21/22 and Route 10 will operate as two-way loops which may not have been understood by respondents. This means that for some residents they will have the option of travelling in one direction or the other, essentially doubling their frequency of service or reducing the length of their journey on the bus, either way saving them time.

Ballyhooly New Road is set to accommodate more housing development in the near future. In anticipation of this development bus services on Ballyhooly New Road have been improved. Route 10 will run on the section south of the junction with Dublin Hill Lower every 30 minutes providing connections to Blackpool Shopping Centre and the City Centre. Route 54 will also operate on Ballyhooly New Road continuing north to serve Upper Glanmire. As future housing and associated development in this part of the city is completed the NTA will evaluate the requirements for further network improvements.

Action Taken

- Alter Route 10 to provide for quicker journeys between Ballyhooly, Ballyvolane, Dublin Hill, Blackpool, Cork City Centre and southern areas such as Douglas.

- Remove deviation on Route 21 to make journeys to Kent Station more direct.
- Introduce new hourly Route 23.

Concerns that the area between Lower Glanmire Road and Old Youghal Road are not served.

Some concern was raised that there is an area between Old Youghal Road and Lower Glanmire Road that was not directly served by bus in the Draft New Network. There are a number of important destinations in this area and an aging population.

Unfortunately, there is no suitable road for a bus route, as the Middle Glanmire Road is too narrow for two-way bus operation.

By sending Route 21 along Murmont Avenue every 30 minutes, the New Network will provide better-frequency service as close to this area as is possible.

Action Taken

No changes to the network.

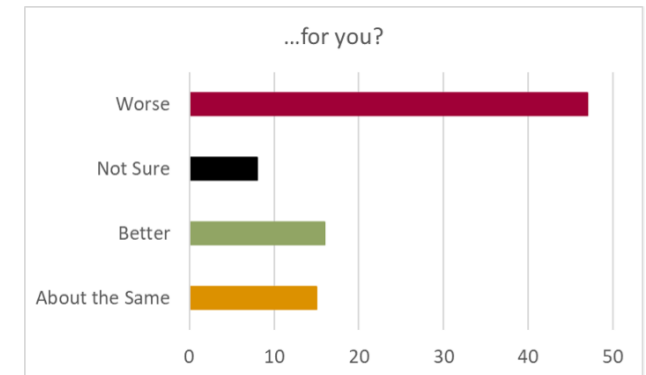
Summary of Changes for the North East Area

In summary, the following changes have been agreed by the NTA team as an outcome of the 2021 Consultation Process:

- **Route 10:** Directness of route to City Centre improved through removal of loop around Kent Station
- **Route 15:** Small change to route to serve Castlejane residences in Glanmire
- **Route 21:** Deviation along Old Youghal Road to Barracks area removed and placed in new Route 23
- **Route 23:** New hourly route introduced from Old Youghal Road/Barracks area to the City Centre and Black Ash Park and Ride
- **Route 54:** New route from Upper Glanmire to Cork Bus Station with six trips per weekday
- **Routes 15 and 30:** Western terminus extended to MTU via CUH

Cork South East Area

Just over half of residents in the South East Area considered the Draft New Network to be worse than the existing network.



It should be noted that one aspect of the network changes was not clearly communicated and there were many misunderstandings of the operation of Route 6 and Route 8, which will combine to provide a frequent two-way loop. Of the 80 comments in relation to Routes 6 and 8, at least 25 were clearly based on misconceptions. It is likely other comments were as well, but the comments were not detailed enough to be certain.

The map of the South East Area of the New Network, with the changes described in this section, is shown on page 93.

Concerns about students not being able to get to Christ King Secondary School (on South Douglas Road next to South Link Road) or Chríost Rí school (in Turners Cross on Capwell Rd).

Many submissions were received relating to students' access to the schools along the South Douglas Road.

A number of proposed routes will provide access within a 10 minute walk. Depending on the school, these short walks would be from bus stops on Douglas Road, or the bridge at South Link Road, or Church Street in Douglas. In addition, Route 7 will operate along South Douglas Road at a frequency of every 20 minutes.

The misunderstanding of the operation of Routes 6 and 8 clearly affected many of the comments received. Many commenters had the impression that a student could not, for example, ride Route 6/8 from their home in Grange along Kinsale Road to Christ King School on S. Douglas Road. Others had the impression that a student could not ride the other direction, from Frankfield through Douglas to the Douglas Community School. Both will be possible, with high frequency service and no interchange.

The team reviewed the routes, and it was agreed that efforts would be made

to place bus stops on Routes 6 and 8 as close as possible to the schools on South Douglas Road. Together with the opportunity to interchange with Route 7 in Douglas Village, the team determined that the New Network provides good accessibility for the schools, and that many students in the area who are poorly served by the existing network (and may not use the bus today) will find that the New Network makes their journey to school easier by bus.

Action Taken

Consideration to be given to the location of bus stops in proximity to schools as part of the implementation of Routes 6 and 8. Routes 6 and 8 have been consolidated as a single Route 6. No changes to the network.

Comments that the proposed frequency of service on Route 9 to Jacobs Island and along Beaumont Drive (every 20 minutes) was insufficient.

Several submissions were made in relation to Jacobs Island and, in particular, the frequency of service proposed on Route 9. Some people expressed concern that buses would be crowded.

Based on the feedback and in considering the operation of the network as a whole, the team was considering an additional through-route through the City Centre. It was decided to merge the operation of Route 4 and Route 9, providing a radial through-route from Lehenaghmore to Jacobs Island, which necessitates matching the frequencies and therefore results in a higher frequency (every 15 minutes) for Jacobs Island and Beaumont Drive.

Action Taken

Combine the routes serving Lehenaghmore/Pouladuff Road and Jacobs Island/Beaumont drive. This new through-route will operate from at a frequency of every 15 minutes.

Concerns that Route 3B from Carrigaline will be full when it approaches Donnybrook and Douglas, and residents of those areas will not be able to get seats.

There were a significant number of submissions concerned with the availability of capacity in Donnybrook and Douglas on services originating in Carrigaline.

The Draft New Network included an increase in the amount of service between Cork City Centre and Carrigaline, reflecting the recent population growth. In addition, the team added more express trips per hour between Cork and Carrigaline, resulting in even more capacity in the New Network.

There should not be crowding on any routes to the point that numerous residents cannot get seats for long journeys. The routes of the New Network will be monitored after implementation, and over future years, and NTA commits that additional capacity will be provided if patronage is sufficiently high to cause crowding.

Actions Taken

Increased frequency between Carrigaline and Cork City Centre during peak times to every 20 minutes, on Route 42X.

Concerns about the reduction in bus frequency on Blackrock Road, Beaumont Drive and through Blackrock Village.

Concerns about the reduction in bus frequency in Ballinlough.

A number of respondents raised concerns about reductions in frequency and capacity in certain parts of the network, particularly along the Blackrock Road and in Ballinlough Road.

Feedback during the first phase of public consultation regarding how to design the network, indicated that most respondents favoured investments in more frequent services that require longer walks from some areas, rather than investments that are spread equally onto all routes and all roads. This input guided the design of the network in Ballintemple, Ballinlough, Blackrock and Mahon, and the decision to concentrate new service investments onto those roads that are close to the greatest number of residents and jobs. This concentrated service also helps the greatest number of passengers benefit from the bus priority measures that will be delivered on key corridors as part of the BusConnects programme.

In many cases, a slightly longer walk will provide access to a much better service, offsetting impacts. For example, from

Ballinlough, more frequent service is available on Boreenmanna or Douglas Roads, a maximum of 600 metres away.

For those people who are unable or prefer not to walk further to reach a more frequent service, less-frequent routes have been maintained on roads such as Blackrock Road and Ballinlough Road.

Action Taken

No changes to the network.

Requests to improve frequency on Route 14 and better facilitate interchange for trips between Carrigaline /Douglas and Mahon.

There was a suggestion to improve the frequency on Route 14 to provide for access to Mahon through better interchange with radial services, such as Route 3 from Douglas and Carrigaline. It was also suggested that Douglas could become a major focal point for interchange with a number of routes converging. A frequent Route 14 would also aid in journeys to and from school, as interchanges with radial routes such as Routes 4, 5 and 6/8 would become faster. It may also take pressure off of some radial routes, such as Route 9 which was described above with regards to some commenters capacity worries.

A frequent Route 14 has wider benefits for the network and the CMA as a whole, because it creates a “frequent grid” on which a great number of places can be connected with a single quick interchange.

The team determined that the concentration of demand along the section of Route 14 from CUH to Mahon Point warrants the additional expenditure required to double the frequency for that segment of the route, from every 30 minutes to every 15 minutes.

Action Taken

Improve the frequency of Route 14 to every 15 minutes between CUH and Mahon Point.

Concerns due to traffic congestion on Monahan Road, particularly when events are on at Páirc Uí Chaoimh. Questions about why Monahan Road would not have frequent service, when bus priority measures have been taken there.

The NTA team considered this feedback and decided that using Centre Park Road will provide for greater overall access to service (and in particular to frequent service) given its proximity to major imminent development in the Docklands. Frequent service concentrated on Monahan Road would also be too close to Blackrock Road, and the two routes would inadvertently “compete” with one another for trips to mostly the same destinations (City Centre and Mahon).

As for all routes, operational issues will be monitored post implementation to identify any persistent delays or reliability problems, and appropriate action will then be taken which may comprise traffic management changes or adaptations to the network.

Action Taken

As described above, frequency of Route 9 on Centre Park Road improved to every 15 minutes. No other changes to the network.

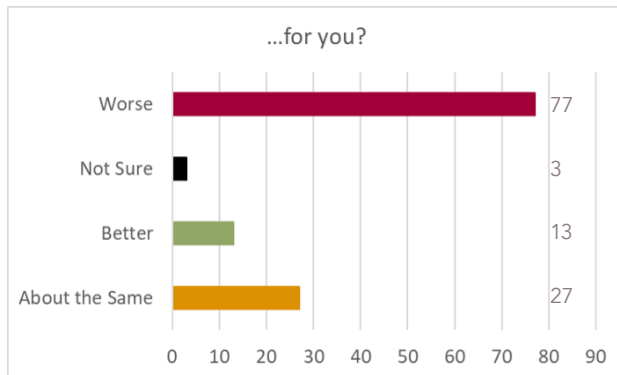
Summary of Changes for the South East Area

The following changes have been agreed as an outcome of the 2021 Consultation Process.

- **Route 3:** No changes to Route 3 itself, but capacity concerns about Route 3 addressed in part by adding two trips per hour, during peaks, to Route 42X between Carrigaline and Cork City Centre.
- **Routes 6/8:** Renamed to Route 6 and shown more clearly as a two-way loop in the New Network materials to avoid confusion.
- **Route 9:** Merged with Route 4 to offer 15-minute frequency between Jacobs Island and Lehenaghmore via the City Centre.
- **Route 14:** Improved frequency from every 30 minutes to every 15 minutes between CUH and Mahon Point.
- **Route 42X:** Improved frequency from every 60 minutes to every 20 minutes at peak between Carrigaline and Kent Station.

Cork South West Area

Two thirds of residents in the South West Area considered the Draft New Network to be worse.



It should be noted that the network changes were not clearly communicated and there were many misunderstandings of the operation of Route 5. Many commenters had the idea that Route 5 would be an enormous one-way loop, when in fact it will be a two-way loop. Of the 77 comments in relation to the network being 'worse', 13 referenced this misconception. It is unknown how many other comments about the network being "worse" were also based on of the proposal.

The map of the South West Area of the New Network, with the changes described in this section, is shown on page 92.

Loss of direct bus route between MTU, CUH or UCC; and Kent Station.

Loss of a one-seat-ride between MTU and UCC.

Concerns on the level of bus service to MTU.

Concerns that Route 1 will not have capacity for residents west of MTU, given the high demand from residents in Ballincollig.

Regarding the loss of bus routes between Kent Station and MTU, UCC or CUH, it was noted that the frequent Route 2A provides a direct link to MTU/UCC/CUH within a 500m walk of the southern entrance to Kent Station. However, considering that there would be further walk distances to train platforms and that some passengers may be making an additional interchange at the other end of their train journey, the team considered options to connect Kent Station to these major destinations without an interchange and with a shorter walk.

Routes 15 and 30 in the Draft New Network were proposed to stop at Kent Station from the east (Glanmire and Midleton, respectively) with a combined 15-minute weekday frequency. The team decided to extend Routes 15 and 30 across the City Centre to UCC, CUH and MTU.

This will provide one-seat-rides from those areas to Kent Station, as well as adding more capacity and frequency between them and the City Centre.

The lengthening of Routes 15 and 30 will also benefit Glanmire, Midleton and other intermediate destinations through the provision of a direct bus service to the Cork South West Area.

In relation to the loss of a one-seat-ride between MTU and UCC, Route 1 on Model Farm Road is within a 400m walk of MTU via a footpath and provides direct access to UCC via College Road and O'Donovan Road. Routes 2A, 15 and 30 will connect MTU and UCC along an alternative route with shorter walk distances depending on the origin and destination of trips within the MTU / UCC campuses.

Action Taken

Extend Routes 15 and 30 to UCC, CUH and MTU.

Disappointment that no proposed routes would extend to Waterfall Village.

The suggestion to provide a new bus service for Waterfall Village was raised numerous times and the team agreed that the imminent development of new housing in Waterfall justifies provision of a new route there. Six times per day on weekdays and Saturdays, a Route 10 bus will continue past CUH as far as Waterfall Village via Waterfall Road. This will connect the village to CUH, Cork City Centre, Blackpool and Ballyvolane.

Action Taken

Add six daily trips on Route 10 that extend to Waterfall Village.

Loss of a one-seat ride provided by the existing Route 214 particularly from Togher to St. Patrick's Street.

Loss of direct link from Lehenaghmore to schools in Turners Cross as currently provided for by Route 203.

A number of submissions were made raising concerns on the loss of the direct link from Togher to the western side of the City Centre (especially St. Patrick's Street) as currently provided by Route 214.

Whilst there was some confusion regarding the operation of the proposed Route 5 and incorrect assumptions that it would comprise a one-way loop, Route 5 will take a more circuitous way into the City Centre and won't bring people as close to Kent Station or St Patrick's Street as the existing Route 214.

Consideration was given by the team as to the potential to revise Routes 5 and 4 to maintain the historical continuous radial pattern on Togher Road. However, it was considered that there are wider benefits of crossing over two high frequency routes and facilitating the opportunity for interchange between Route 4 and Route 5, for example allowing people living in Lehenaghmore access to UCC and St. Patrick's Street with a single frequent interchange, whilst people in Togher have easy

access to the City Hall area with a single interchange.

Also, Route 5 will serve Merchant's Quay which is within a short walking distance of St. Patrick's Street. Route 5 is proposed to operate at a frequency of every 15 minutes compared to the 214 which currently has a frequency of every 20 minutes. This better frequency will offset some of the journey time impacts to some passengers.

A very small number of survey respondents raised concerns on the loss of direct bus service between Lehenaghmore and Turner's Cross for children going to school, currently provided by Route 203 every 20 minutes. Redesigning the network to improve access for all residents will inevitably impact on some existing bus users, and this is one such example.

With regards to the connectivity from Lehenaghmore and Turners Cross, this will be provided for by way of interchange between Routes 4 and 5 which both operate at a high frequency of every 15 minutes, resulting in an average wait to interchange of 7.5 minutes.

Whilst this will inconvenience some passengers who use the existing Route 203 to travel between Lehenaghmore and Turners Cross, the increase in frequency will

partially offset the impact on journey times for these students. The reason the team judged this change worthwhile, despite the negative impact on a small number of students, is that the higher frequency routes and the new service patterns will allow students to travel to many more schools than they could reach on any single route. The redesigned network will improve access to school, on average, for all students in Cork, including those who do not use the bus today.

Action Taken

No changes to the network.

Concerns that some areas where many older people reside (Deerpark and Friar's Walk) would not be covered by even an occasional service.

Whilst there is a dense network of streets in the South West Area allowing people to walk to the main bus routes on Pouladuff and Connolly Roads, feedback was received in relation to the need to continue to serve the area in between these two roads. This area is today covered by Route 209A, which makes just two round trips per day. The team decided to provide a new but infrequent route in this area, so that people there can reach the City Centre with a very short walk. A new Route 23 will operate once per hour between Black Ash Park & Ride and the barracks on Old Youghal Road, via Turner's Cross, Deerpark Road, St. Patrick's Street and Kent Station.

Action Taken

Introduce new Route 23 between Old Youghal Road and Black Ash Park & Ride, via Deerpark Road and St. Patrick's Street.

Requests for service on Togher Road between Lehenaghmore and Doughcloyne, and on Manor Road east of Lehenaghmore Road.

Some respondents requested that either Route 4 or 5 double-back to get closer to residents and the industrial estate on Togher Road between Lehenaghmore and Doughcloyne. Other residents requested that Route 4 on Lehenaghmore Road deviation into the Manor Farm estate.

The team evaluated the walking distances that residents in these two areas will have to bear to reach either of these frequent routes. The team also evaluated the number of residents who would benefit from the deviations and the number of passengers who would be delayed by the deviations. The team decided not to introduce either deviation at this time.

In the future, as Cork City grows outwards to the south, Togher Road may become a logical place for Route 5 to branch and divide its frequency. This depends on the type of development that occurs to the south, and whether and where it is concentrated.

To improve access to the bus for residents of Manor Farm, bus stop and pedestrian improvements should be considered on Lehenaghmore Road at Manor Road. This

will be addressed in the Ancillary Issues Report.

Action Taken

No changes to the network as currently proposed.

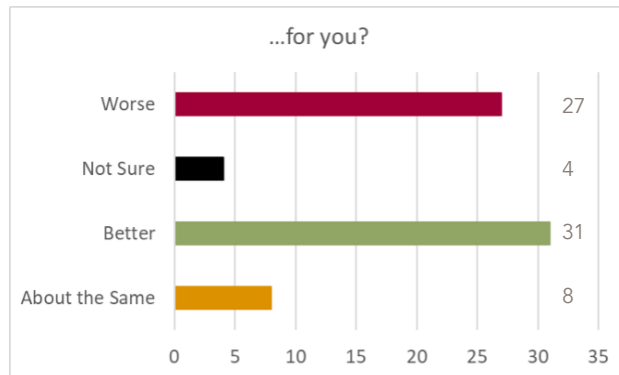
Summary of Changes for the South West Area

The following changes have been agreed by the NTA team as an outcome of the 2021 Consultation Process.

- **Routes 15 and 30:** Extended from Kent Station to MTU via the City Centre, UCC and CUH.
- **Route 23:** New route proposed to operate between Black Ash Park & Ride and Old Youghal Road/barracks via Tramore Road, Pearse Road, Deerpark Road, St Patrick's Street, Kent Station and Summerhill North.

Cork Outer East Area

There was a fairly even split between residents of the Cork Outer East Area (those who listed 'Carrigtwohill', 'Cobh', 'Midleton', 'Little Island' or 'Glounthaune' as where they live) who considered the Draft New Network to be better and those who considered it to be or worse than the existing network.



Over a third of the respondents who indicated that the Draft New Network would be worse referred to the lack of a one-seat-ride from Kent Station to UCC/MTU. The comments related to students travelling from the outer east areas by rail and availing of bus connections to reach their respective colleges.

This issue was described in an earlier section as part of the Cork South West Area. Additional service, requiring shorter

walks, will be provided between Kent Station and UCC/CUH/MTU by way of an extension on Routes 15 and 30 resulting in a combined 15 minute frequency.

The map of the Outer East Area of the New Network, with the changes described in this section, is shown on page 95.

Suggestions there should be a bus route between Cobh and Carrigtwohill.

Consideration was given to whether there is sufficient demand for travel between these two places to warrant a unique bus route connecting only these two places, in addition to the rail connection already provided. Cobh is also connected to other places in the CMA via rail, a commercial bus service (Cobh Connects) and a ferry. The team concluded that there is not sufficient demand today, but should this change in the future the NTA may re-evaluate options for connectivity between these two places.

Action Taken

No changes to the network.

Mixed response to the proposed Cobh route with many welcoming the addition to the network and others suggesting it should serve Cobh Town Centre more directly and areas to the north of the town such as Ticknock Shopping Centre.

Comments on the proposed Cobh Town service were considered in detail by the team. Cobh is a challenging environment for bus operations with many narrow roads and steep topography, especially in the busiest part of town near the centre. It was not possible to find an efficient way to serve the northern part of Cobh (in particular, Ticknock) whilst maintaining the coverage and frequency of services as proposed and welcomed by many respondents. Similarly, no suitable routes were identified to increase the penetration of the bus service into Cobh Town Centre.

In the future, as Cobh develops further to the north, a branched route that includes Ticknock, or a two-way loop using the northerly road around the town, may be worth considering. However, either would require doubling the operating and capital expense of the route already planned.

Action Taken

No changes to the network.

Suggestions that Route 30 buses be deviated through northern parts of Carrigtwohill and potentially connect with the train station.

Support for the proposed route through the Business and Technology Park in Carrigtwohill.

With this feedback in mind, the network in Carrigtwohill was reviewed including consideration of new development areas. Route 30 is considered by some to be already too meandering for the long journey many of its passengers will be making. Additional deviations would cause longer journeys for all passengers whose trips did not start or end in northern Carrigtwohill. There would also be a risk that the route to northern part of Carrigtwohill would duplicate and unintentionally compete with the rail service, causing inefficiency. The team decided that deviating Route 30 to northern parts of Carrigtwohill would compromise its directness and was not appropriate given the rail service available to many people in the northern area.

Action Taken

No changes to the network.

Enthusiasm for the later evening service to Midleton.

Many commenters expressed their support for the later evening bus service proposed on Route 30 as part of the Draft New Network.

Action Taken

No changes to the network.

Suggestions that bus routes should better connect with Little Island train station.

Concerns that eastern parts of Little Island were not well served.

There were a number of submissions suggesting that better connectivity between bus and rail was required at Little Island. This matter was considered at length by the team. It is understood from Cork County Council that an improved pedestrian linkage from Little Island Train Station across the N25 to northern parts of Little Island will soon be provided. This will allow people to reach the train station more quickly by foot than by waiting for a bus route.

Commenters and Cork County Council staff also provided updated development information which indicated that there will be new demand for public transport as far east as Courtstown. As a result, the team decided that Route 14 should be extended to the east of Little Island as far as Courtstown.

Routes 14 and 30 were also revised slightly on Little Island to make Route 30 less circuitous for those people riding through between eastern towns (such as Carrigtwohill or Midleton) and Cork.

Action Taken

- Revise Route 14 to operate from Courtstown Industrial Estate through northern Little Island.
- Revise Routes 14 and 30 to make Route 30 more linear on Little Island.

Requests that Routes 32 and 33 be operated at a better frequency to better serve areas south of Midleton. Requests that bus arrivals and departures on these routes be timed with train arrivals and departures.

Routes 32 and 33 were proposed to operate at a better frequency in the Draft New Network compared to the existing network. The team considered whether greater increases than what was proposed in the Draft are warranted, but concluded that they could not be justified at this time.

It may be possible to time some bus arrivals and departures with the trains. This will depend in part on whether the train schedule lines up with the trip time of these routes, and also on how much time the trains and the buses need, respectively, to layover at the Midleton station between arriving and departing.

In addition, at some times of day the desire to time Route 33 connections with the train may conflict with the desire to extend that route west in the mornings and afternoons to provide school service in Ballintubbrid.

Action Taken

No changes to the network.

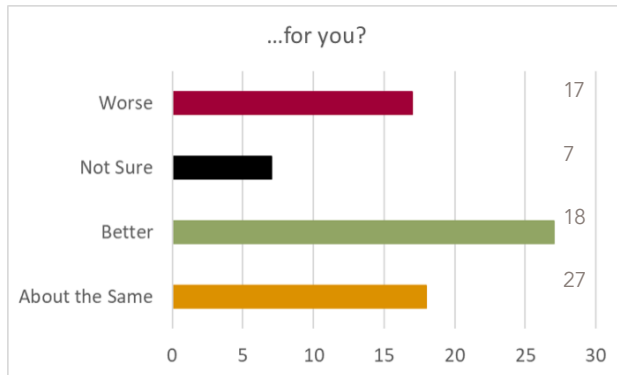
Summary of Changes for the Outer East Area

The following network changes have been agreed by the NTA team as an outcome of the 2021 Consultation Process:

- **Route 14:** Extended to Courtstown on Little Island. Modified to travel via Eastgate Retail Park, Eastgate Road and a new road link.
- **Route 30:** Given a more linear pattern on Little Island, in consideration of people riding through, facilitated by the change to Route 14.

Cork Outer West Area

The majority of residents in the Cork Outer West Area (those who listed 'Ballincollig', 'Blarney', 'Tower', or 'West Cork' as where they live) considered the Draft New Network to be better or about the same as the existing network.



The map of the Outer West Area of the New Network, with the changes described in this section, is shown on page 96.

Support for Route 53 with numerous requests to increase frequency

Support for Route 16/16L with some requests to increase frequency

A number of submissions from Blarney, Tower, and Kerry Pike welcomed the planned routes but requested better frequencies.

Many of the routes in this part of the network are very long, covering large areas with discontinuous development. The length makes it costly to provide high frequency, while the discontinuous development pattern means that fewer people are benefiting from the high frequency than when such service is provided along a continuously dense corridor.

As is, the New Network will provide an increase in the level of bus services in this part of the City. As the areas of Kerry Pike and Blarney continue to develop, there may be justification to support in frequency, longer hours of service or additional days of service.

Action Taken

No changes to the network.

Suggestions that Route 53 should enter the City via Shanakiel and Western Road, serving UCC

In relation to suggestions that Route 53 should enter the City via Shanakiel and Western Roads, this would leave a gap in coverage on Sunvalley Drive.

Many of the submissions on this matter related to access to UCC. For residents in Blarney and Tower and along Route 16L they will also have the opportunity to interchange in Ballincollig with the very high frequency Route 1. Thus, they will be able to reach UCC by interchange to a very frequent route either in the city centre or in Ballincollig, by riding Route 16/16L in one direction or the other, depending on the timing of their trip.

Action Taken

No changes to the network.

Suggestion that routes in Blarney should be extended north along Station Road to serve new development areas.

There were some suggestions to extend services northwards through Blarney along either Waterloo Road or Station Road. This extension would be a deviation off of the direct path through Blarney to Ballincollig, and as a result the team decided its costs to other potential patrons outweigh the benefits to the potential patrons living or working on those roads.

In the future, consideration could be given to extending Route 53 along Station Road. It would be necessary to find a suitable terminus and turnaround facility for buses, and a place for bus drivers to take a break, for such an extension to be viable. Whether this extension would be possible would also depend on how many minutes it added to the round-trip driving time from Cork Bus Station, and whether that addition disrupted any timed connections between Route 53 and other routes at the Station.

Action Taken

No change to the network.

Enthusiasm for the new Ballincollig – Mahon through-route pattern on Route 1.

The provision of bus service on Castle Road in south Ballincollig is welcomed.

Some suggest that the branch point on Route 1 should be further west, whilst others suggest that it should be further east.

Concerns that the frequency to Classes Lake is not sufficient.

Request for a one-seat-ride bus route between Ballincollig and CUH.

There were a number of submissions on the branching of Route 1 in Ballincollig forming Route 1A and 1B, many with opposing suggestions of moving it eastwards or westwards.

In reviewing the feedback, it was apparent that there was no 'ideal' location to branch the Route 1 service and that there was a need to serve both Ballincollig Main Street and Castle Road/Carriganarra Road to the south. In addition, Classes Lake produces very high bus patronage on the existing network, and so extending high frequency service at least that far is important.

The network was reviewed in detail with the feedback in mind and it was decided

to operate two routes from Ballincollig towards the City Centre. By operating Route 1 to a terminus at the eastern side of Dell, the revised network will provide enhanced frequency and capacity to serve Dell employees and the residents of Classes Lake and surrounding areas.

A second route will be provided by way of an extension of Route 2B every 30 minutes to Grange Road on the western side of the Dell campus via Castle Road in the southern part of Ballincollig. This will provide a new link between Ballincollig, Marymount, UCC facilities at Curraheen Road, Bishopstown and CUH. Route 2B will enter the City Centre via Western Road.

Action Taken

- Extend high-frequency service on Route 1 all the way to Dell's eastern entrance.
- Provide service on Castle Road to Ovens through an extension of Route 2B every 30 minutes.

Concerns on the switching of the Ballincollig service from Carrigrohane Road to Model Farm Road / College Road due to the likelihood of delays.

Some submissions from the Ballincollig area raised concerns on the routing of services into Cork City along Carrigrohane Road rather than Model Farm Road. As acknowledged in some submissions, different passengers have different needs, with many travelling from Ballincollig to destinations along Model Farm Road and others going to the City Centre and beyond.

Many of the concerns regarding the use of Model Farm Road related to risk of delays due to traffic. It is anticipated that the bus priority elements of the BusConnects programme will reduce the delays to buses.

Other concerns related to the capacity of the service. The revised new network will provide additional capacity to the Ballincollig area through the extension of Route 2B. Further enhancements to the network such as the extension of Route 15 and 30 to MTU will result in more capacity on Route 1 that is available to those traveling home from the city centre to Ballincollig.

Bus Éireann's regional service Route 233 currently operates along Model Farm Road and will be shifted for some of its daily trips

onto the Carrigrohane Road to provide an alternative service option.

Action Taken

An alternative service option will be provided along Carrigrohane Road under the Connecting Ireland scheme. No other changes to the PSO network.

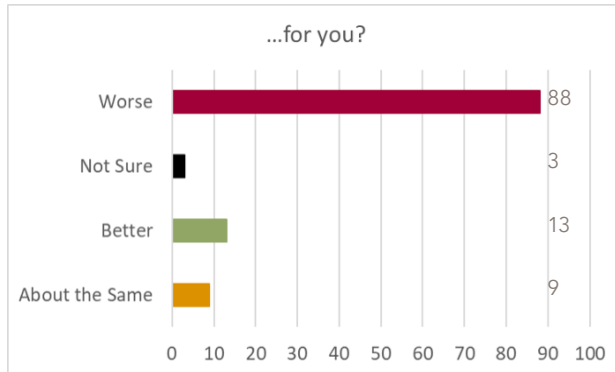
Summary of Changes for Cork Outer West Area

The following changes have been agreed as an outcome of the 2021 Consultation Process:

- **Route 1:** Full frequency (every 10 minutes) extended to Classes Lake and Dell's eastern entrance. Service lengthened to 24 hours.
- **Route 2B:** Every other trip extending from St Mary's Hospice, along Castle Road & Flynn's Road before following R608 to Coolroe Meadows and terminating at Grange Manor at the western entrance to Dell.
- **Route 10L:** Route as previously proposed on Curraheen Road in the Draft New Network is superseded by the new branch on Route 2B. Route realigned to follow Waterfall Road from CUH to Heatherfield, Waterfall.
- **Route 233 (funded by BÉ):** Some trips to be realigned onto Carrigrohane Road.

Cork Outer South Area

The majority of residents in the Cork Outer South Area (those who listed 'Carrigaline', 'Passage West / Monkstown' or 'Ringaskiddy' as where they live) considered the Draft New Network to be worse than the existing network. Of those who considered the network to be worse, over two thirds were from the Passage West / Monkstown area, with most being existing users of Routes 223 Ringaskiddy – South Mall or Route 216 Monkstown – CUH.



The map of the Outer South Area of the New Network, with the changes described in this section, is shown on page 94.

Loss of one-seat-rides between Passage west and UCC / MTU / CUH.

Enthusiasm for the connectivity provided between Passage West and Carrigaline.

Concern that the frequency on Route 12 is too low.

Loss of a route between Passage West and Shanbally / Ringaskiddy.

Loss of a route between Ringaskiddy, Shanbally and Douglas.

Suggestions that Church Hill / Old Church Road in Passage West should be served providing access for school children and those who find the steep topography challenging.

The reconfiguration of the network will result in the severance of some existing routes. Two of these were the focus of many comments from residents in Passage West, namely the link to Ringaskiddy as provided by the existing Route 223, and the link to CUH as provided by the existing Route 216. In the Draft New Network, these journeys would require interchange. Requiring interchange made it affordable to create new connections such as the proposed Route 12 between Passage West and Carrigaline. This new route was

widely welcomed with positive feedback. However, negative feedback did highlight local issues that warranted reconsideration of introducing interchanges for both journeys mentioned above.

In Passage West, further submissions referred to the intermittent service to Church Hill / St Peter's School and suggestions that service be increased to be more regular.

The team considered that there was merit in retaining the one-seat-ride between Passage West and Ringaskiddy, especially because the interchange required by the Draft New Network for this journey would be between two infrequent routes and would take place outside of a town or city centre. To address this concern, a new Route 45 is included in the Revised New Network, which is very similar to the existing Route 223. It will operate hourly from Ringaskiddy / Shanbally via the R610 to Monkstown, Passage West, St Peter's School, and terminating in Douglas.

Regarding the loss of a one-seat-ride from Passage West to CUH, which is provided by the existing Route 216, the team decided that this journey is so well provided for by the proposed network that adding an additional route from Passage West would not be appropriate. Passage West will be

connected to Douglas by Route 12 every 15 minutes at peaks and every 30 minutes at midday and evenings. From Douglas, Route 14 will be available to CUH every 15 minutes. Additionally, someone may remain on Route 12 into Cork City Centre where 14 buses per hour will be passing on their way to CUH.

It is understandable that residents of Passage West who are accustomed to making a one-seat-ride to CUH on Route 216 would be unhappy at the introduction of an interchange to their journey. However, this type of inconvenience to a small number of people makes it possible to design the entire network to improve those residents' trips to other places, and to improve bus trips for a great many other people. For this reason, the NTA team decided not to restore the one-seat-ride currently provided by Route 216.

Action Taken

Introduce new Route 45 between Douglas and Ringaskiddy via Passage West / Monkstown, every 60 minutes.

Enthusiasm for the new link between Crosshaven and Ringaskiddy, but not at the expense of a direct route from Crosshaven to the City Centre.

Enthusiasm for Route 40.

Numerous concerns were expressed about the removal of a one-seat-ride between Crosshaven / Fountainstown and the City Centre. For those whose trips are made to destinations west of the City such as UCC and MTU, the impact was even greater. In the Draft New Network these trips would require one or even two interchanges.

The team decided that given the high patronage on the existing route from Crosshaven, and the double-interchange that would be introduced for journeys between Crosshaven and west side destinations, addition of a non-stop bus route would be appropriate. Route 42X will be extended from Fountainstown to Kent Station. It will provide local service between Fountainstown, Crosshaven, and Carrigaline, and then act as an express between Carrigaline and Cork City Centre. It will operate once per hour Mondays through Saturdays, all day, and every 20 minutes during weekday peaks. The addition of hourly service on Sundays during the summer can be considered in the future, to support visits by Cork City

residents to the beach.

Action Taken

- Remove branch 40B to Fountainstown.
- Replace with **Route 42X** from Carrigaline to Fountainstown, providing local service via Crosshaven and a one-seat-ride between Crosshaven and Cork City Centre.

Suggestions that buses should operate along L2474 due to steep hills and to maintain service to St. Francis College.

Concerns were expressed over removal of bus services to schools currently provided through route variations.

Suggestions were made that buses should serve L2474, in particular to provide access to St Francis College. Concerns were also raised, as noted earlier, about access to Saint Peter's School.

A sensible route would follow L2474 and Church Hill to connect Douglas, St. Francis College, St. Peter's School and Passage West. However, Church Hill is inoperable by buses, making it very difficult to provide regular services to either of these schools.

The team developed an interim solution, until Church Hill is made operable for buses. At morning and afternoon, a route will connect Douglas and St. Peter's School via L2474, Upper Monkstown and Carrigmahon.

Action Taken

Implement new Route 46 operating at morning and afternoon to connect Douglas and St. Peter's School.

Requests that bus services should be extended south of Carrigaline to Minane Bridge / Tracton.

The density of housing is very low both within these areas and between these areas and the terminus of the closest routes in the network. Tracton is just inside the CMA, whilst Minane Bridge is just outside of it. The team did not consider it feasible to extend service to these areas given the high expense and the small number of potential beneficiaries, nor would it be fair in consideration of the way that villages of similar size and distance from other developed places have been served.

Action Taken

No change to the network.

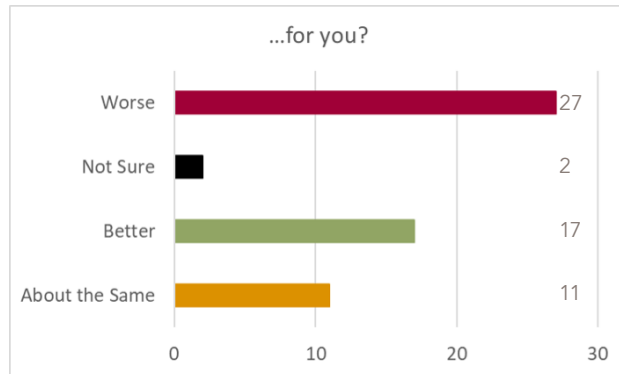
Summary of Changes for Cork Outer South Area

The following changes have been agreed by the NTA team as an outcome of the 2021 Consultation Process:

- **Route 12:** Occasional diversions to schools in Passage West and Monkstown eliminated as they will be served by new Route 45.
- **Route 40B** in Fountainstown: Replaced by the extension of Route 42X.
- **Route 42X:** Extended and providing local service from Carrigaline to Fountainstown via Crosshaven, hourly Mondays through Saturdays. Frequency of express trips between Carrigaline and Cork City Centre increased to every 20 minutes during weekday peaks.
- **Route 45:** Introduction of a new Route 45 between Douglas and Ringaskiddy via R610, N28, Marian Terrace/Coolmore Gardens and R613.
- **Route 46:** Introduction of a new Route 46 to operate an occasional service mornings and afternoons between Douglas and St. Peter's School, via R610, L2474, Scotman's Road and Laurel Hill.

Cork City Centre

As shown in the graph below, just under half of residents in Cork City Centre considered the Draft New Network to be worse than the existing network.



Nearly half of those who considered the network to be worse were users of the existing Route 205, with many concerned on the loss of a route offering very short walks and a one-seat-ride between Kent Station and MTU.

As most routes radiate from the City Centre, most changes to the New Network will have some impact on the City Centre. This section focuses on feedback from residents in the City Centre.

Loss of direct links between Kent Station and MTU.

In relation to the need for a direct bus link between Kent Station and MTU, this issue was raised by many residents elsewhere, particularly the Cork South West Suburbs and the Cork Outer East Areas.

Action Taken

Extend Routes 15 and 30 westwards to UCC, CUH and MTU.

Loss of direct link to Crosshaven.

A number of submissions raised concerns on the loss of direct link between Cork City Centre and Crosshaven for City residents accessing the amenity of the coast.

Residents from Crosshaven in the Cork Outer South Area also raised concerns over the need to interchange to travel between Crosshaven and the City Centre, in addition to the second interchange required to go on to places like MTU or Ballincollig.

Action Taken

Remove branch 40B from Route 40 and instead extend Route 42X from Carrigaline to Fountainstown offering local service via Crosshaven, once per hour Mondays through Saturdays.

Concern about the level of bus service coverage in Friar's Walk, Deerpark and Ballyphehane.

A small number of submissions referred to a lack of coverage of the area between Pouladuff and Connolly Roads, south of the City Centre. This coverage gap was described at length in the earlier section with regards to comments about the South West Suburbs.

Action Taken

Introduce new Route 23 between Old Youghal Road/barracks and Black Ash Park & Ride, via St. Patrick's Street and Deerpark Road.

Concern over the provision of service between the City Centre and Togher.

In relation to the concern raised over bus connections between the City Centre and Togher, it is likely that the misunderstandings in relation to the operation of Route 5 as a one-way loop instead of a two-way loop had an impact on feedback.

The issue of connectivity between Togher and the City Centre was reviewed by the team. The route patterns as proposed in the Draft New Network are considered to sufficiently serve the City Centre whilst offering increased opportunity to travel to other parts of the City.

Action Taken

No further changes to the network.

Concern that some routes don't serve St Patrick's Street or South Mall.

There were many comments about routes not serving St. Patrick's Street or South Mall, and concerns that alternative locations are too far removed from the commenter's destination in the City Centre, or that such locations undesirable places to wait for a bus.

The New Network contains approximately 40% more bus service than the existing bus network and it will not be possible to route all bus services along St. Patrick's Street. It will also not be desirable, since for many trips a route along St. Patrick's would be circuitous and out-of-direction.

Many of the routes in the New Network are through-routed cross city and there is a need for a balance between City Centre coverage and efficient operation.

Routes heading in the same general direction should be grouped together, so that people benefit from the higher frequency for their shorter journeys, and this grouping requires that the network be distributed onto fewer streets in the city centre.

It is important that all radial routes through the city cross all other routes, so that people's interchanges are made in the same place for both directions of their trip.

For these reasons, routes are no longer proposed to use South Mall. This makes the city centre network simpler and makes higher-frequency routes and interchanges more possible, but also means that some people heading for destinations on S. Mall will have a longer walk after getting off their bus.

Finally, consideration also needs to be given to the integration between bus services and other transport modes, particularly walking and cycling, which are for most people the fastest way to reach a destination in the city centre after alighting from a bus.

Throughout this planning process, the NTA and Bus Éireann have observed the ways that the New Network will require additional or moved terminal facilities in the City Centre. Additional space for buses, wayfinding signs for passengers, waiting areas for passengers, and services for bus drivers, will all be required in the city centre, particularly at Kent Station; at the bus station; and near UCC on Western Road. Some route termini have been moved relative to what was proposed in the Draft New Network, to account for limits of the space available for these facilities.

Action Taken

Revisions to the locations of the termini of Routes 12, 13, 16, 20 and 21 to address feedback from the public as well as the need for bus layover space and operator break facilities in the centre.

Summary of Changes for Cork City Centre Area

The following changes have been agreed as an outcome of the 2021 Consultation Process:

- **Route 12:** Terminus relocated from Cork Bus Station to Kent Station.
- **Route 13:** Terminus relocated from Cork Bus Station to Kent Station.
- **Routes 15 and 30:** Extended from Kent Station to MTU via the City Centre, UCC and CUH.
- **Route 16:** Terminus relocated from Cork Bus Station to Kent Station.
- **Route 20:** Terminus relocated from Cork Bus Station to Kent Station.
- **Route 21:** Extended to UCC to relocate terminus from Cork Bus Station to Western Road/Dyke Parade.
- **Route 23:** New route proposed to operate between Black Ash Park & Ride and Old Youghal Road/barracks via Deerpark Road and Summerhill North.
- **Route 42X:** Extended from Carrigaline to Fountainstown via Crosshaven Road, Church Bay Road and R612, once per hour Mondays through Saturdays.

Profile of Phase Two Respondents

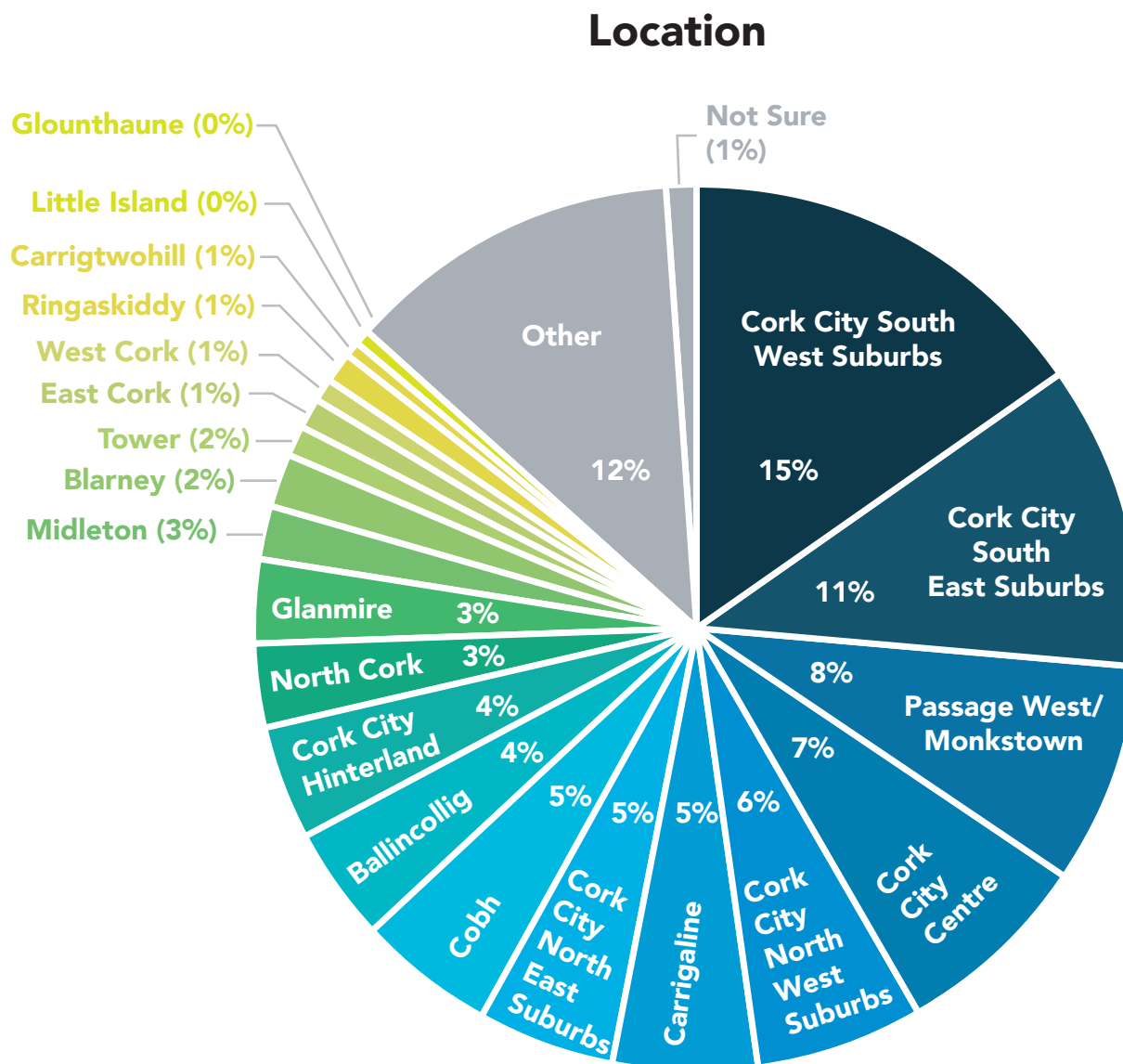
Residential area

Respondents were asked to choose from a list of areas the place they live.

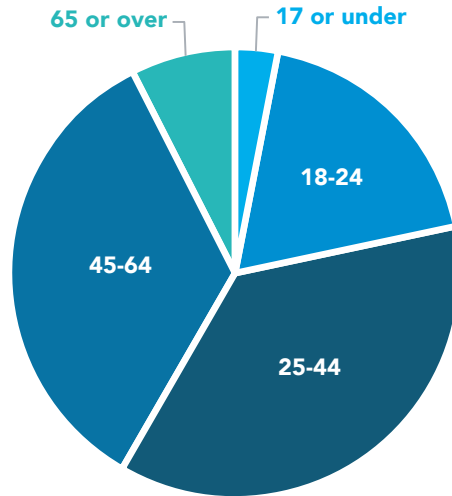
Around half (48%) of the respondents said they were living in Cork City, with higher numbers of responses from the south city. This is roughly proportional to the population in these areas within Cork city.

From the Cork Metropolitan Area, there were many submissions from Passage West / Monkstown (58).

Overall, there was a wide distribution with submissions received from all parts of the CMA.



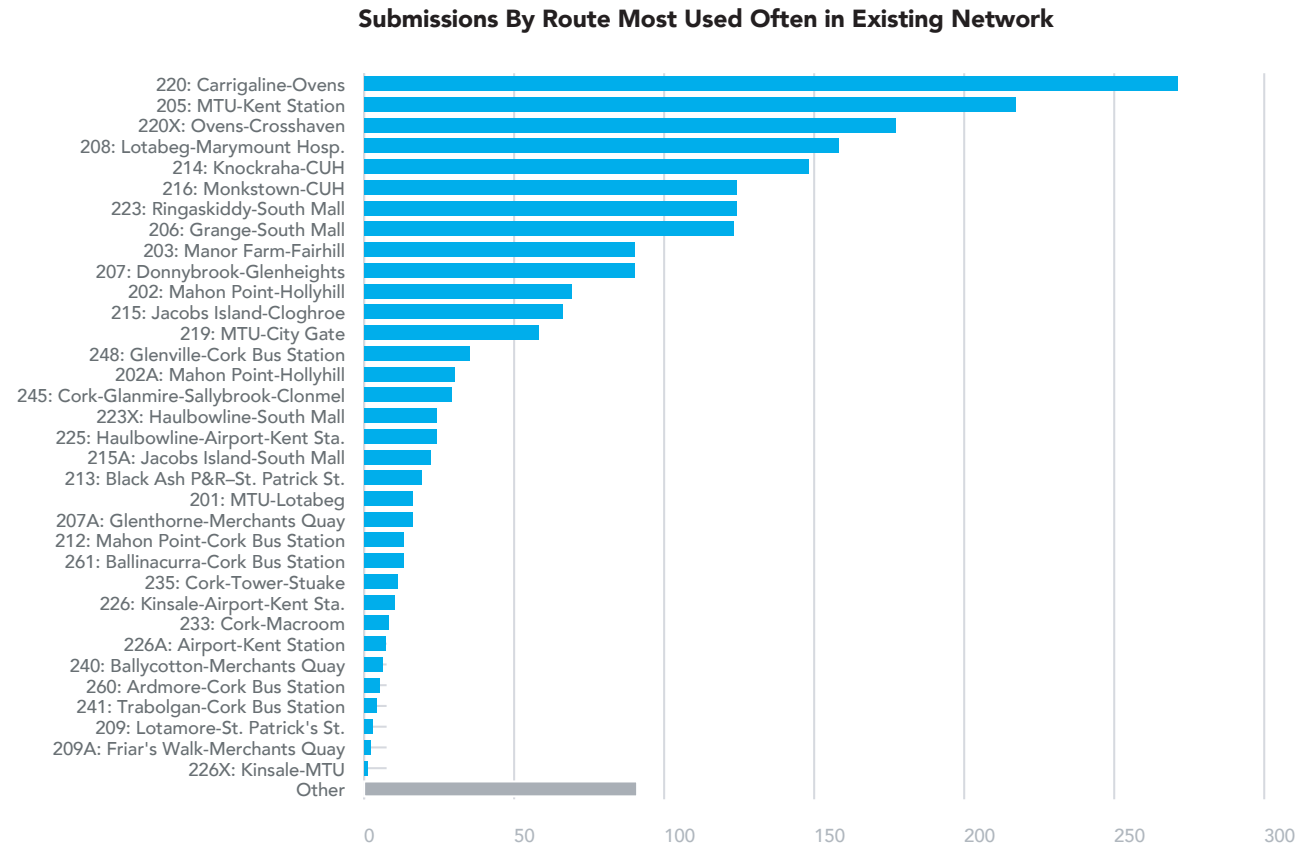
Age



The majority of respondents were within the general working age population, with 71% aged between 25 and 64.

It is important to note that only 7% of respondents were aged over 65, whereas this age group comprises around 13% of the population.¹

Public Transport Usage



Numerous responses came from users of existing Routes 220, 205, and 220X.

1. As reported within the [Cork City Socio-Economic Summary Profile](#), June 2020, Cork City Development Plan 2022-2028

Comments by Route

The table below shows some of the most frequently-mentioned routes in the Draft New Network during the engagement, and the overall sentiment for those routes.

Route	Like (%)	Dislike (%)
2A MTU—Glanmire	23%	51%
12 Carrigaline—Bus Station	17%	57%
53 Blarney—Bus Station	62%	13%
1 Ballincollig—Mahon Point	46%	34%
5 CUH—CUH Loop	6%	76%
52 Whitechurch—Bus Station	43%	12%
40 Crosshaven—Haulbowline	13%	72%
8 Grange Road—Mercy Hospital	9%	78%
34 Cobh Town Bus Service	39%	24%
4 Lehenaghmore—Kent Station	18%	61%

Conclusions

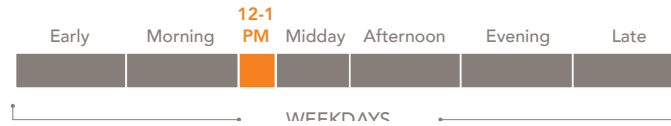
Overall, about half of respondents viewed the Draft New Network favourably for the Cork Area as a whole, including many respondents who had specific critiques or were concerned by a specific impact on their own journeys.

The project team extensively reviewed the feedback and modified the New Network based on this feedback. Most of these modifications required the addition of more service and therefore increases to the operating and capital cost of the New Network. This was necessary in order to preserve the improved frequency, simplicity, directness and long hours of service, whilst restoring some of the features of the existing network upon which large numbers of people rely.

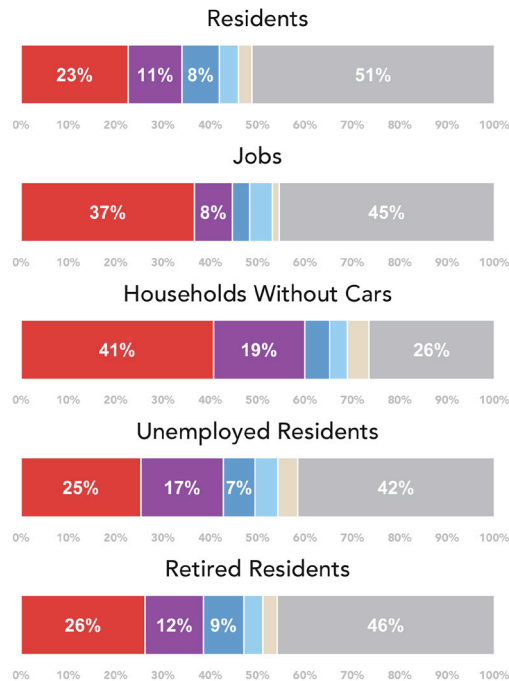
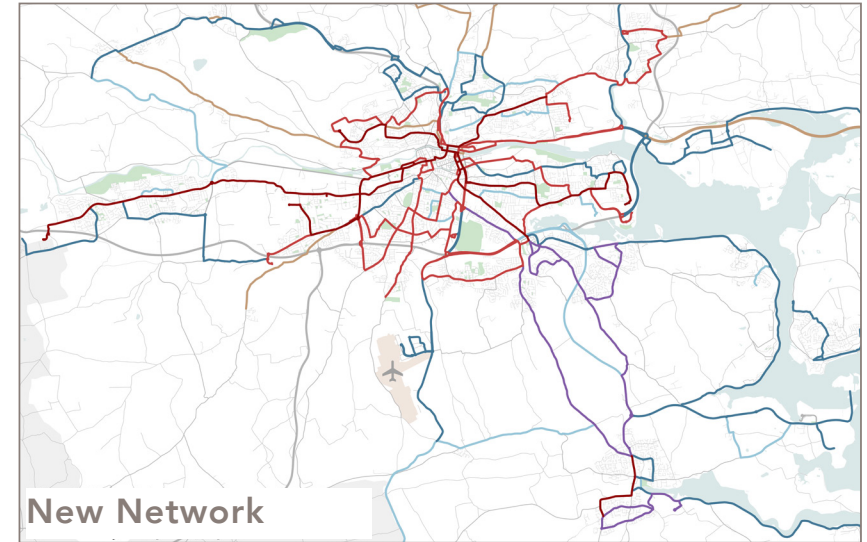
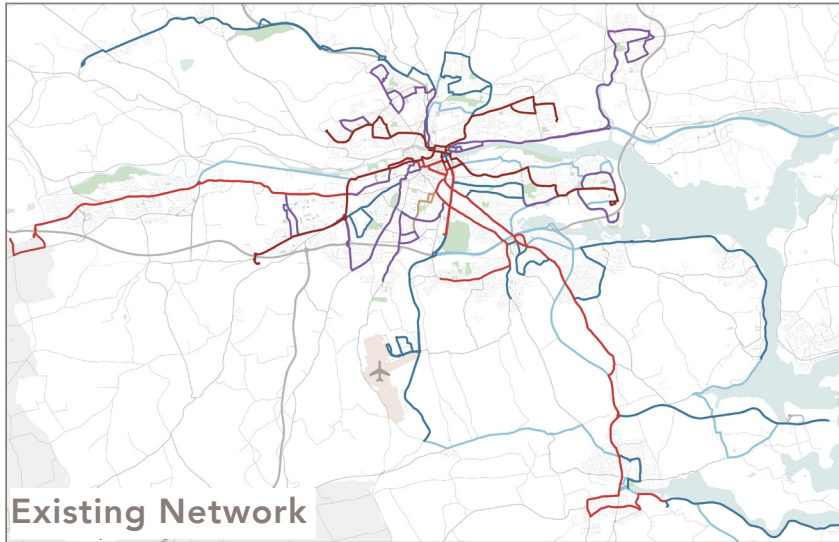
Additional detail on the public consultation process and the feedback received is provided in a separate Public Input Summary, available on the [project webpage](#).

4 Snapshots of the New Network

Weekday Midday

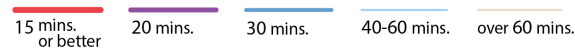


Many people need to travel at midday whether they are coming home from an early work shift, leaving work or school early, meeting someone for lunch or going to the shops.



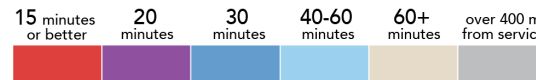
Map legend:

Cork PSO bus routes coming approx. every



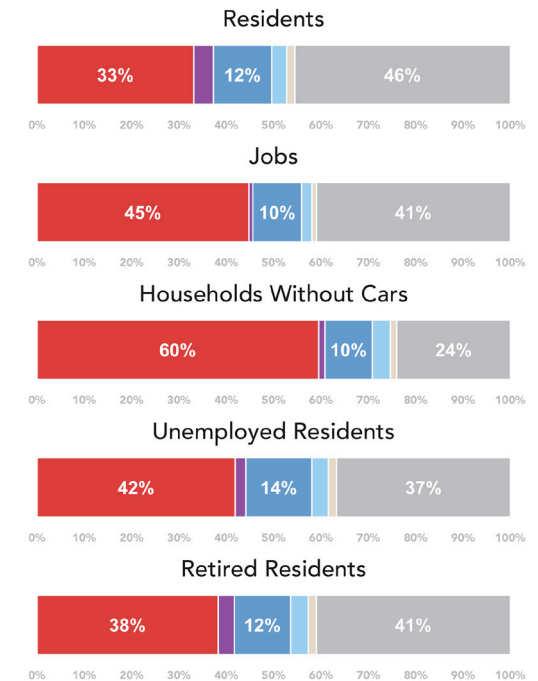
Graph legend:

Within 400 m walk of buses or trains coming approx. every

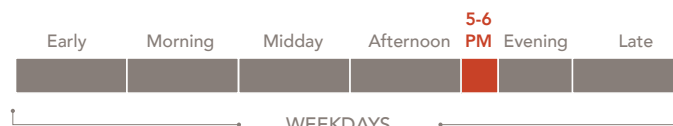


The graph at left shows the percentage of residents and jobs in the CMA that are today within a 400 metre walk of public transport, and at what frequency, at midday on weekdays.

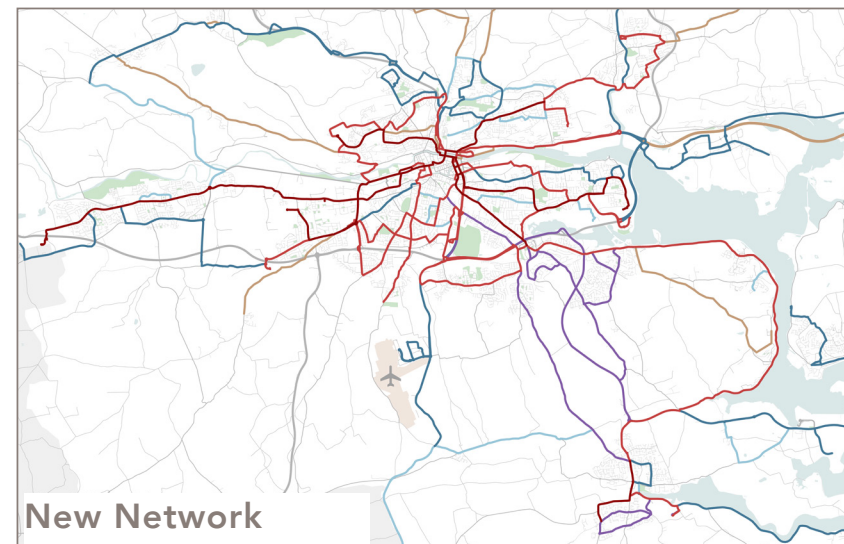
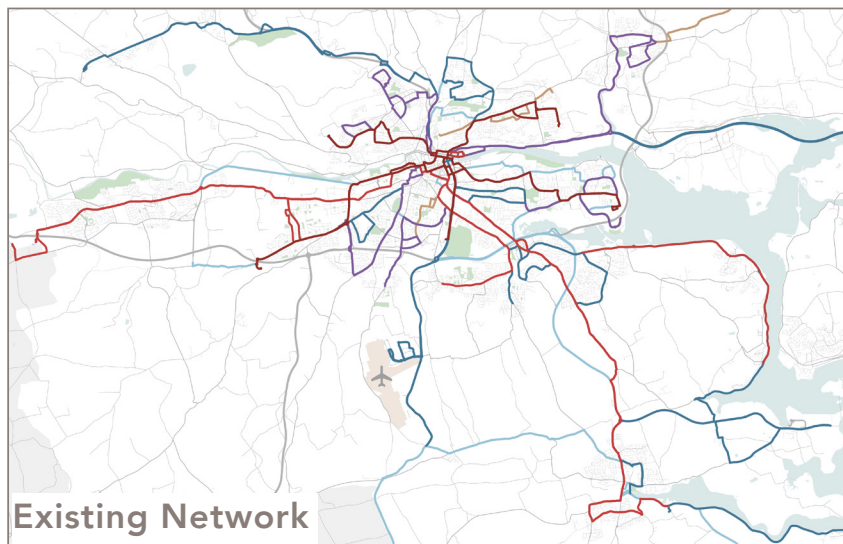
The graph on the right shows the same measure for the New Network.



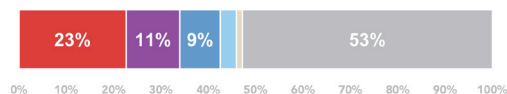
Weekday Peak



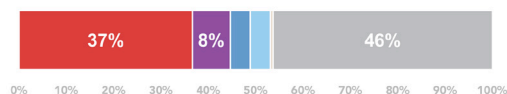
Rush hours are typically the busiest time for Cork's bus network. Many people journeying home from work or school just as others are running errands or going out to socialise.



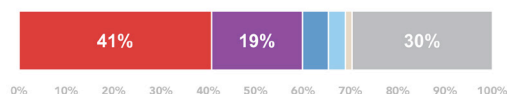
Residents



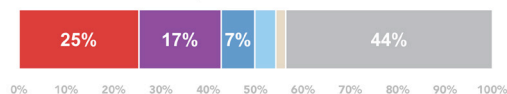
Jobs



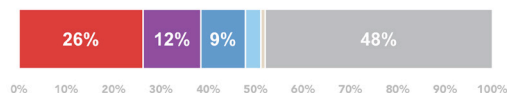
Households Without Cars



Unemployed Residents

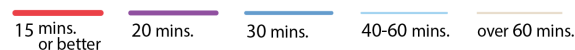


Retired Residents



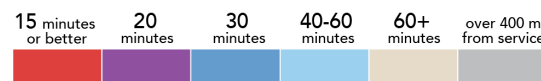
Map legend:

Cork PSO bus routes coming approx. every



Graph legend:

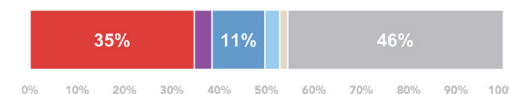
Within 400 m walk of buses or trains coming approx. every



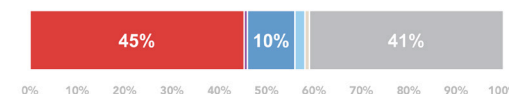
The graph at left shows the percentage of residents and jobs in the CMA that are today within a 400 metre walk of public transport, and at what frequency, between 5:00 and 6:00 pm on weekdays.

The graph on the right shows the same measure for the New Network.

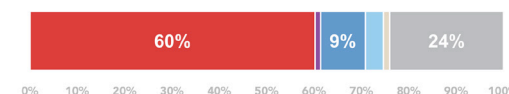
Residents



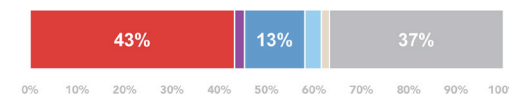
Jobs



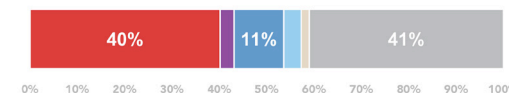
Households Without Cars



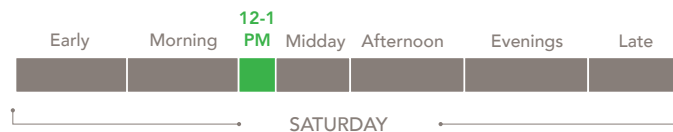
Unemployed Residents



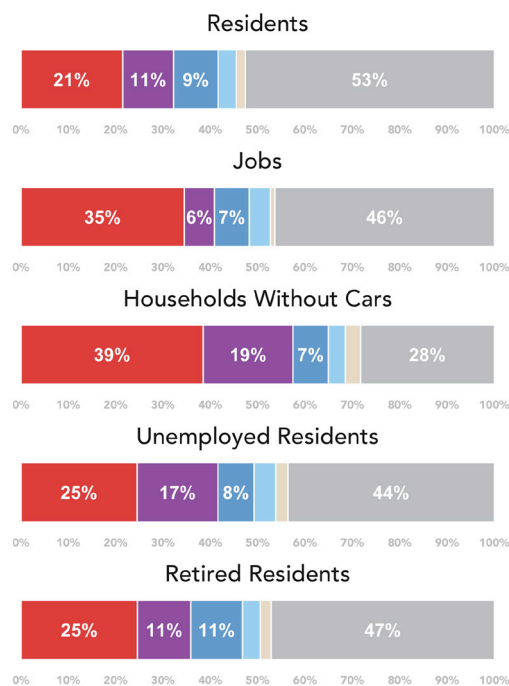
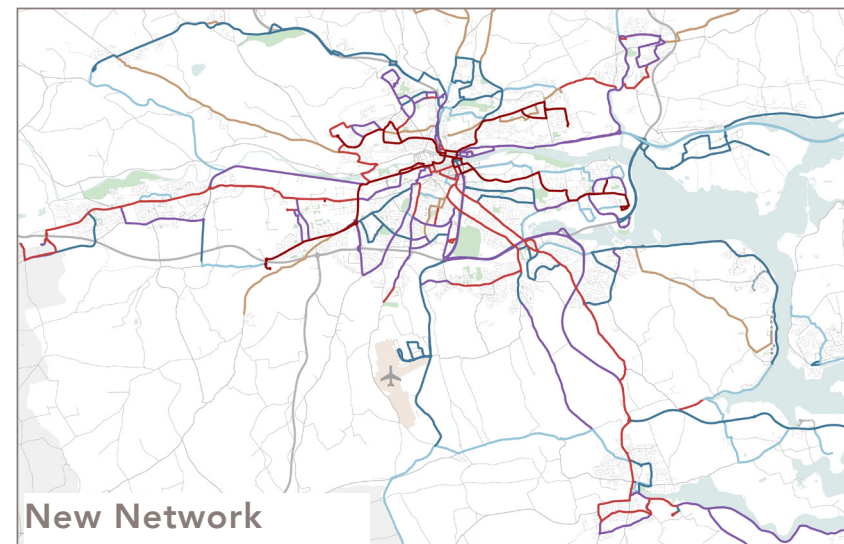
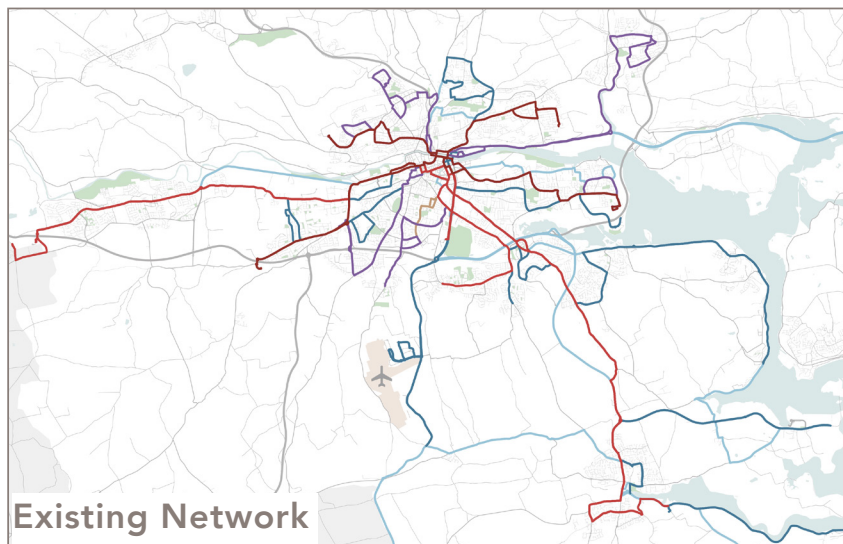
Retired Residents



Saturday Middy

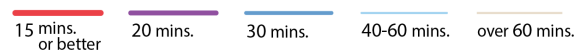


Weekend travel has grown over recent decades, as more people take journeys for shopping and socialising and as industrial and service jobs expand into weekends.



Map legend:

Cork PSO bus routes coming approx. every



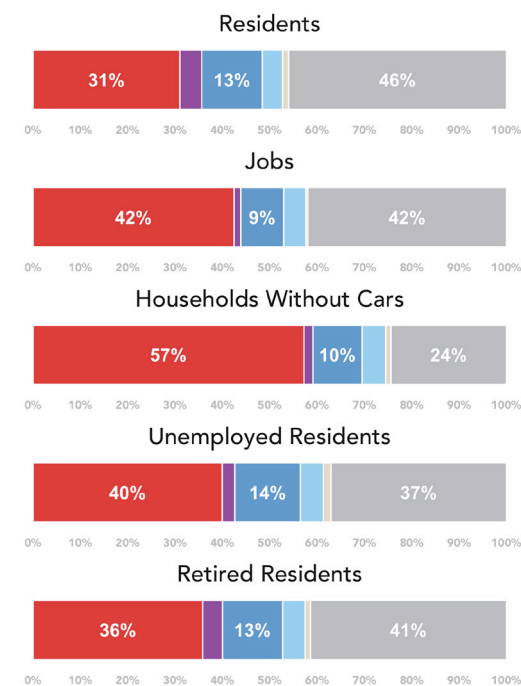
Graph legend:

Within 400 m walk of buses or trains coming approx. every

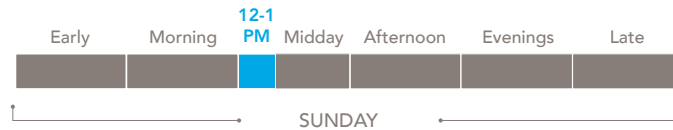


The graph at left shows the percentage of residents and jobs in the CMA that are today within a 400 metre walk of public transport, and at what frequency, at midday on Saturdays.

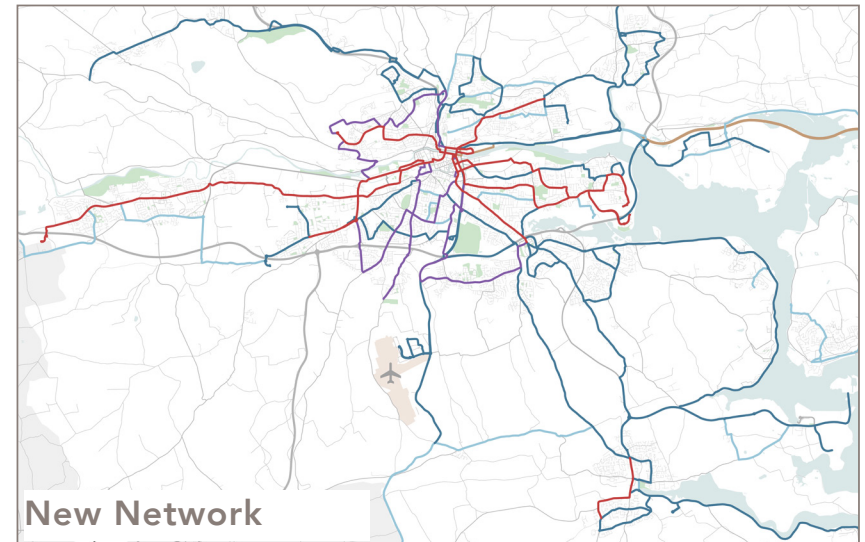
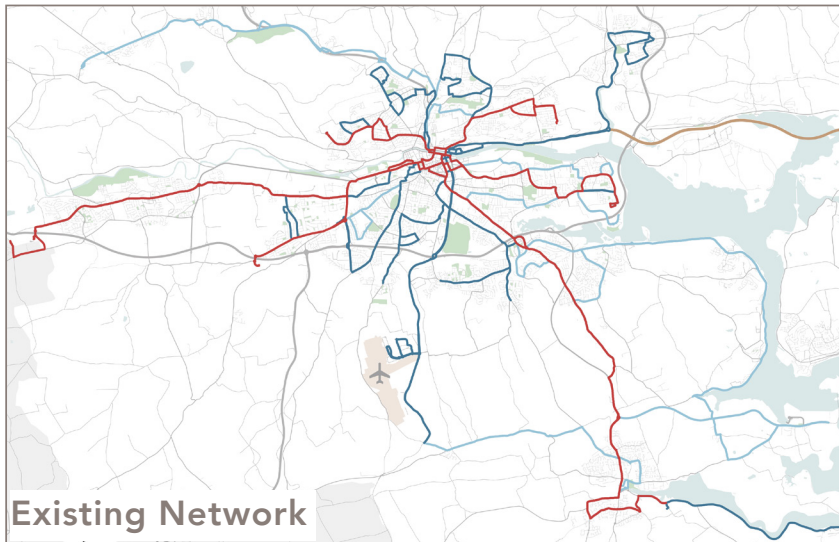
The graph on the right shows the same measure for the New Network.



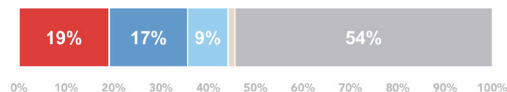
Sunday Middy



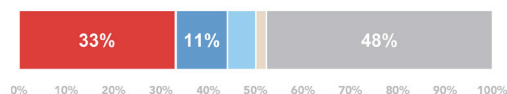
As traditions relating to Sundays shift, more people want to travel for all purposes. Industrial jobs sometimes call for weekend shifts as well.



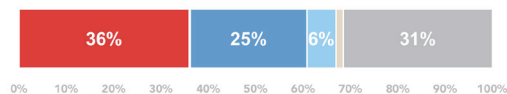
Residents



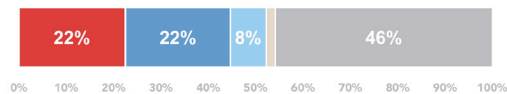
Jobs



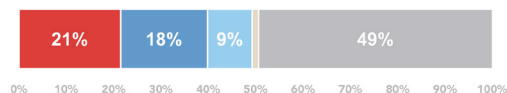
Households Without Cars



Unemployed Residents

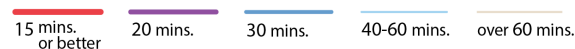


Retired Residents



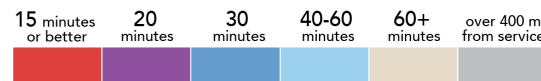
Map legend:

Cork PSO bus routes coming approx. every



Graph legend:

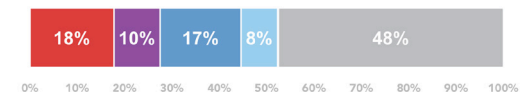
Within 400 m walk of buses or trains coming approx. every



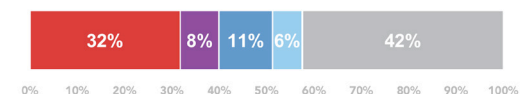
The graph at left shows the percentage of residents and jobs in the CMA that are today within a 400 metre walk of public transport, and at what frequency, at midday on Sundays

The graph on the right shows the same measure for the New Network.

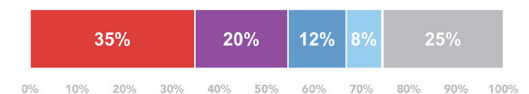
Residents



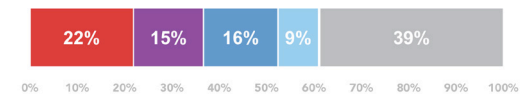
Jobs



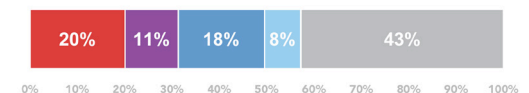
Households Without Cars



Unemployed Residents



Retired Residents



This report continues in an Appendix, which contains many detailed maps and tables, beginning on the next page.

A Appendix: Detailed Tables and Maps

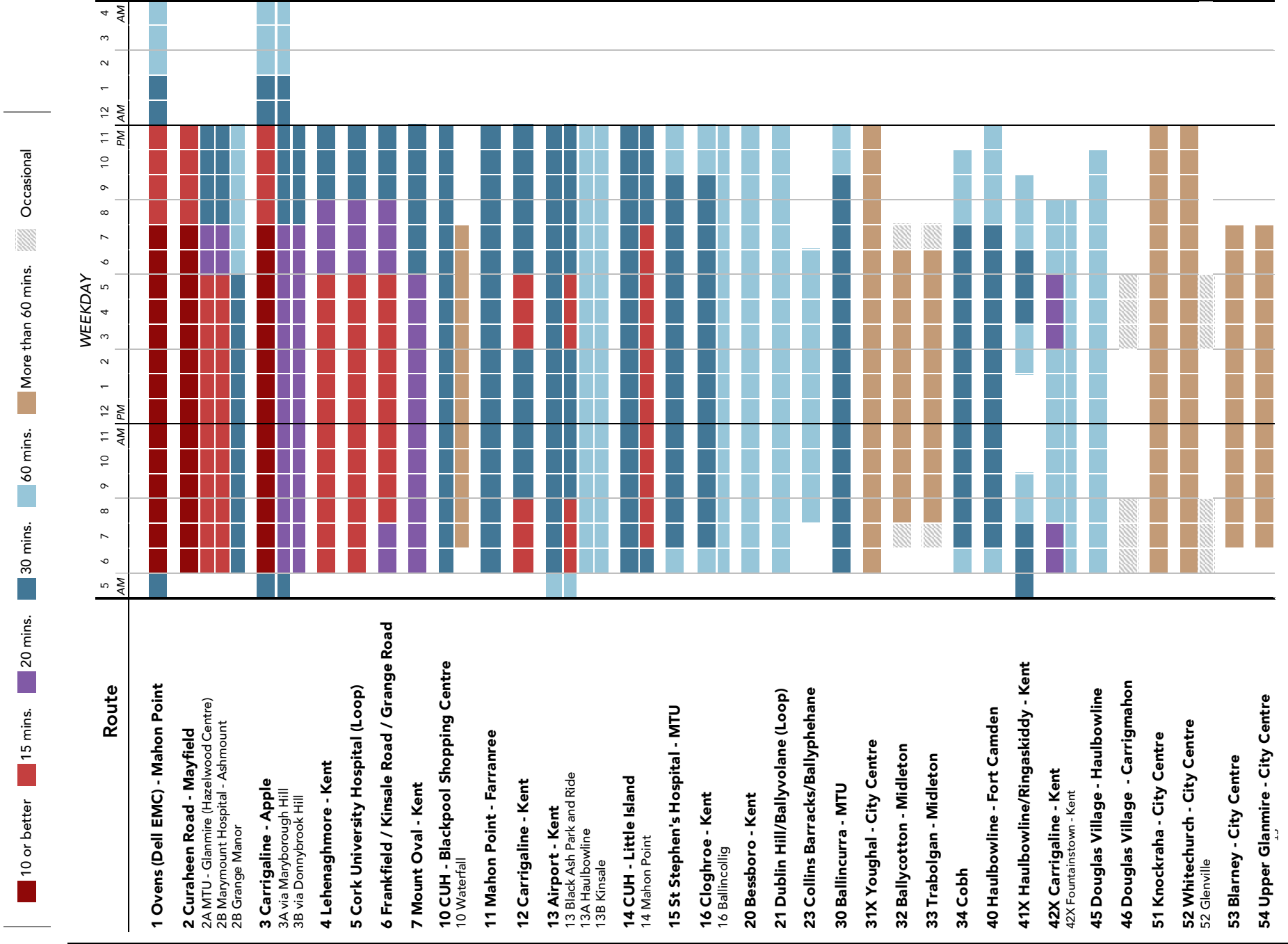
New Route Frequencies and Hours

The tables on the following pages show the frequency and hours of service for each route in the New Network. Subsequent pages show the frequencies and hours of service on the existing network.

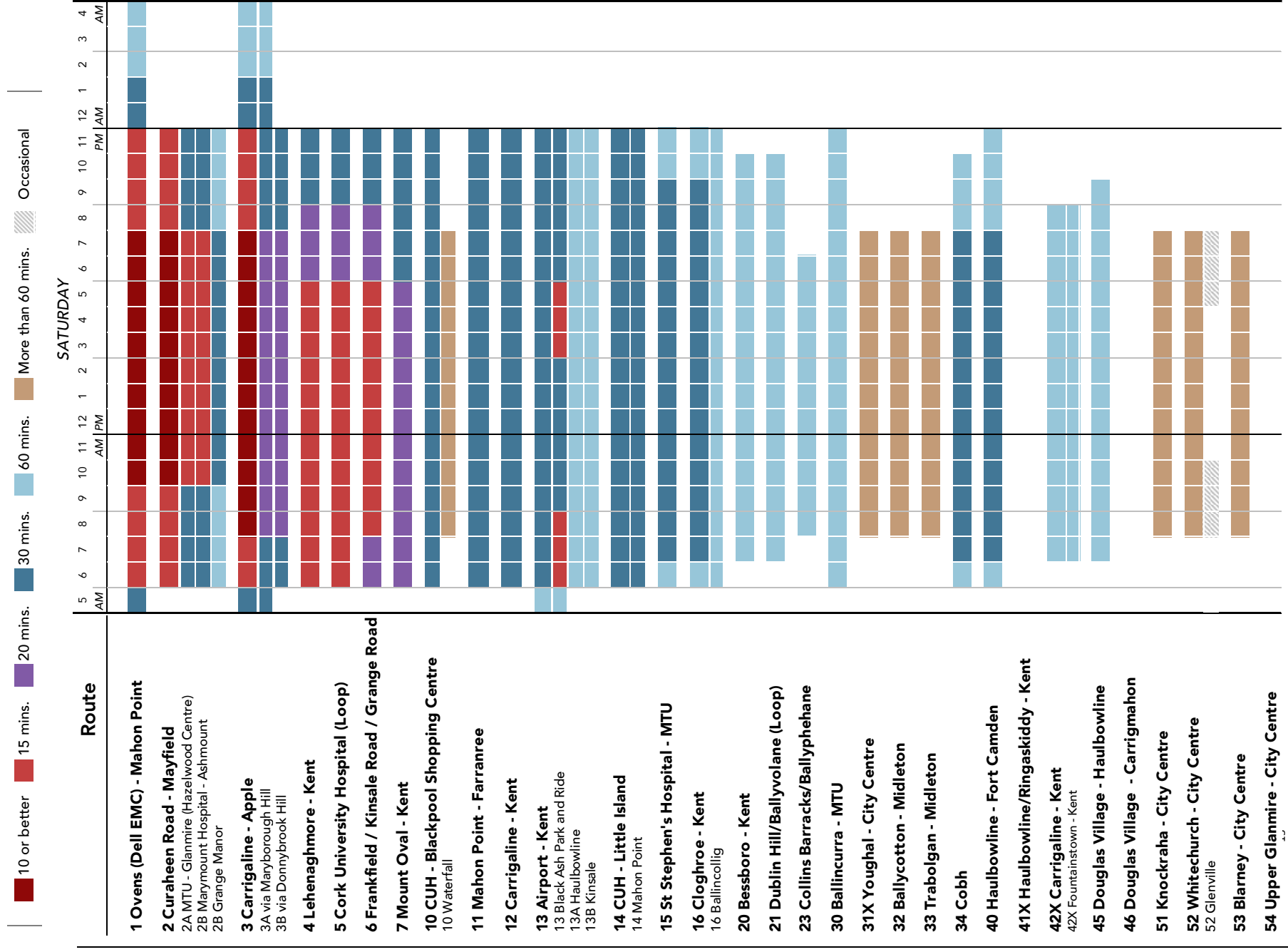
The start and end times shown for the New Network are **approximate**.

Most routes will start service at different times in each direction, from the two ends of the route, depending on the direction of prevailing demand. For example, a route shown here with service starting at 6:00 am might, once implemented, have an inbound trip beginning at 5:30 am and outbound trip beginning at 6:15 am, or vice versa.

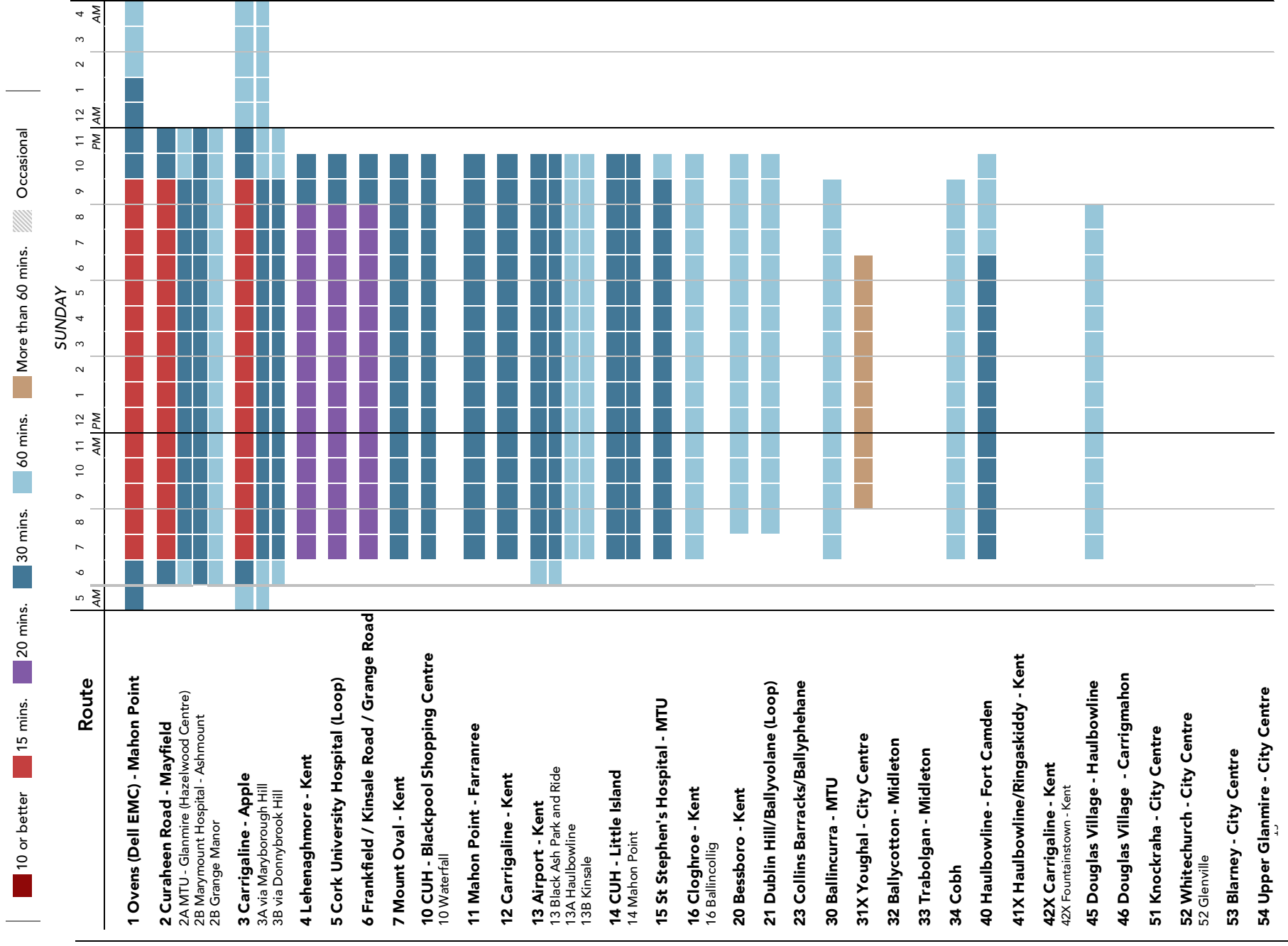
Weekdays in the New Network



Saturdays in the New Network

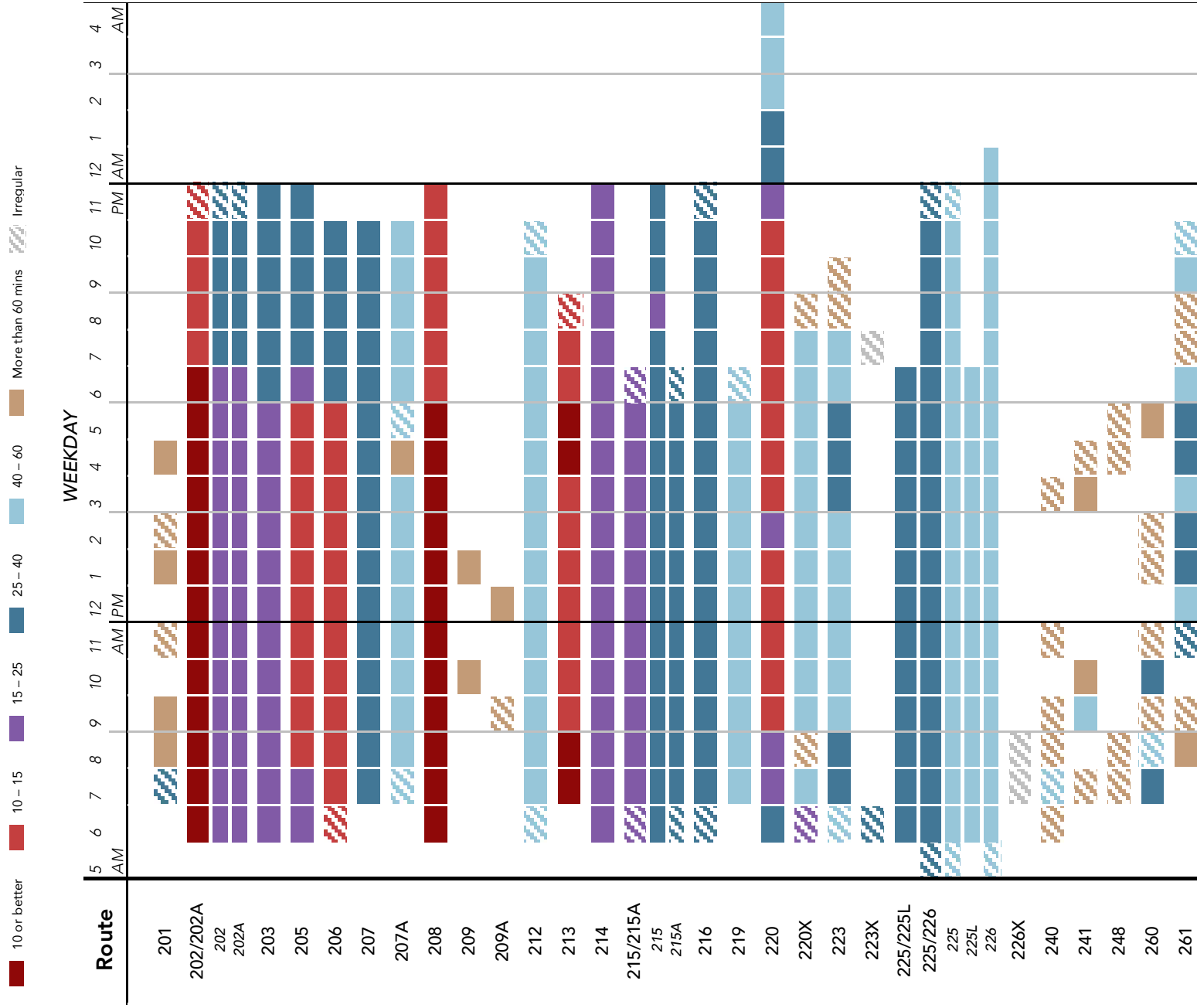


Sundays in the New Network

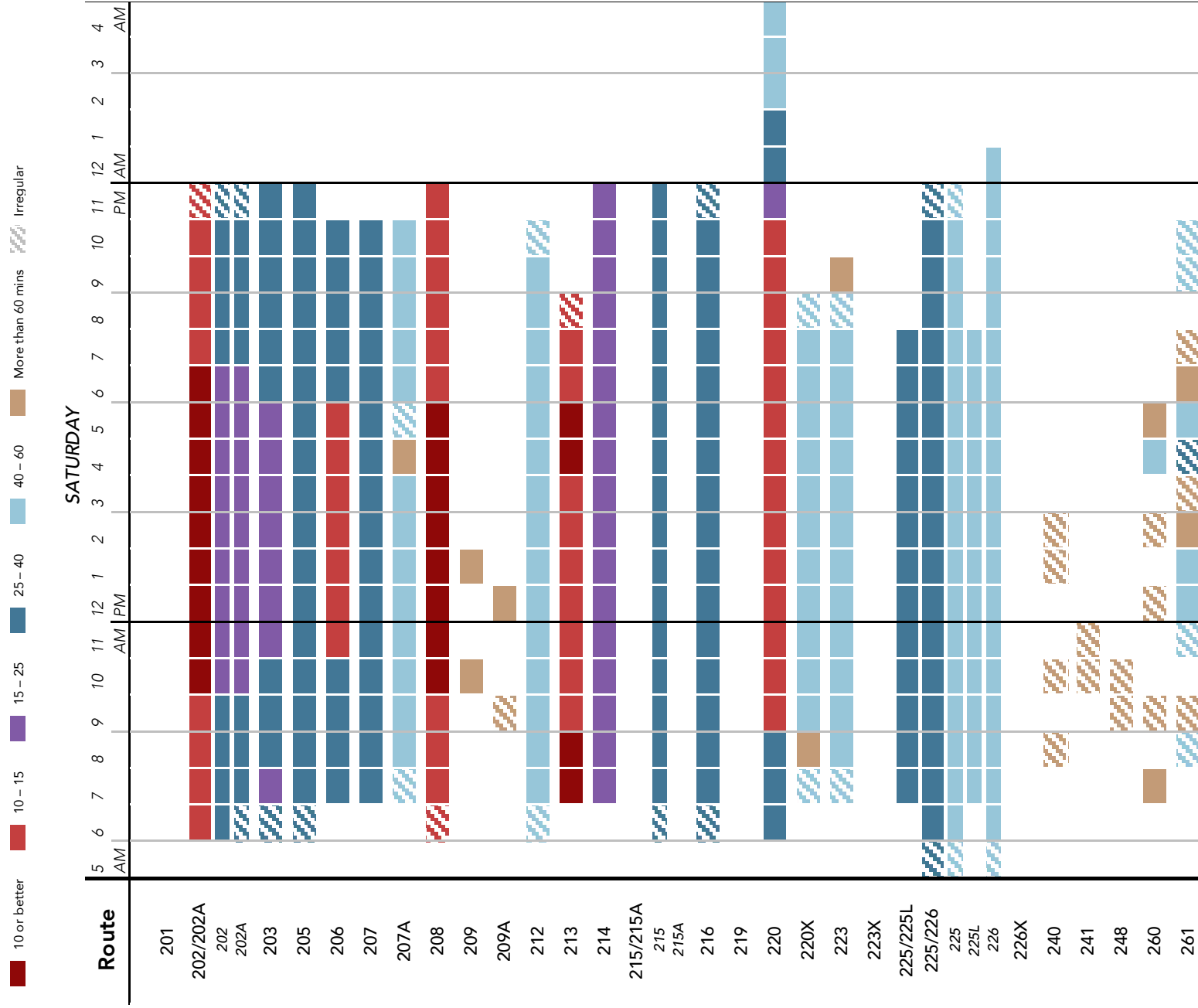


Existing Route Frequencies and Hours

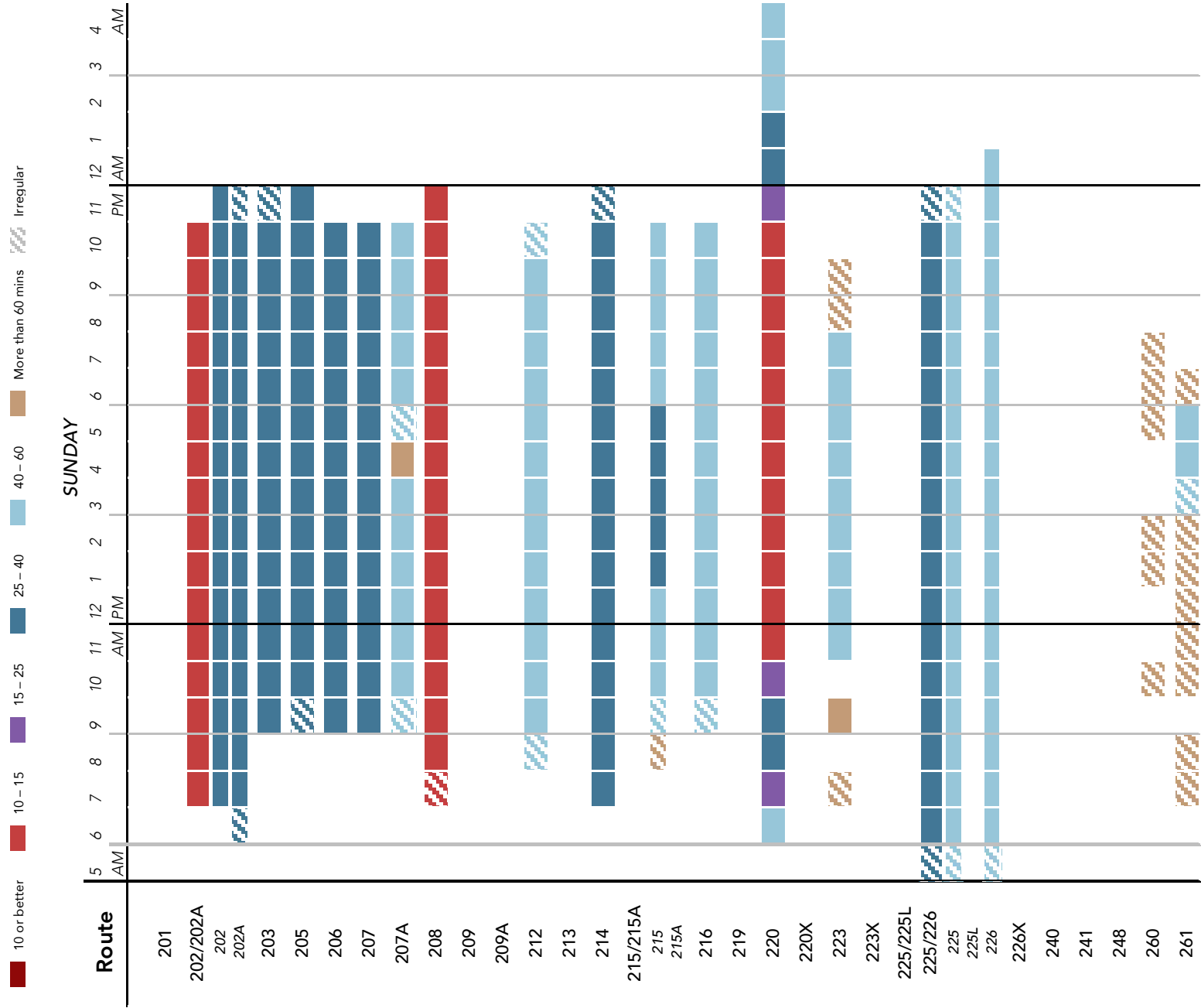
Weekdays in the Existing Network



Saturdays in the Existing Network



Sundays in the Existing Network



Network Maps

The maps on the following pages show the New Network in different areas of the CMA.

Subsequent maps show the existing network at three scales.

On these maps, **route colours represent weekday midday frequencies**.

Red represents frequent service, with a bus coming every 15 minutes or better, in the midday on weekdays, and **dark red** indicates service every 7.5 or 10 minutes.

Purple is for routes coming every 20 minutes. **Dark blue** routes come every 30 minutes and **light blue** come every 60 minutes. **Brown** routes offer service at poorer frequencies, such as every two hours. *Dashed* routes offer service only at certain times of day (such as during rush hours or at school bell times).

To understand routes' frequencies at all times of the week, and proposed hours of service, review the tables starting on page 82.

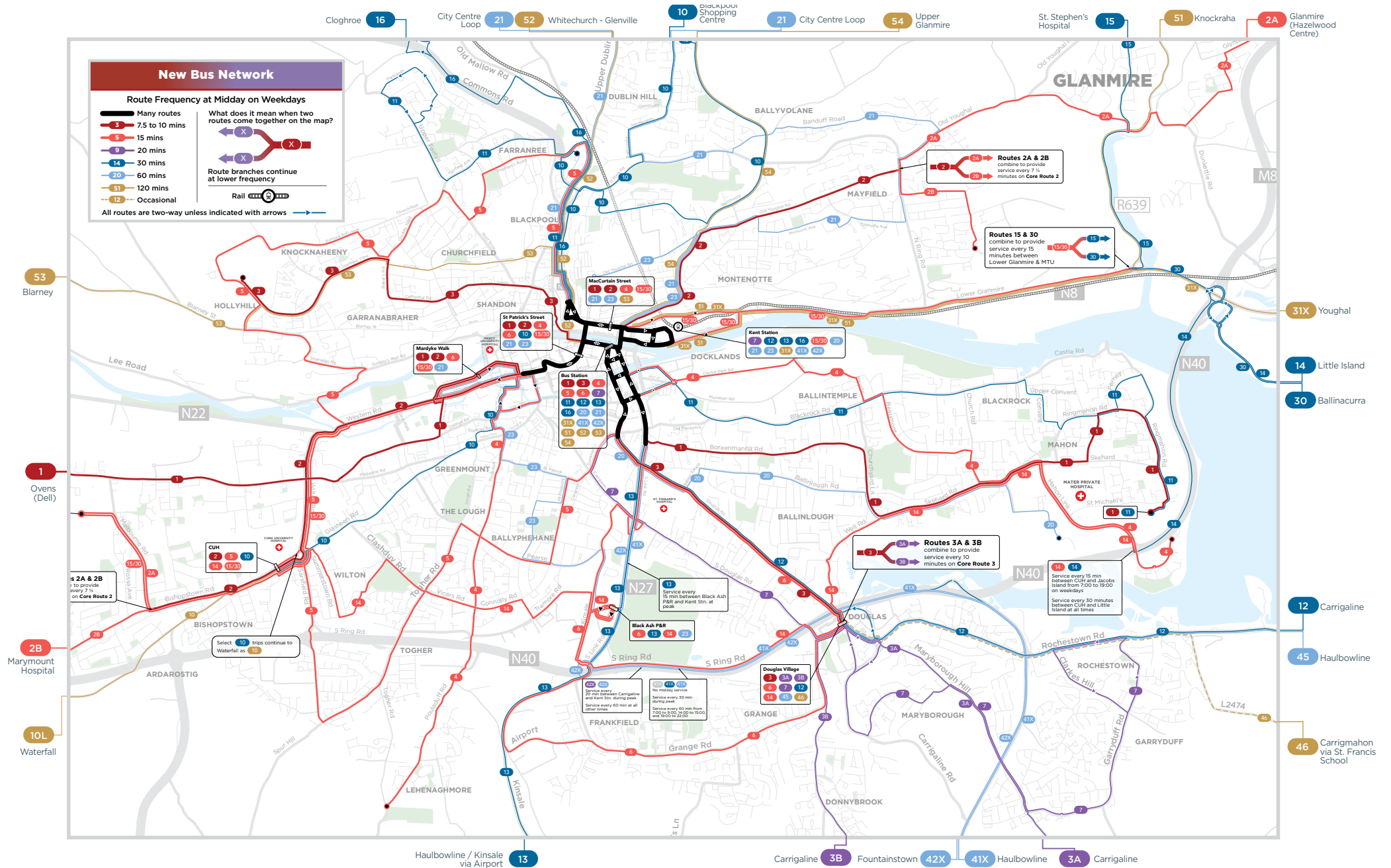
For even more detail, and to compare existing and proposed new routes in a given area, visit the [online map](#).

If you wish to print these maps, please print them as an A3.

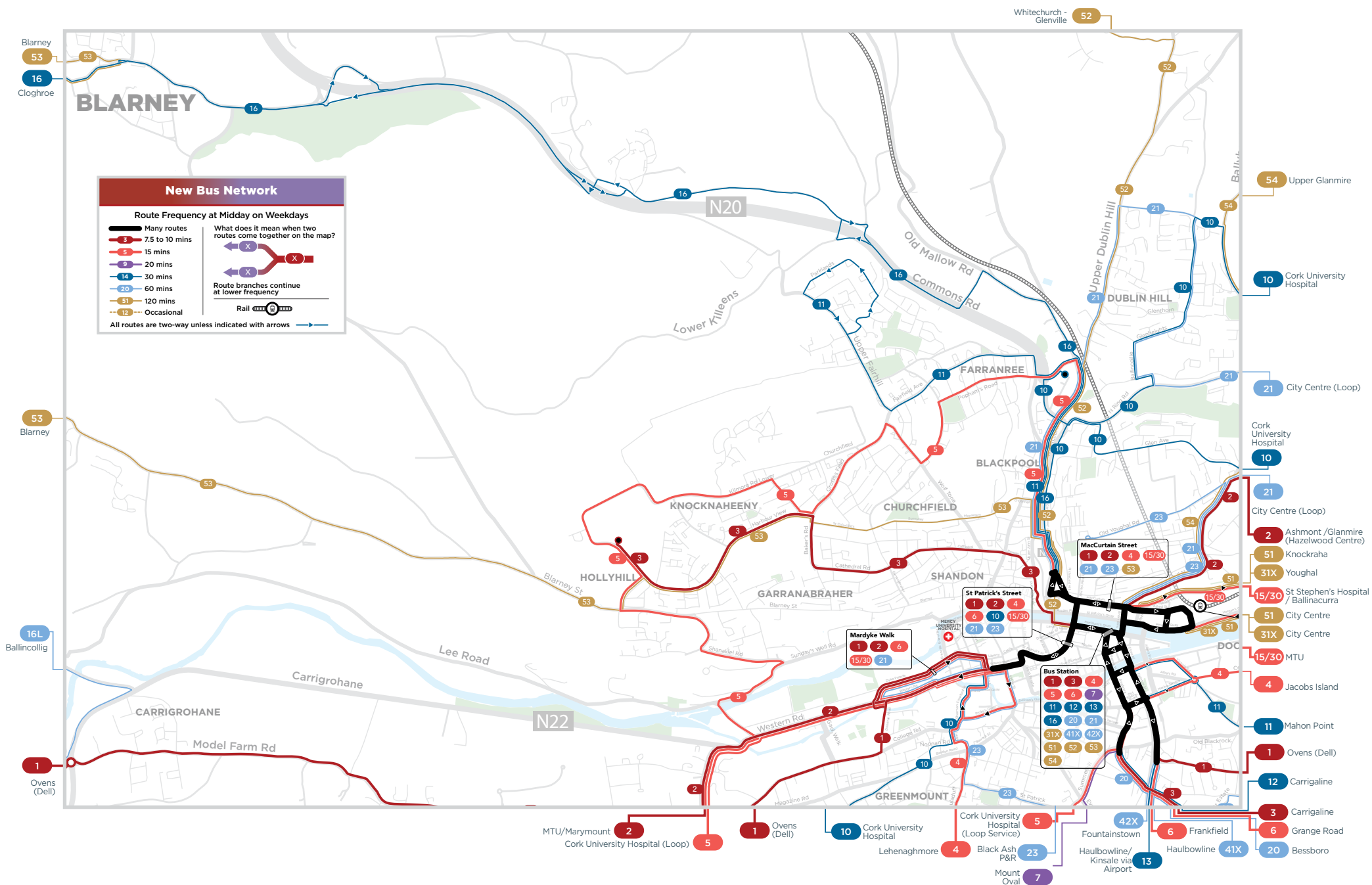
The maps on the following pages should be printed A3 for legibility.

Alternately, more detail can be seen in the [online map](#) of the New Network.

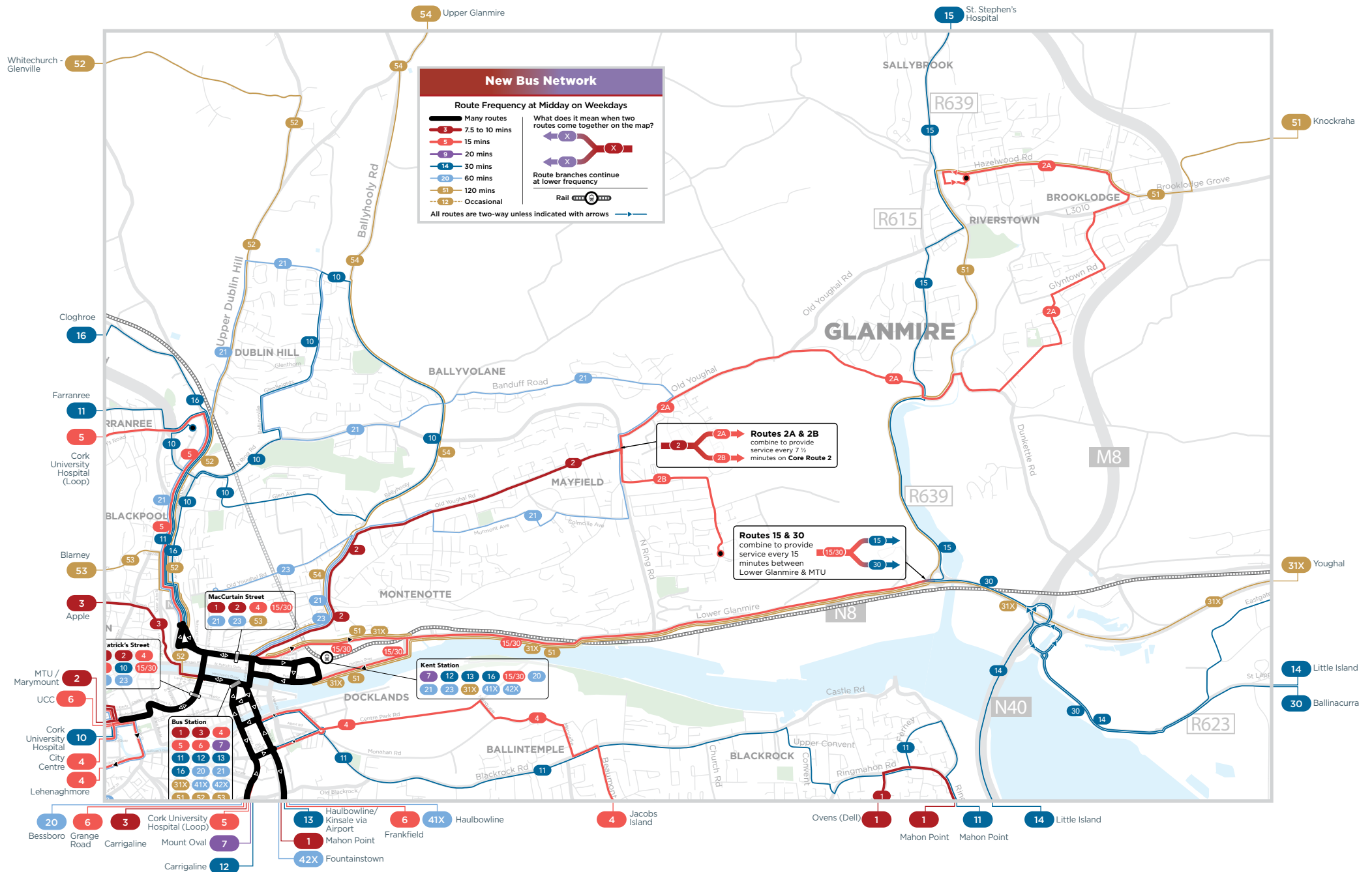
Central Map of the New Network



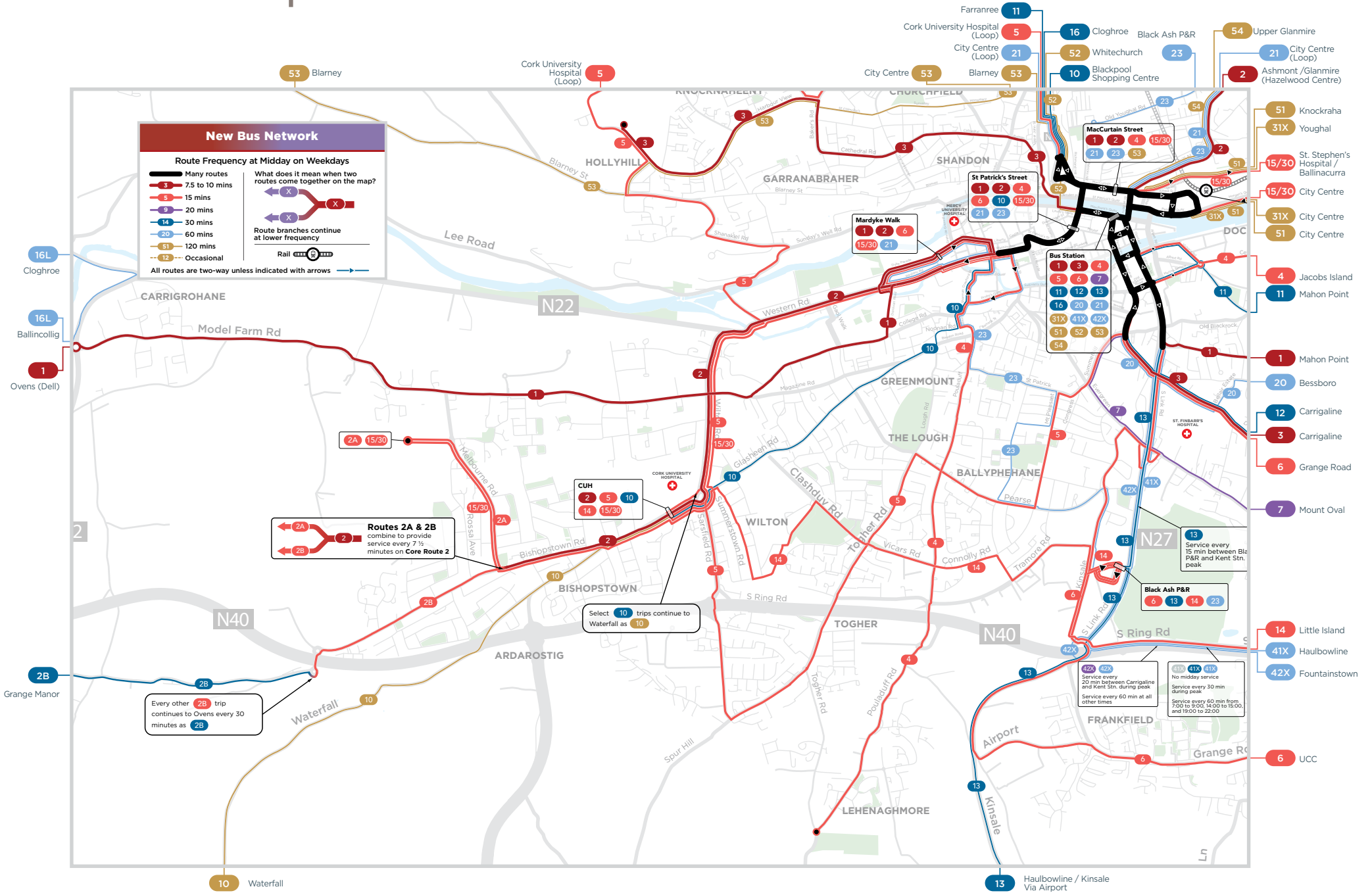
North West Map of the New Network



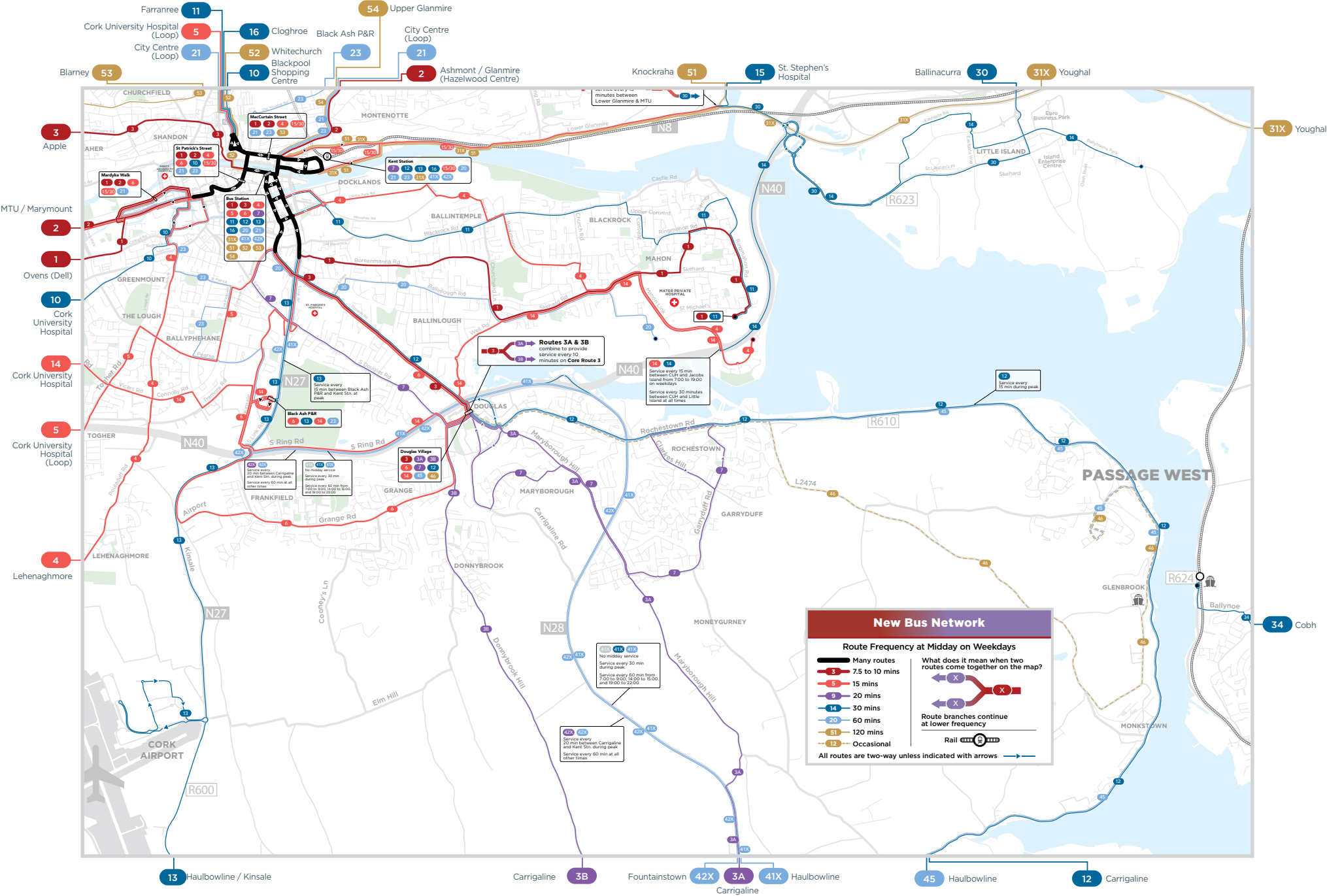
North East Map of the New Network



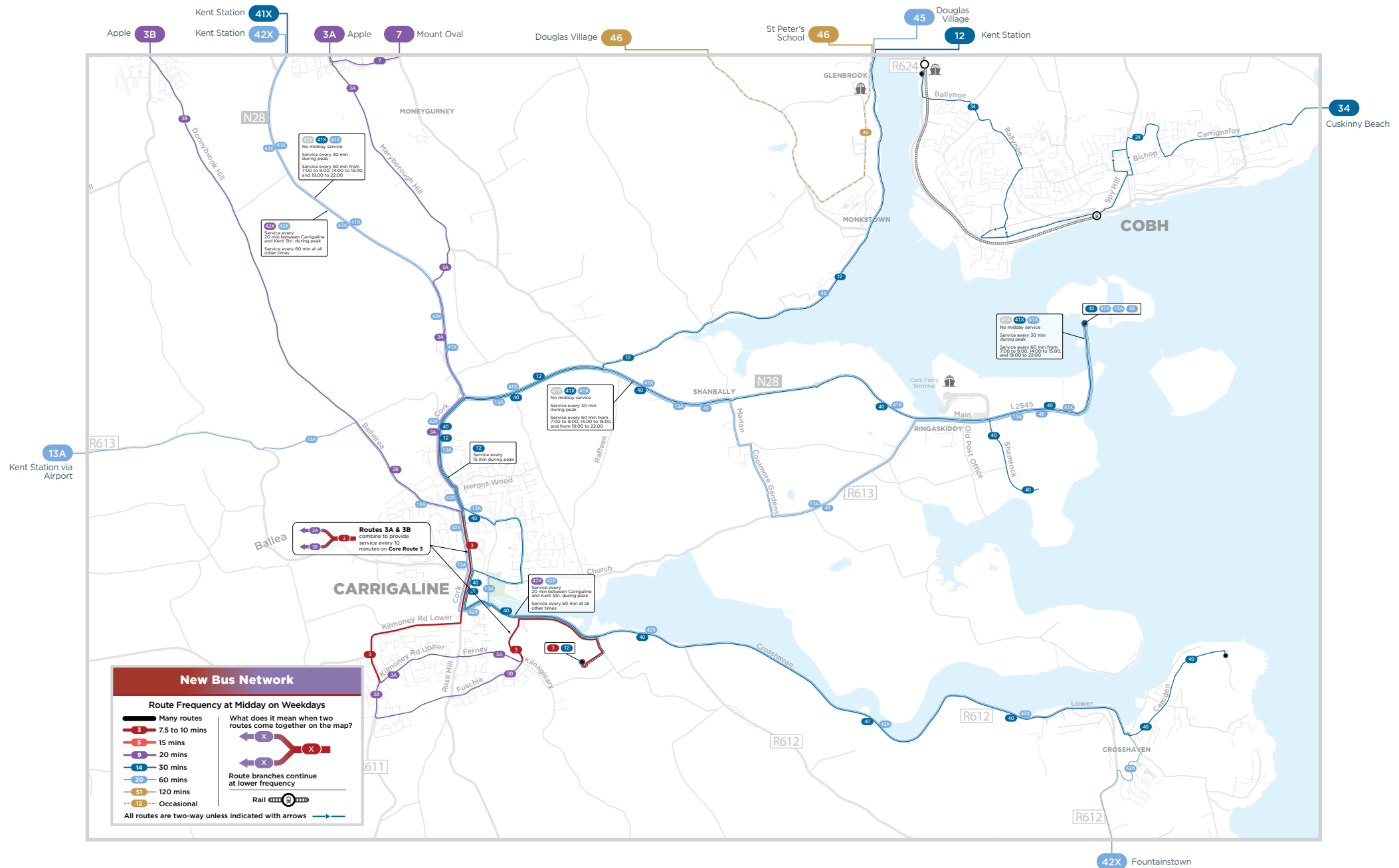
South West Map of the Network



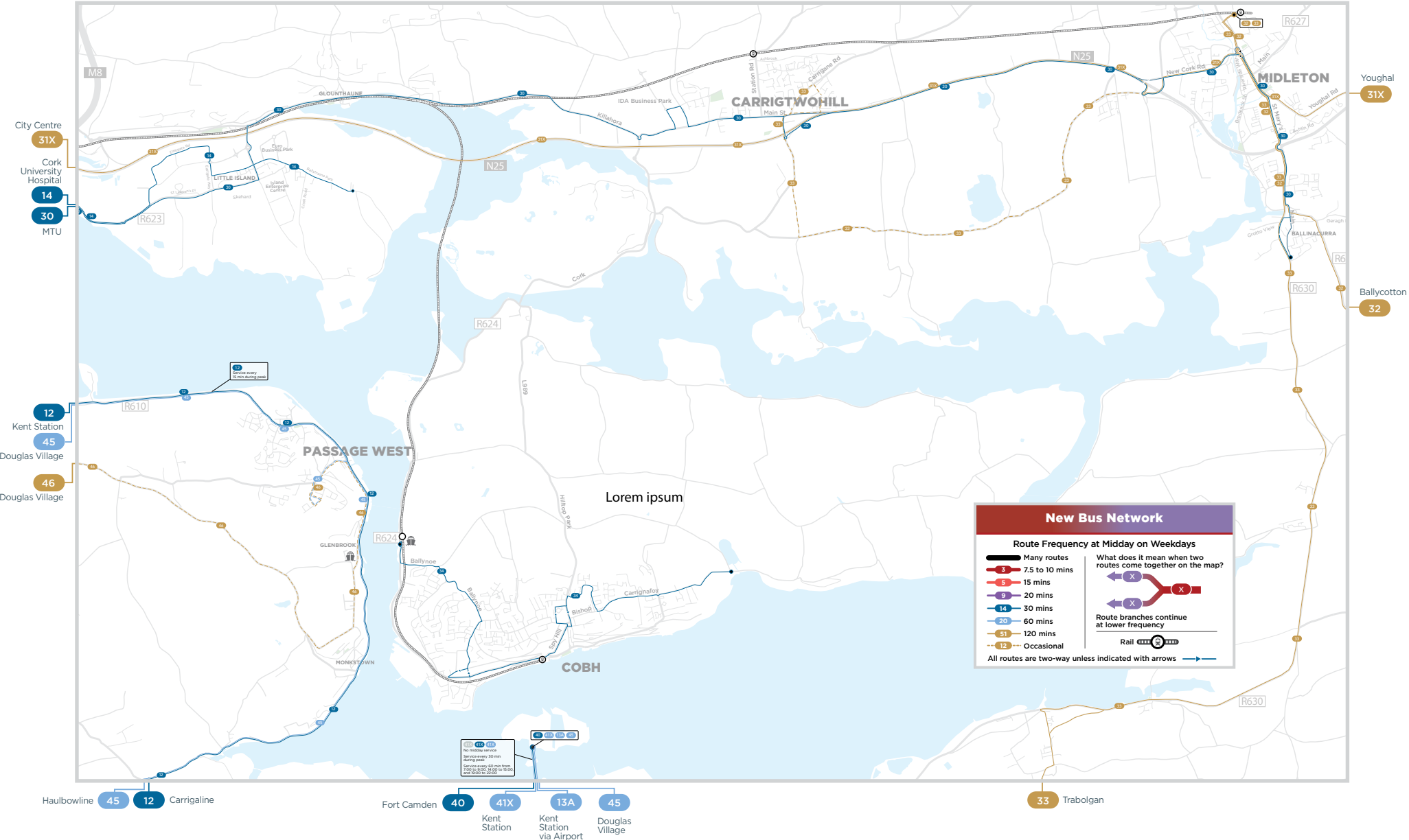
South East Map of the New Network



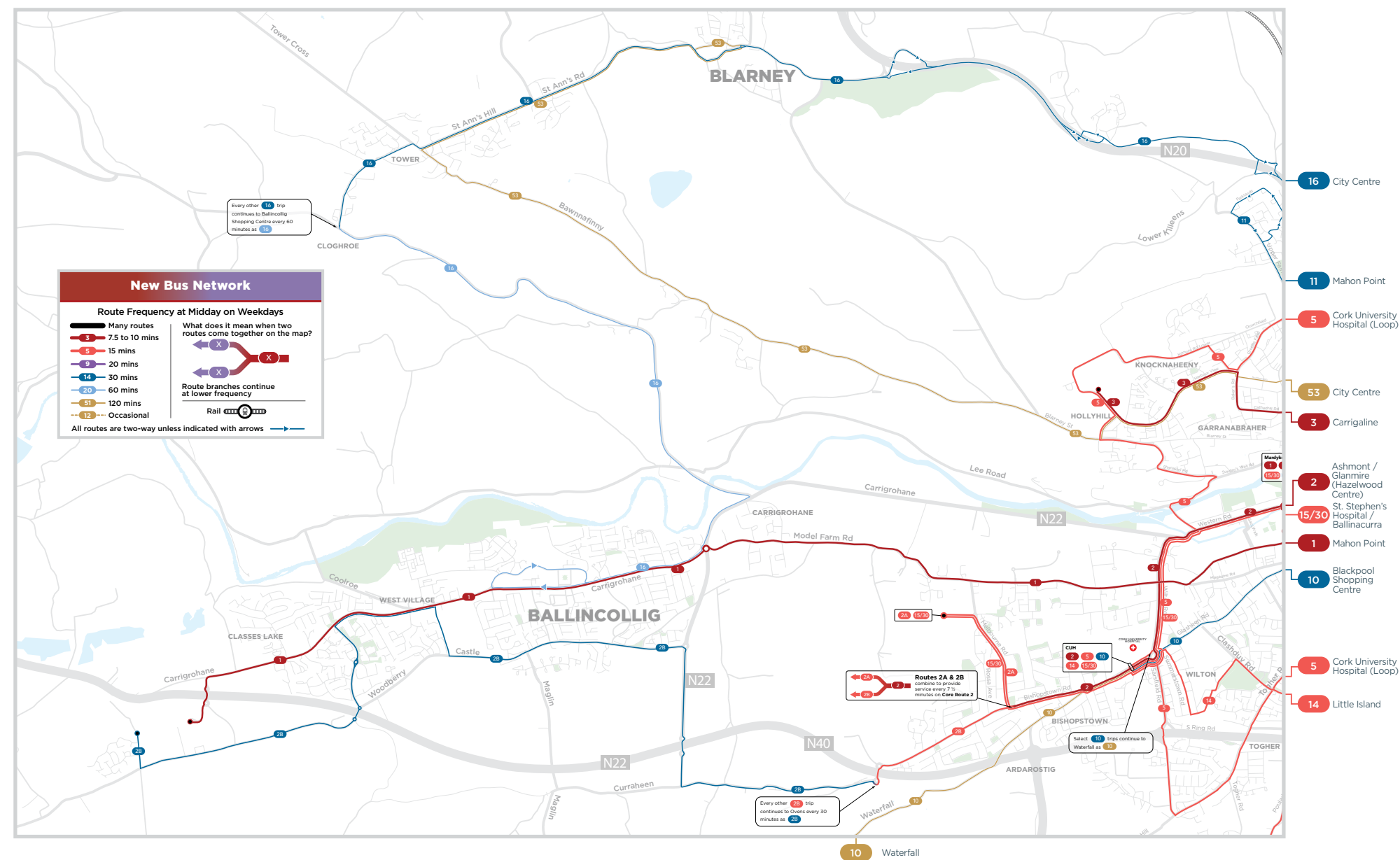
Outer South Map of the New Network



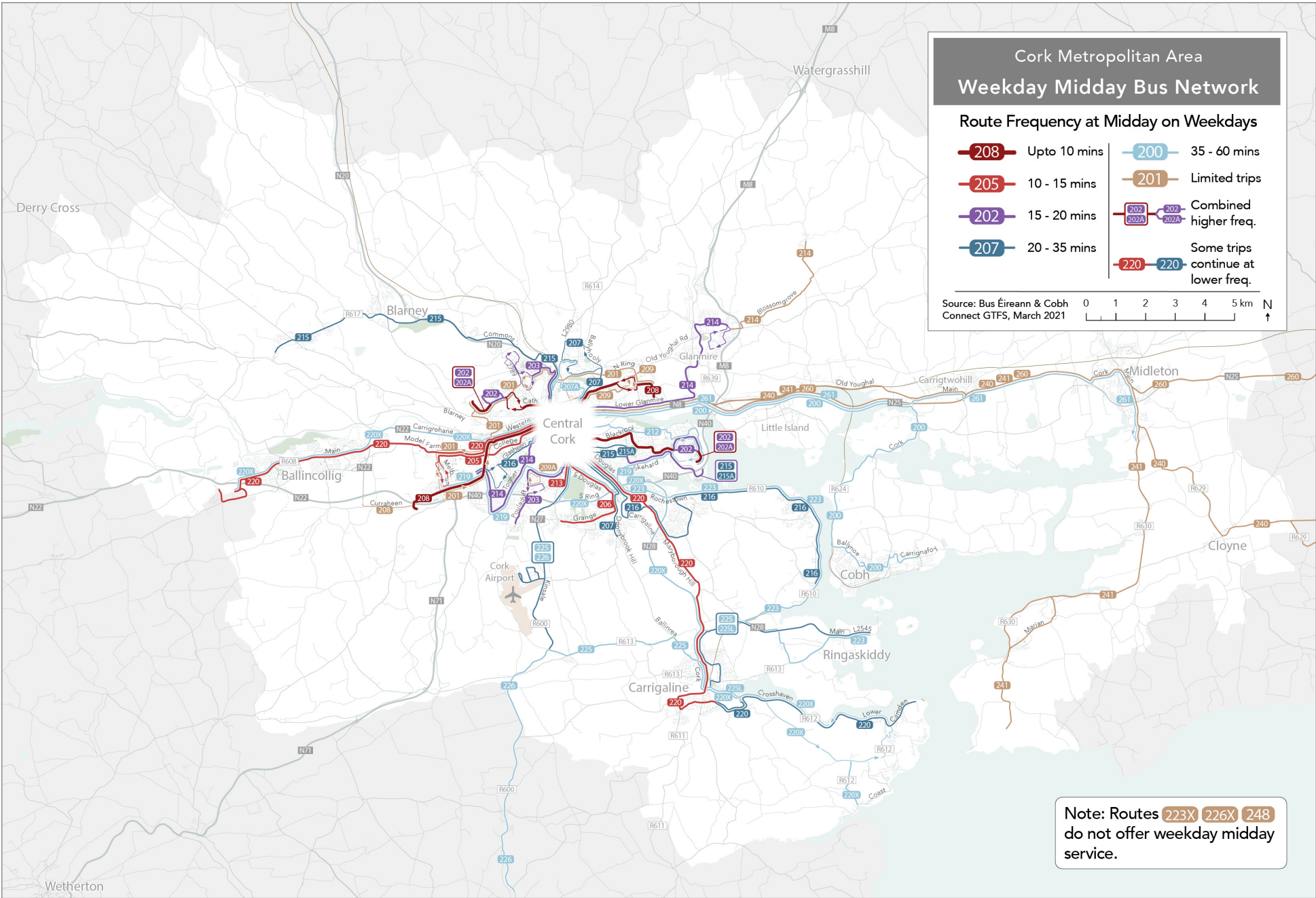
Outer East Map of the New Network



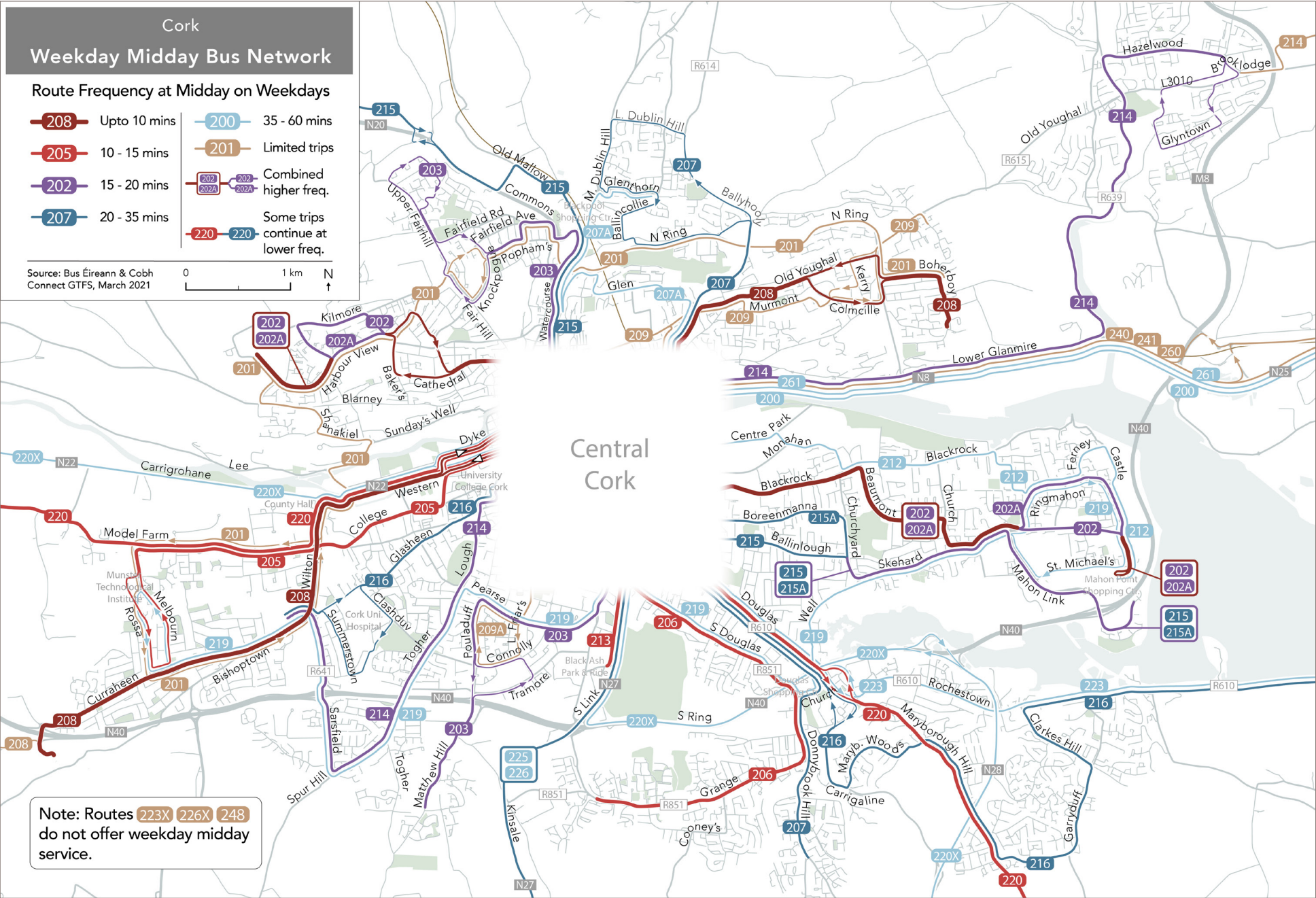
Outer West Map of the New Network



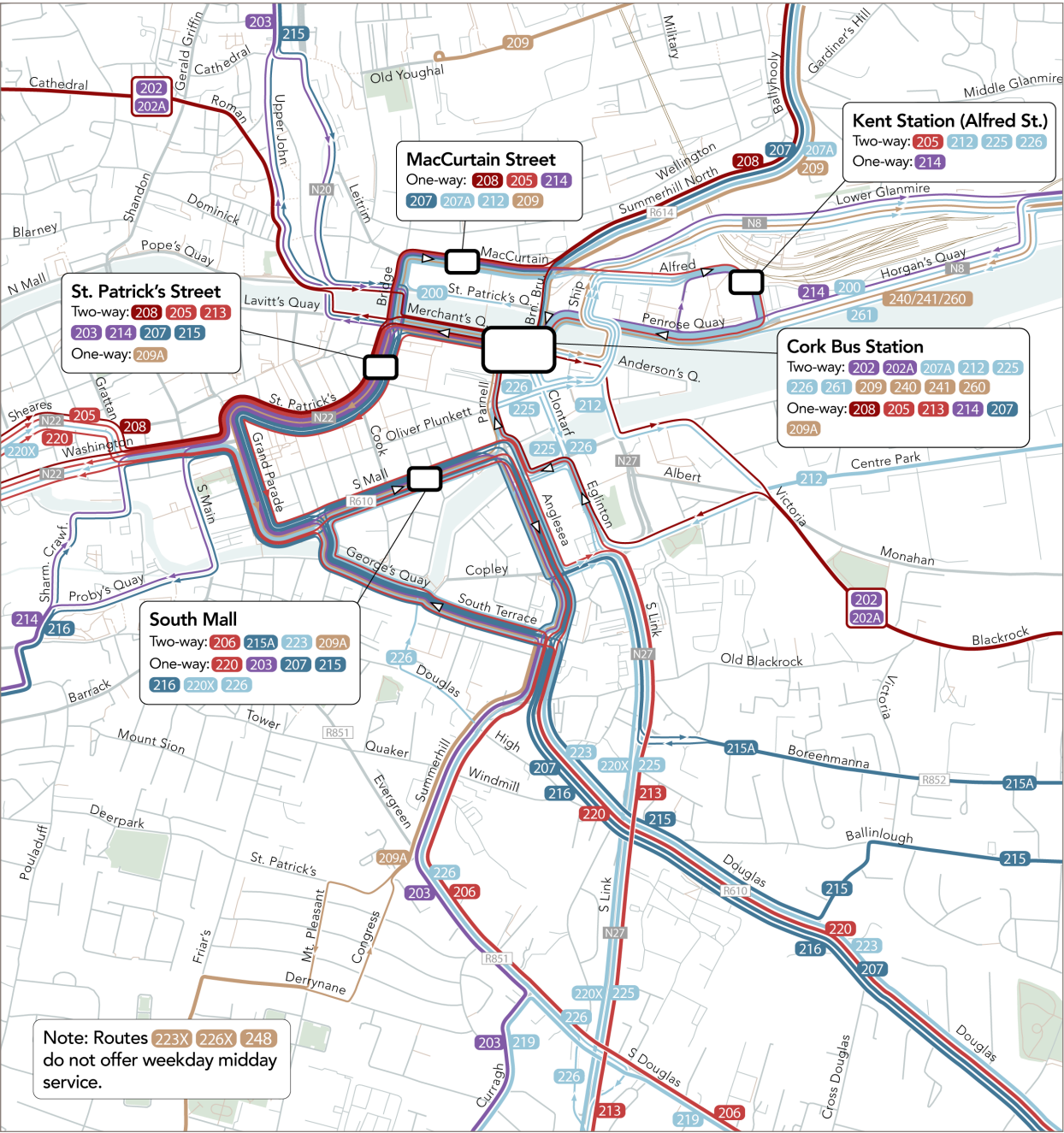
Existing Network – Metropolitan Area



Existing Network – Central Area



Existing Network – Cork City Centre



Central Cork

Weekday Midday Bus Network

Route Frequency at Midday on Weekdays

208

Upto 10 mins

205

10 - 15 mins

202

15 - 20 mins

207

20 - 35 mins

200

35 - 60 mins

201

Limited trips

208 202A 202 202A

Combined higher freq.

220 220

Some trips continue at lower freq.

Major Bus Stop in the City Centre

Source: Bus Éireann & Cobh Connect GTFS, March 2021

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A APPENDIX: DETAILED TABLES AND MAPS

Access Analysis

Average access was measured for all residents, jobs and education places in the Cork Metropolitan Area (CMA).

Summarising changes in access requires setting arbitrary limits on journey times, and measuring access within those limits. For this analysis, we analysed access within 30 and 60 minutes of travel.

To arrive at average access changes for the entire CMA, we estimated the fastest-available public transport journey times from every place in the CMA to every job or school location. The jobs or education places reachable within journeys of 30 or 60 minutes or less were summed for each place. The results for each place were then weighted by the number of residents living in that place.

Some of the maps in this chapter (starting on page 101) show the job access change, in percentage terms, for each resident according to the place they live. Other maps (starting on page 103) show access change results in the places where the *jobs* are located. The first type of map can be thought of as speaking to the concern of a resident or worker ("Where can I go?"), whilst the second type can speak to the concern of a business owner or employer ("How many customers or workers can reach my site?").

Measuring changes in access for journeys of 60 minutes or less shows interesting results for Cork City and the larger towns of Cork County, but the measure is not meaningful for the smallest towns and the rural areas in the CMA. In such places, where bus service is provided every-other-hour or just a few times per day, people will obviously plan their journey around the bus schedule.

An access analysis based on average waiting times is therefore not relevant for rural areas and small towns the way it is for urban and suburban places. The proximity and availability of service are more important information about the New Network in rural areas.

Access Change Maps

The average change in job access provided by the New Network can be seen in the [online map](#). Access changes in the central parts of the CMA are mapped on the following pages, using these colours:

- In most places, and for the majority of residents, more jobs will be reachable; they are shown in shades of **purple**.
- In a few places, fewer jobs will be reachable; they are shown in shades of **orange**.

- On both the online and static maps, more dots mean more people. The darker the concentration of dots, the more people will experience that gain or loss.

Notes on the following pages are too small to be read if printed (and would not fit on the maps at a print-legible size). They should be read in the PDF version of this document instead.

Change in Residents' Access to Jobs within 30 min., Midday on Weekdays

Please read these notes in the PDF version of this report.

The Fairhill area is today almost exactly a 30-minute journey (including average wait time) to Cork city centre. The New Network will lengthen that journey by about 5 minutes – but the city centre is so dense with jobs that even a small part of it no longer being within 30 minutes results in a large decrease in 30-minute access.

At the same time, the New Network will offer frequent service in Farranree, with direct service to Apple, CUH or Cork centre. Fairhill will also gain service to Mahon Point without interchange.

Ashmount residents, like those in Fairhill, will see a few minutes added to their journeys to the city centre and UCC. Because they are today about 29 minutes' journey from such dense job areas, just a few minutes' more journey time causes a visible loss on this 30-minute access map.

For Ashmount residents willing and able to walk to Tinker's Cross, they can take a direct route to the centre and UCC will be available every 7.5 minutes, and a direct route to MTU every 15 minutes.

The most frequent service in this area will shift from Blackrock Road/Beaumont Drive to Borreenmanna/Skehard Roads, making journeys slightly longer for those near the former and slightly shorter for those near the latter. Because these areas are about 30 minutes' journey from the city centre and Mahon Point, small changes in journey time have big effects on the number of jobs within 30 minutes.

Very frequent service between Carrigaline and Cork city centre (every 10 minutes) will branch onto Maryborough Hill and Donnybrook Hill Roads. This is an efficient way for routes already connecting Cork and Carrigaline to also to serve people on both of those roads...but it means that Maryborough Hill Road (where today the Route 220 offers 15-minute frequency) will have a frequency of every 20-minutes. This will lengthen journeys from Maryborough Hill Road by an average of 2.5 minutes.

Donnybrook Hill and Mt. Oval (which are as populated as Maryborough Hill) will benefit from this branching arrangement, gaining a better frequency, plus a direct route to Carrigaline.

Notes are not repeated on every map for which they could be relevant.

Access changes can also be viewed in the online map at [\[insert link\]](#).

Change in Residents' Access to Jobs

Weekdays 12-1pm (Within 30 min)

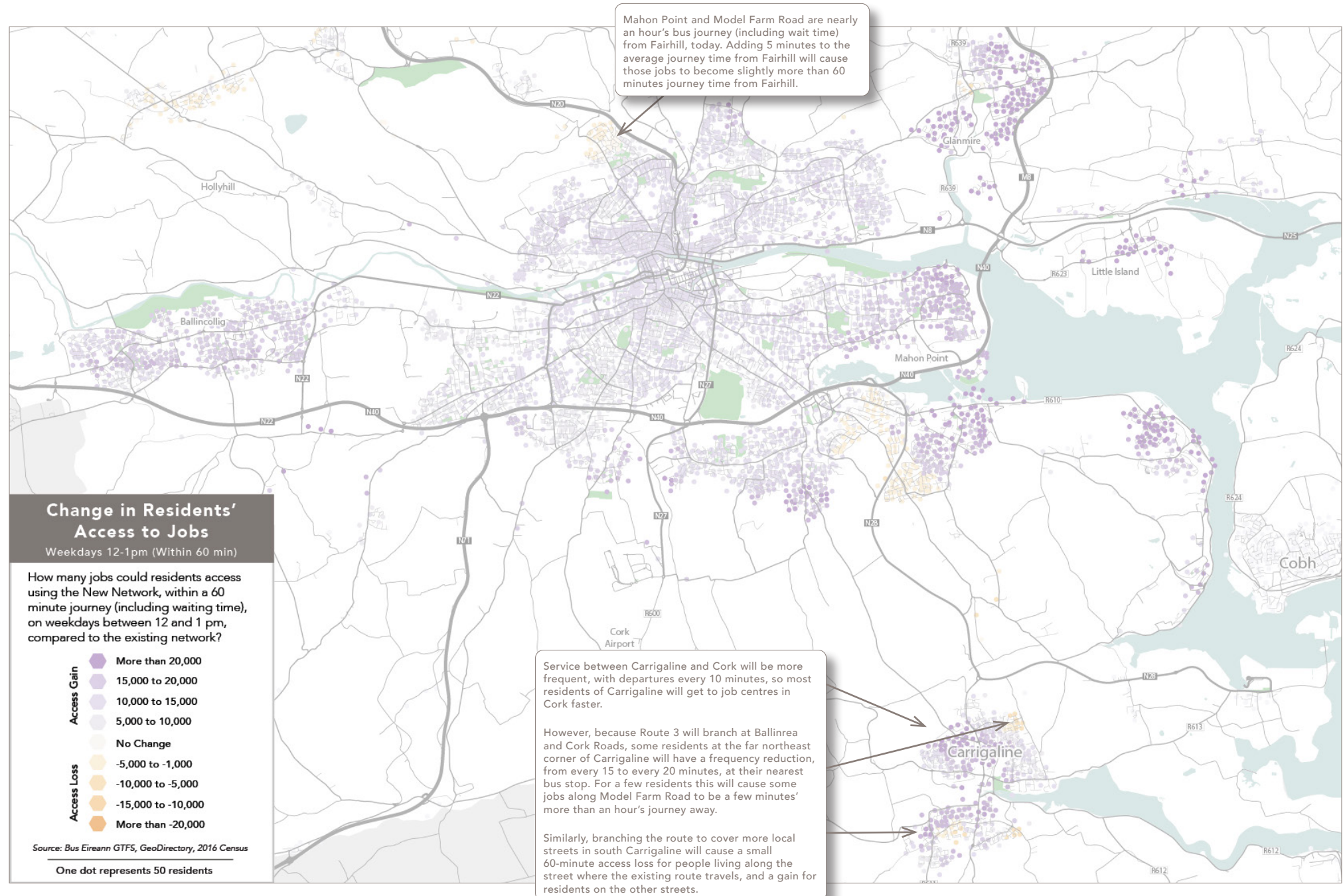
How many jobs could residents access using the New Network, within a 30 minute journey (including waiting time), on weekdays between 12 and 1 pm, compared to the existing network?

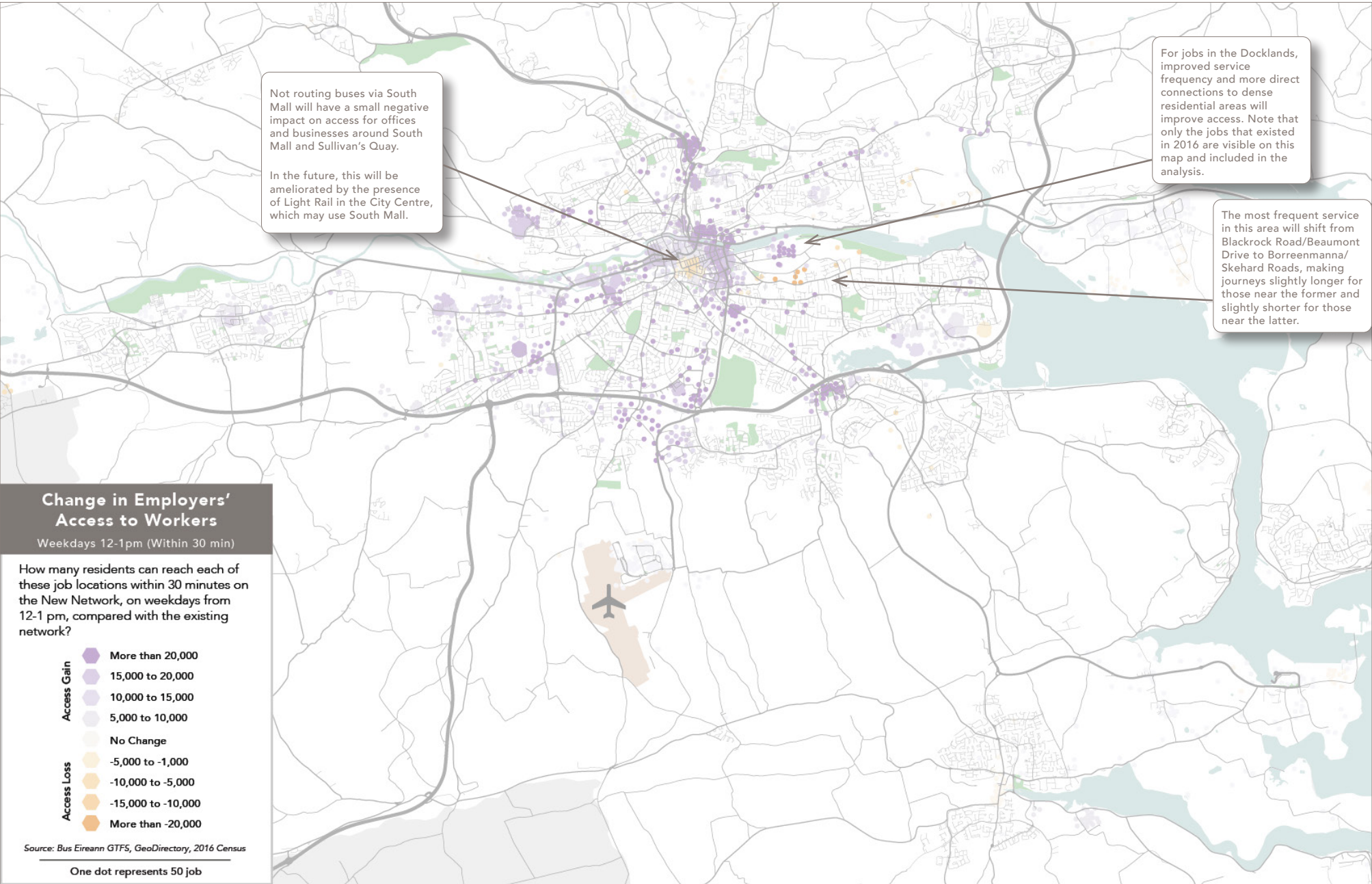


Source: Bus Eireann GTFS, GeoDirectory, 2016 Census

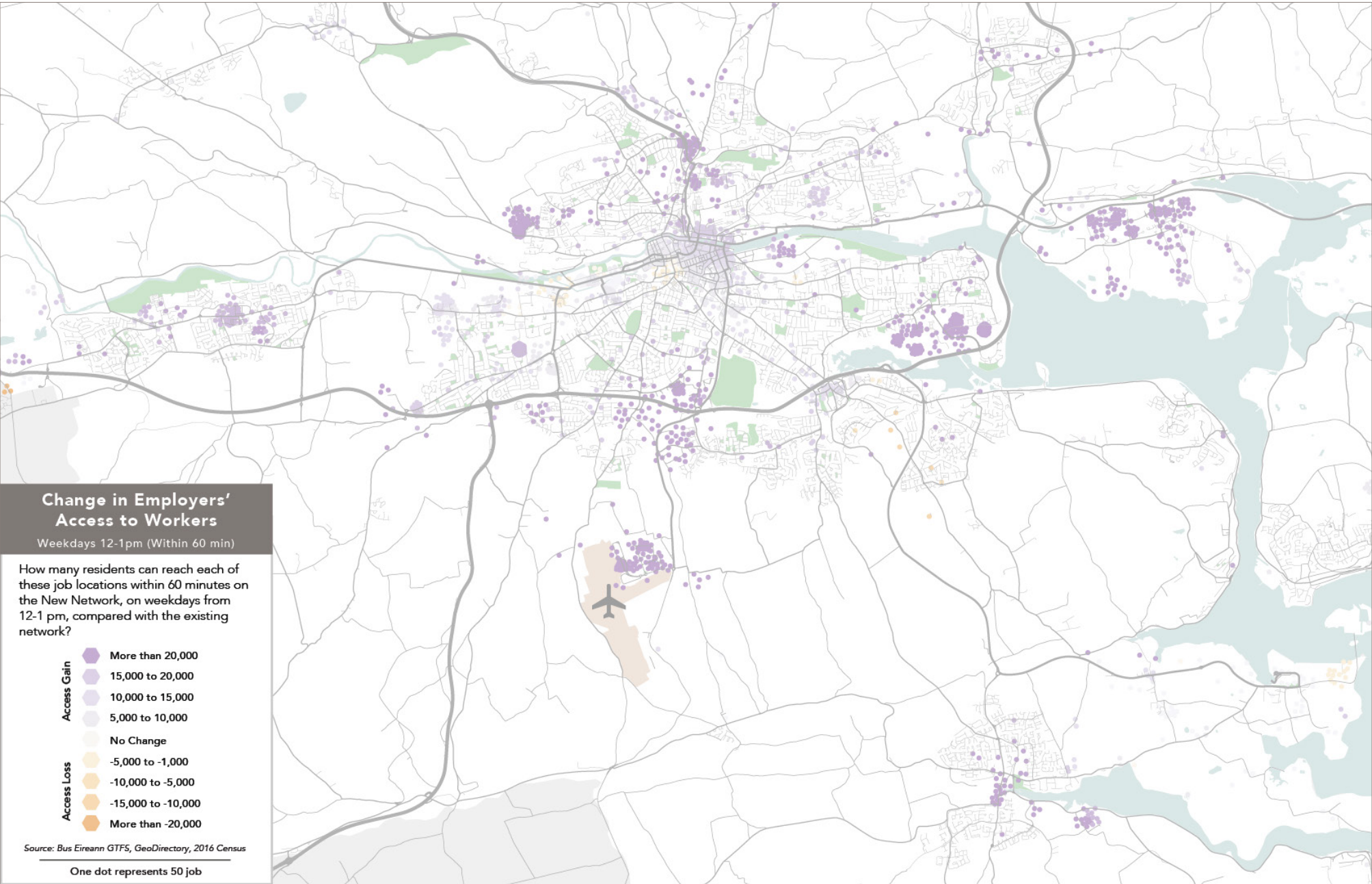
One dot represents 50 residents

Change in Residents' Access to Jobs within 60 min., Midday on Weekdays

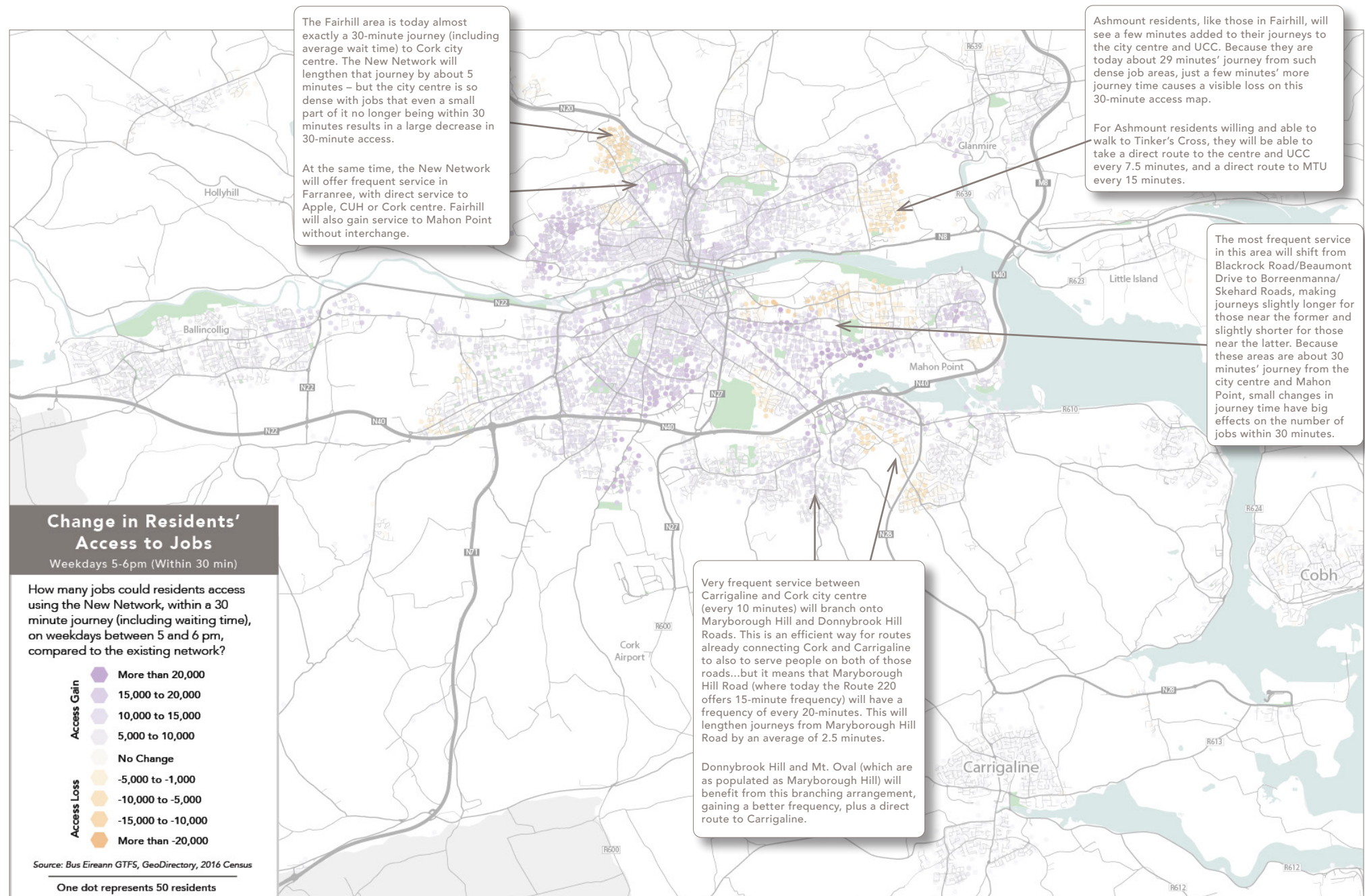




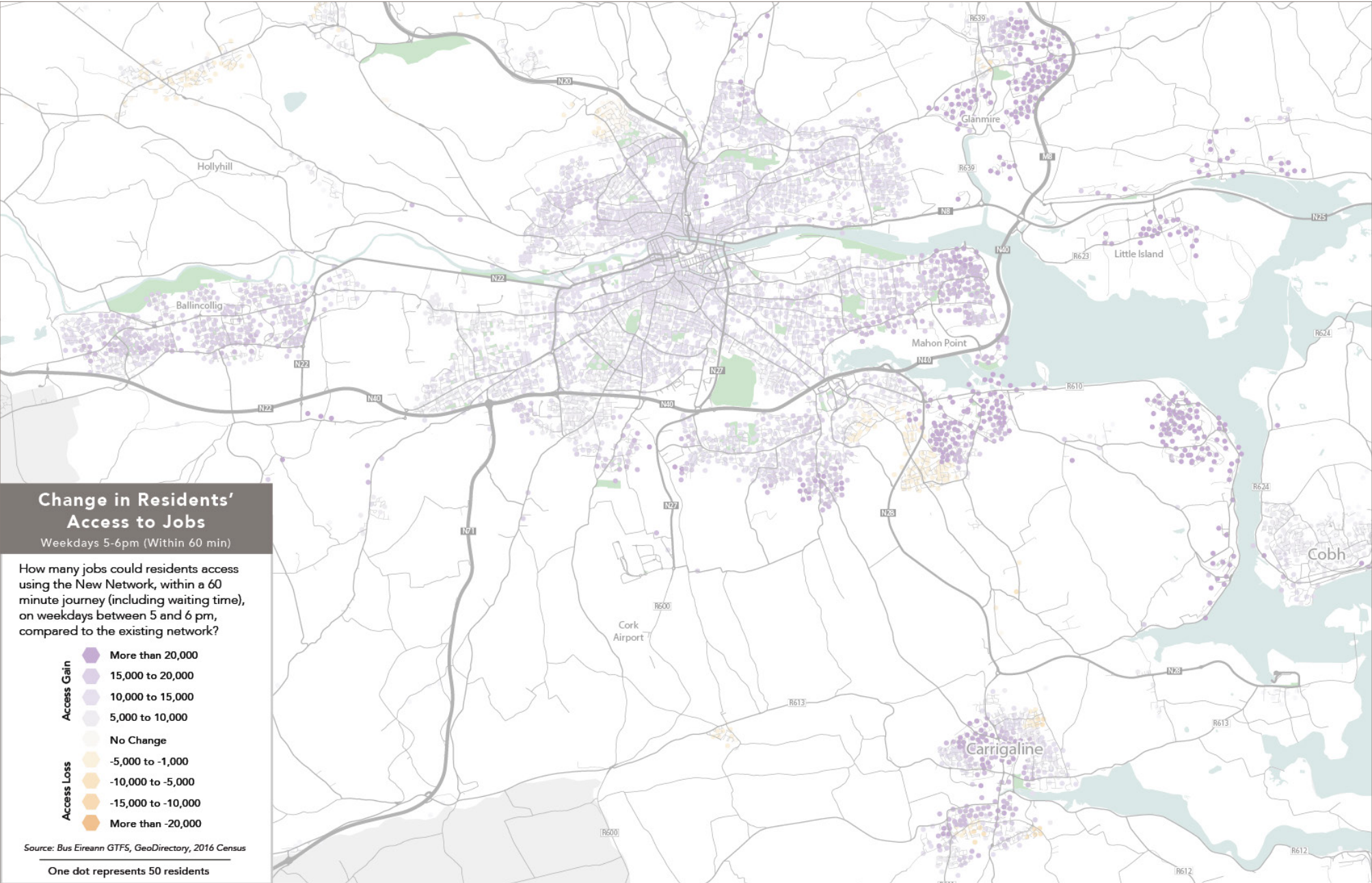
Change in Employers' Access to Workers in 60 min., Midday on Weekdays



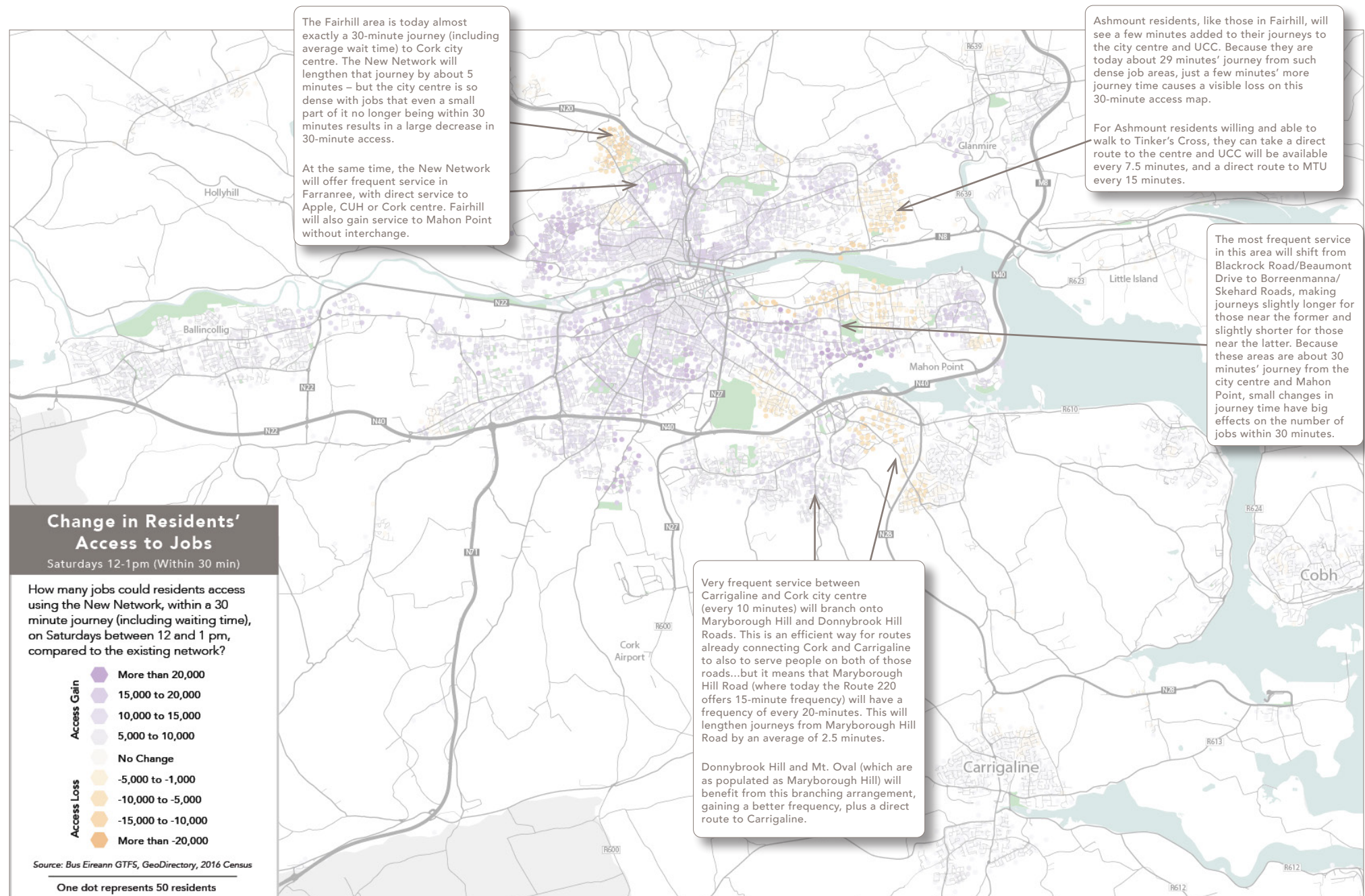
Change in Residents' Access to Jobs within 30 min., PM Peak on Weekdays



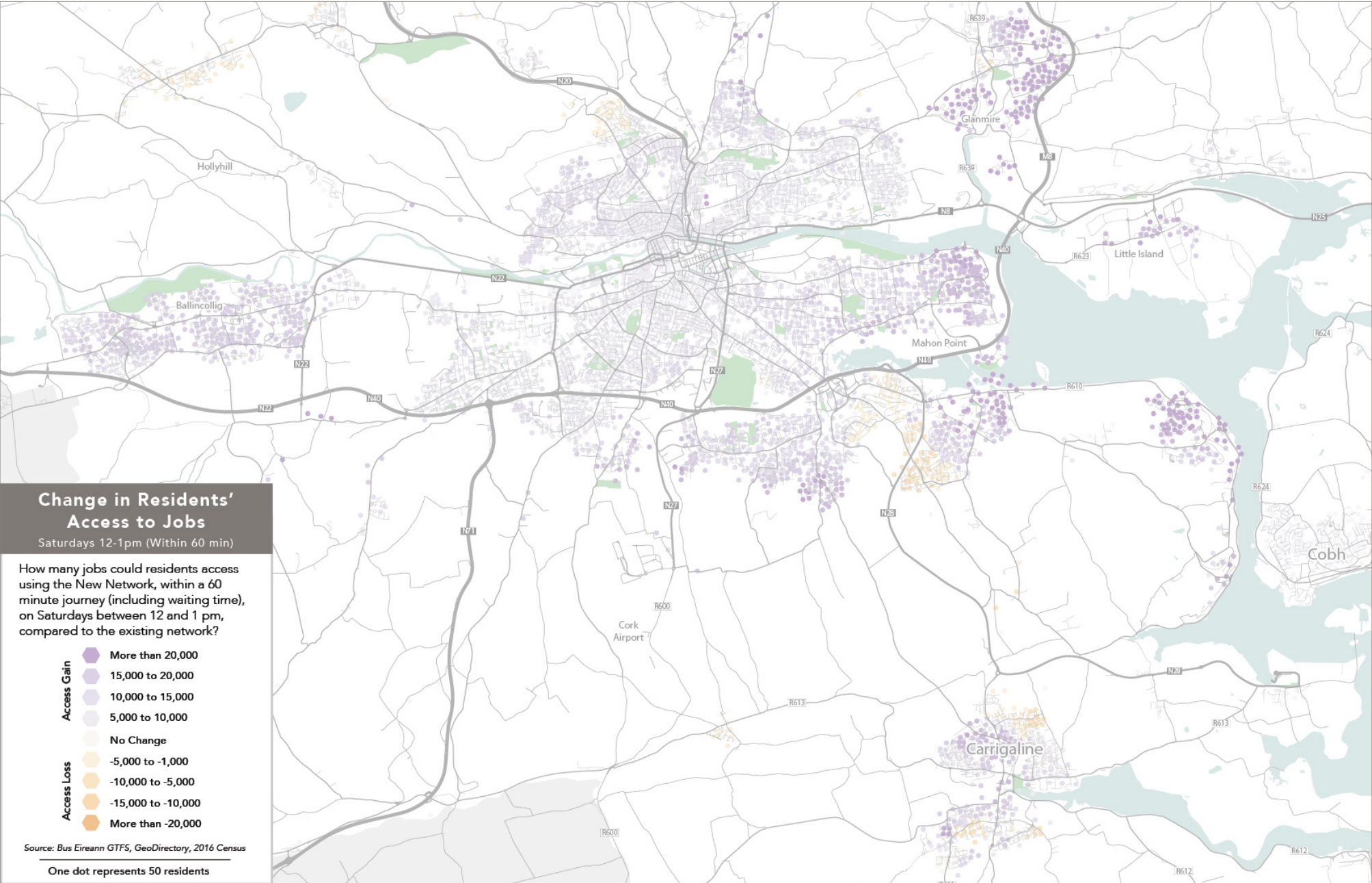
Change in Residents' Access to Jobs within 60 min., PM Peak on Weekdays



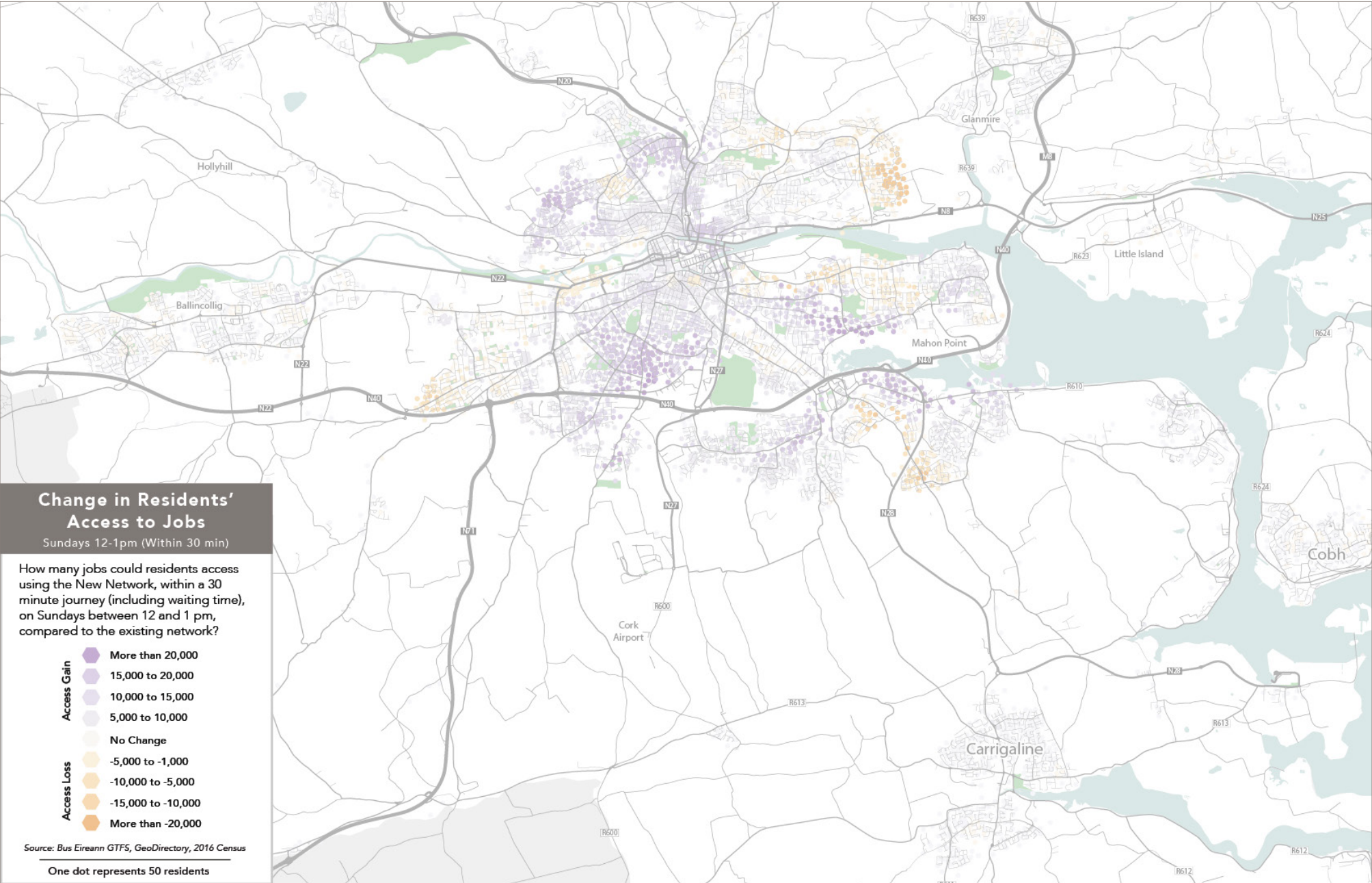
Change in Residents' Access to Jobs within 30 min., Midday on Saturdays



Change in Residents' Access to Jobs within 60 min., Midday on Saturdays



Change in Residents' Access to Jobs within 30 min., Midday on Sundays



Change in Residents' Access to Jobs within 60 min., Midday on Sundays

