



## **DRAFT Electric Vehicle Charging Strategy**

### **Publicly Accessible Charging Infrastructure**

**Cork City Council**

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**Comhairle Cathrach Chorcaí**  
**Cork City Council**

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## 1.0 Introduction

The Climate Action Plan 2023 (CAP23) has set targets for a significant reduction in transport emissions to include a 20% reduction in total vehicle kilometres, a reduction in fuel usage, and a significant uptake in sustainable transport trips and a shift towards active and sustainable travel modes. CAP23 acknowledges that fleet electrification forms a key part in terms of delivering these targets, with 30% of the private car fleet to be electrified by 2030.

The Department of Transport published their Electric Vehicle Charging Infrastructure Strategy for 2022-2025 to present the pathway for the delivery of electric vehicle charging infrastructure to support the Climate Action plans targets. The Cork City Development Plan has set out a clear objective (Objective 5.22) in support of the rollout of electric vehicle charging infrastructure both on-street and within existing car parks, in addition to their inclusion in new development.

This report presents Cork City Council's Electric Vehicle Charging Strategy. The Strategy focuses on the delivery of publicly accessible electric vehicle charging infrastructure to allow for the targeted uptake in electric vehicles in Cork City. The strategy makes recommendations with respect to the different types of charging infrastructure required and its spatial distribution within Cork City. The strategy has identified a first wave of infrastructure investment to be designed and constructed between 2024-2025 which will subsequently be monitored and analysed to refine the delivery of subsequent waves of investment.

This Strategy has focused on the delivery of publicly accessible charging infrastructure with the ultimate objective to serve the charging needs of residents and visitors to the city. Further electric vehicle charging infrastructure will also be delivered in the city to include en-route charging infrastructure and charging infrastructure for buses and heavy goods vehicles. These electric vehicle charging infrastructure programmes are being prepared by other government agencies (Transport Infrastructure Ireland, National Transport Authority, Zero Emission Vehicles Ireland) and when combined with the recommendations of this Strategy will form a comprehensive Electric Vehicle Charging Infrastructure Strategy for the entire city.

### Strategic Environmental Assessment and Appropriate Assessment

A Strategic Environmental Assessment (SEA) has been carried out on this plan. The environmental report that has been developed through the SEA process is being published for consultation in conjunction with this plan and submissions will be used to ensure environmental considerations are addressed in the final Cork City Council Electric Vehicle Charging Infrastructure Strategy. Cork City Council intend on delivering the EV charging infrastructure as defined in this Strategy. The Strategy will accord with the provision of the Cork City Development Plan 2022 – 2028 and all relevant higher order plans.

A Screening for an Appropriate Assessment has been conducted and this plan has been screened out. The impact of the plan (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 sites has been considered with respect to the conservation objectives of the sites and to their structure and function. If any mitigation measures are identified as required from this process, these will be included in the final plan.

## 2.0 Policy Context

### Climate Action Plan 2023

#### Introduction

Climate Action Plan 2023 has been prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021 and responds to our changing climate which is rapidly transforming our world. There has been an increase of approximately one degree in average global temperatures since 1850, which has resulted in increases in greenhouse gases (GHGs) due to the burning of fossil fuels. Climate Action Plan 2023 sets out a roadmap for Ireland to take action to reduce our emissions by 50% by 2030 and ultimately reach net zero by 2050.

#### Transport Sector

With respect to the Transport Industry the Plan will:

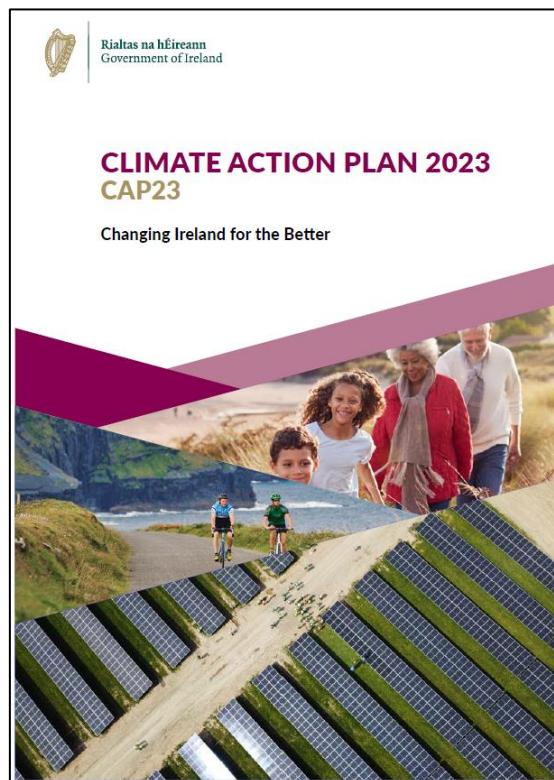
- drive policies to reduce transport emissions by improving our town, cities and rural planning, and by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles.

The plan calls for a significant cut in transport emissions with updated targets to include a 20% reduction in total vehicle kilometres, a reduction in fuel usage, and a significant uptake in sustainable transport trips and a shift towards active and sustainable travel modes. The Plan acknowledges that fleet electrification and use of biofuels will provide the greatest share of emissions abatement in the medium term, with 30% of the private car fleet to be electrified by 2030.

#### Electric Vehicle Charging Infrastructure

With respect to Electric Vehicle Charging Infrastructure the Plan has identified the following:

- Zero Emission Vehicles Ireland (ZEV) was established in July 2022 as a dedicated office to support consumers, the public sector, and businesses to continue to make the switch to zero-emission vehicles. ZEV will lead on the delivery of the Ireland's target to have 30% of the private car fleet to be electrified by 2030.
- A National Electric Vehicle Charging Infrastructure Strategy has recently been published and provides a set of common policies and standards for the rollout of EV charging and will provide guidance on the fair and efficient rollout of charging infrastructure in the state.
- The ambition of the Strategy is to meet the needs of the Climate Action Plan target of 940,000 electric vehicles in total by 2030 (845,000 passenger EVs, and 95,000 light goods vehicles).
- ZEV have a number of commitments to deliver over the coming years including:
  - Destination Charge Point Schemes - including sports clubs, community centres, etc., as well as commercial destinations;
  - Local Authority Residential Charging Schemes including a shared charging app pilot;



- Regional Assembly and Local Authority Electric Vehicle network plans to deliver accessible and low-cost charging;
- High-powered electric vehicle charging strategy; and
- Review financial incentives to further the transition of vehicle fleets, considering actions to support and deliver a just and equitable EV transition.

### Cork City Development 2022-2028

The Cork City Development Plan has clear objectives to support the transition from traditional fuel sources to more sustainable fuel sources included supporting the provision of charging infrastructure for electric Vehicles on-street, within car parks and in new developments. In addition, the development plan includes specific recommendations with respect to the quantum of charge points required within new developments.

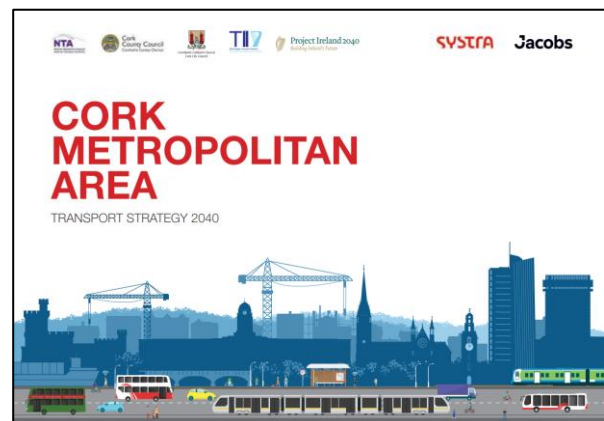
### Cork Metropolitan Area Transport Strategy

The Cork Metropolitan Area Transport Strategy has been developed by the National Transport Authority (NTA) in collaboration with Transport Infrastructure Ireland (TII), Cork City Council and Cork County Council. The National Planning Framework 2040 anticipates that Cork is expected to grow by 50% to 60% and this growth will result in a significant increase in the demand for travel. This demand needs to be planned for carefully in order to maintain Cork’s attractiveness to live, work, visit and invest in.

A key principle for Cork Metropolitan Area Transport Strategy is to reduce dependency on the private car, while increasing the appeal of sustainable transport options. The Strategy presents an accessible, integrated transport network for all travel modes that enables the sustainable growth of the Cork Metropolitan

Area as a dynamic, connected, and competitive city region.

The Cork Metropolitan Area Transport Strategy includes policies in support of the transition to a Low Carbon and climate Resilient Society which includes the expansion of the existing electric vehicle charging points.



### 100 Climate Neutral and Smart Cities (Mission Cities)

In 2022, Cork and Dublin were the Irish cities selected to participate in the European Union’s Mission to achieve 100 Climate Neutral and Smart Cities.

The mission has three main elements to deliver a roadmap to climate neutrality:

- Climate Action Plan
- Investment Plan
- Climate City Contract

Through the mission, Cork has access to dedicated City Advisors to assist build a city-wide movement to achieve climate neutrality ahead of Ireland’s **National Climate Objective** (net zero by 31/12/2050). The delivery of publicly accessible electric charging infrastructure will assist deliver on this objective by reducing transport related emissions.

## Noise Action Plan 2018-2023 Cork Agglomeration Area

Cork City Council and Cork County Council jointly prepared a Noise Action Plan for Cork city in accordance with EU directive 2002/49/ EC and the Environmental Noise Regulations 2006 (SI No. 140 of 2006). The purpose of the Noise Action Plan is to act as a means of managing environmental noise, and to meet the aim of the EU Directive of preventing, and reducing environmental noise through the adoption of the action plan. The Noise Action Plan identified road traffic noise as the predominant noise source within the Cork Agglomeration Area and noted that the introduction of electric vehicles for both private and public transport vehicles have the potential to positively impact on noise levels in the city.

## Electric Vehicle Charging Infrastructure Strategy

### Introduction

This strategy is the framework for the delivery of electric vehicle (EV) charging infrastructure in Ireland supporting the delivery of the Climate Action Plan ambition of approximately one million Electric Vehicles on Irish roads by 2030. A core goal of the strategy is to ensure that EV charging infrastructure provision remains ahead of demand.

It considers the different charging needs of urban and rural communities and the increasing uptake of homecharging solutions for EV owners, as well as an increased demand for a public charging network. The Strategy recognises the difficulty in predicting the specific details about the charge point types and interfaces that will be available by the end of this decade and the strategies detail focuses on the years up to 2025. At this stage in 2025, the Electric Vehicle Charging Infrastructure Strategy will be reviewed and refined to reflect on lessons learned.



The Strategy acknowledges that the majority of EV charging will be carried out at home however there is a growing need to expand the provision of publicly accessible charging infrastructure. The 5 primary types of Electric Vehicle Charging Infrastructure are:

- Home Charging (private)
- Residential Neighbourhood charging (public)
- Destination Charging (public)
- En-route Charging (public)
- Workplace Charging (private)

The focus of Cork City Council's Electric Vehicle Infrastructure Strategy will be on the residential neighbourhood and destination charge points and will liaise with both ZEVI and Transportation Infrastructure Ireland with respect to the En-route Charging Hubs.

## Key Principles

The Electric Vehicle Charging Strategy has been prepared based on five fundamental principles:

### *Principle 1: EV infrastructure will form part of a wider sustainable transport network*

This principle will ensure that both our land use strategies and supporting transport infrastructure ultimately support the compact growth of our urban areas and ensure active and public transport travel modes are promoted over private travel, including travel by electric vehicles.

### *Principle 2: EV charging infrastructure will work for everyone, regardless of age, health, income, or other needs*

This principle will ensure a fair and equitable transition for all members of society both in terms of physical mobility and taking into account the varying socio-economic factors of the population. Finally, any software application (app) delivered or endorsed by ZEVl should ensure full disclosure with respect to costs and developed to allow maximum accessibility by all age groups in the state.

### *Principle 3: For the majority of EV users, home charging will remain the main solution*

This principle will ensure **home charging is the primary means of fuelling electric vehicles** into the future and allows for improved optimisation of the state's electrical grid.

### *Principle 4: Options will be provided for those who cannot charge at home*

This principle ensures that for at least part of the publicly accessible charge points that low cost charge points are provided proximate to homes which do not have access to private off-street parking. In addition, community hubs are to be provided to supplement the neighbourhood charge points, a key benefit of providing residential community hubs is the confidence they will give drivers to invest in an electric vehicle by removing any potential concern with respect to range and charger anxiety.

### *Principle 5: Across the EV charging network, EV charging systems will be interoperable and as simple as possible to use*

This principle will ensure consistency in the delivery and operation of electric vehicle charge points in the state and requires the preparation of a national standard. This interoperability between potentially different suppliers of electric charge points in the city is supported by the Cork City Council's Electric Vehicle Infrastructure Strategy and is key to enhanced user interface with this new technology.

## Alternative Fuels Infrastructure Regulation

The Alternative Fuels Infrastructure Regulation key objectives include the following:

- to ensure minimum infrastructure to support the required uptake of alternative fuel vehicles across all transport modes and in all EU Member States to meet the EU's climate objectives;
- to ensure full interoperability of the infrastructure; and
- to ensure comprehensive user information and adequate payment options at alternative fuels infrastructure.

The proposed regulation sets a number of mandatory national targets for the deployment of alternative fuels infrastructure across all countries in the European Union which will be subdivided further to each jurisdiction in the state to ensure a balanced approach is delivered.

The scale of publicly available electric recharging infrastructure (in terms of Power Output (kW) for light duty road vehicles (cars and vans) for the jurisdiction of Cork City is under review through Zero Emission Vehicles Ireland and will be based on the following:

- for every battery electric light duty vehicle a total power output of at least 1 kW should be provided and,
- for every plug-in hybrid light-duty vehicle, a total power output of at least 0.66 kW should be provided

It also sets out distance-based targets for light duty and heavy-duty road vehicles on the TEN-T core and comprehensive network which will be delivered through the En-routing EV charging Infrastructure Strategy delivered by Transport Infrastructure Ireland and Zero Emission Vehicles Ireland). It also requires EU Member States to ensure a number of recharging stations are in place for heavy-duty vehicles in urban nodes.

The regulation also includes provisions for ensuring user-friendliness of recharging infrastructure (e.g. payment options, price transparency and consumer information, non-discriminatory practices, smart recharging).



## 3.0 Electric Vehicle Charging Infrastructure Typologies

### Introduction

There are four key electric vehicle charging infrastructure typologies presented in the ZEVI Strategy including:

- **Home-Charging:** The majority of charging will be home charging which will take place off-street.
- **Residential neighbourhood charging:** these are charging systems catering for residents who do not own a driveway or have access to private parking. This charging network will also support local businesses, taxis, visitors, etc. as well as potentially providing faster charging options to those who have domestic charging facilities.
- **Destination Charging:** Provide top-up charging at key destinations
- **En-route charging:** Provide higher-speed charge points at strategic locations on the road network.

Cork City Council's Electric Vehicle Infrastructure Strategy is primarily focussed on the delivery of residential neighbourhood charging infrastructure which can be further broken down into two types of charging facilities:

- **Neighbourhood Charging Stations:** These charging stations are typically normal speed installations with a total charging speed of 22kW shared between 2 charge points at each charging station.
- **Community Charging Stations:** These are fast charging stations with a total charging speed of between 50kW and 150kW shared between 2-4 charge points

The spatial distribution of public Community Charging Points will reflect the current and potential delivery of destination charging stations as both charging infrastructure types have the potential to serve similar demands of the community (i.e. short duration – high capacity stations). For neighbourhood charging stations the vast majority of these will be public provided facilities.

### Neighbourhood Charging Stations

Neighbourhood charging stations are normal speed installations with the primary objective to facilitate residents who do not have access to a private off-street parking space. Their provision is to replicate, as best possible, domestic charging although it is acknowledged that neighbourhood charging stations will need to be shared among a group of residents.



### Charging Times

Typically, electric vehicle batteries vary in size from around 40 kW (Nissan Leaf) to 90kW (Jaguar I-Pace), although both smaller and larger battery sizes are available on the market currently. The average battery size is in the region of 60 kW (Hyundai Ioniq 5, Skoda Enyaq, Tesla Model 3, Volkswagen ID.3). The estimated charging time to deliver an 80% increase in an average battery life utilising a normal charging station will be between 5 and 9 hours (depending on the number of vehicles charging at the same time, weather conditions, battery size and state, etc...). This charge will deliver an average range of 300 kilometres which is equivalent to approximately 6 average days of driving (average annual mileage is approximately 16,000 kilometres).

### Electric Vehicle Capacity

Based on the above charging requirements and applying a 25% utilisation rate (normal speed charging infrastructure can have relatively low utilisation rates, as residents tend not to avail of charging during the day (they are at work) and tend to occupy the charge point all evening/ night (although they may not be charging for that entire period), therefore each neighbourhood charging station has the potential to serve the charging needs of 8 electric vehicles.

### Community Charging Stations

Community Charging Stations are fast charging stations which have a dual purpose to serve as a complimentary charging alternative to all residents including those with access to private off-street parking and provide for every day charging requirements associated with visitors, business travellers, taxis, service vehicles, etc... There will be opportunities to expand the mobility offer at such community charging stations to include the car share opportunities, bike share facilities including e-bikes, etc.



### Charging Times

The estimated charging time to deliver an 60% increase in an average battery life utilising a fast-charging station will be between 30 minutes and 1 hour, this charge will deliver an average range of 250 kilometres which is equivalent to approximately 5 average days of driving.

### Electric Vehicle Capacity

Based on the above charging requirements and applying a 50% utilisation rate (due to the shorter charging times, there is more likely to be greater opportunities to avail of the charging infrastructure during the day and in particular in the evening. Each fast charging station has the potential to serve the charging needs of 120 electric vehicles.

## 4.0 Cork City Council Electric Vehicle Infrastructure Charging Strategy

### Key Principles

**Principle 1: EV infrastructure will form part of a wider sustainable transport network:** In the context of Cork City Council's Electric Vehicle Infrastructure Strategy, the siting of new EV charging stations will avoid impacting on both existing and proposed new active and sustainable transport projects in the city. In addition, a key objective in the siting of new charge points in the city is that they will be easily accessible by foot from the surrounding residential areas.

**Principle 2: EV charging infrastructure will work for everyone, regardless of age, health, income, or other needs:** The Cork City Council's Electric Vehicle Infrastructure Strategy will require all charge points to be well lit<sup>1</sup>, incorporate sustainable energy generation (where possible) and that a percentage of wheelchair accessible units will be included for within the total stock of infrastructure charging stations. In terms of electricity costs, the strategy will include opportunities for residents to avail of both low cost charging opportunities (i.e. normal speed charging) and fast charging (generally at a higher cost).

**Principle 3: For the majority of EV users, home charging will remain the main solution:** The Cork City Council's Electric Vehicle Infrastructure Strategy will identify areas in the city where homes do not have access to a private adjacent parking space and where it is not possible to have a private home charger.

**Principle 4: Options will be provided for those who cannot charge at home:** With respect Cork City Council's Electric Vehicle Infrastructure Strategy there will be a focus on providing normal speed charge points (generally low cost and the closest public available equivalent to home charging) close to areas of the city where residents have restricted access to off-street private car parking. However, the strategy will also provide for fast charging infrastructure to allow for greater flexibility in charging options in the city for all electric vehicle users. The provision of residential community charging stations will also provide for the following:

- Business users including light vehicle owners;
- Visitors to the city (including EV visitors to homes without a home charger);
- Taxis;
- Homes with two Electric Vehicles;
- Homes where the deployment of a home charger is not possible or overly expensive;
- Individual home(s) which do not have access to private off-street parking but are in an area where predominately homes are provided with driveways (i.e. outer suburbs);
- Redundancy should there be a technical problems with the home charger; and
- Support the possible delivery of multi-modal interchanges to include, car share schemes, (e)bike hire, and other community services (i.e. parcel delivery, etc..)

Due regard shall be had to architectural and cultural heritage assets in the city when siting the Electric Vehicle charging stations.

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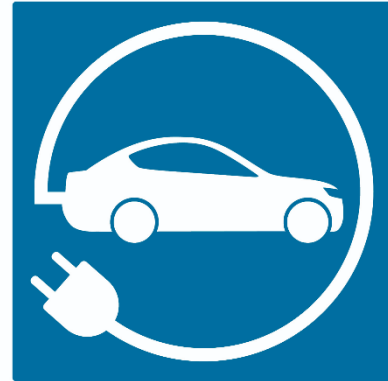
<sup>1</sup> While ensuring lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity in areas of important habitat types.

**Principle 5: Across the EV charging network, EV charging systems will be interoperable and as simple as possible to use:** The delivery of interoperability will primarily be the responsibility of Zero Emission Vehicles Ireland, however Cork City Council’s Electric Vehicle Infrastructure Strategy will ensure a consistent approach to infrastructure delivery across the jurisdiction to facilitate the introduction of common data and reporting requirements across the country.

## Car Ownership

### Existing Car Ownership

The population of Cork City is 222,333 based on Census 2022 representing 4.3% of the entire population of Ireland. At the end of 2022 there was a total of 2,255,971 registered private cars on Irish roads with a total of 272,726 cars registered in County Cork with an estimated 96,635 cars registered in Cork City. Of which approximately 1550 (1.6%) are fully electric and 1550 (1.6%) are plug-in hybrids.



### Future Car Ownership

As noted previously, the ambition for the country is to have a total of 845,000 electric passenger vehicles registered in the country by 2030, which based on current car ownership would result in approximately 36,500 electric vehicles in Cork City. This is equivalent to a 12 fold increase in Electric Vehicles compared to the end of 2022. To facilitate this projected growth in electric vehicle a significant increase in publicly available charging infrastructure is required.

## Publicly Accessible Electric Vehicle Charging Stations

### Existing Situation

There is approximately 50 Electric Vehicle Charging Stations in Cork City currently (although it is recognised that this number continues to increase as different organisations are continually adding charge points to their existing parking stock). The following lists the current charging stations in Cork City (Q3 2023).

Ballincollig	
<i>Destination Charging</i>	
<b>Fast Charging Stations</b>	<b>Normal Charging Stations</b>
<ul style="list-style-type: none"><li>• Lidl Ballincollig</li><li>• Oriel House Hotel</li></ul>	<ul style="list-style-type: none"><li>• ALDI Ballincollig</li></ul>
Cork City North	
<i>Destination Charging</i>	
<b>Fast Charging Stations</b>	<ul style="list-style-type: none"><li>• The Montenotte Hotel</li><li>• Kent Station</li><li>• Lapps Quay Car Park</li><li>• Merchant’s Quay Car Park</li><li>• Paul Street Car Park</li><li>• North Main Street Car Park</li><li>• Carroll’s Quay Car Park</li><li>• St Anne’s Cathedral, Shandon</li><li>• Clayton Hotel Silversprings</li></ul>
<ul style="list-style-type: none"><li>• Commons Road – Circle K</li></ul>	
<b>Normal Charging Stations</b>	
<ul style="list-style-type: none"><li>• St Mary’s Primary Health Care</li><li>• Lidl Ballyvolane</li><li>• An Post North Delivery Office</li><li>• Lidl Mount Agnes Road</li><li>• The Glen Resource and Sports Centre</li></ul>	
<i>Public Charging</i>	
<b>Normal Charging Stations</b>	Lower Glanmire Road

## Cork City South

### *Destination Charging*

#### **Fast Charging Stations**

- River Lee Hotel
- Bon Secours Hospital
- Bandon Road – O’Brien’s (under construction)
- Frankfield Road – Circle K
- Cork Airport
- Rochestown Road - Circle K
- Mahon Point Shopping Centre

#### **Normal Charging Stations**

- The Kingsley Hotel
- Cork County Hall
- Munster Technological University
- Lidl Bishopstown
- Wilton Shopping Centre
- Doughcloyne Industrial Estate
- Southside Industrial Estate
- St Finbarr’s Car Park
- Grand Parade Car Park
- City Hall Car Park
- St Finbar’s Hospital, Douglas
- Cork Builders Providers
- Turners Cross Retail Park
- Black Ash Park and Ride
- Tramore Valley Park
- Douglas Village Shopping Centre
- O’Sullivan’s Bar, Douglas
- Maryborough Hotel
- Logitech Ireland
- Aldi Douglas

### *Public Charging*

#### **Normal Charging Stations**

- South Mall
- Copley Street
- Copley Street- Cotter’s Street
- Ballypheane Community Centre

In general, the majority of the publicly accessible charging infrastructure are normal speed chargers (i.e. 22kW or less) and have been provided at key attractors in the city including existing petrol filling stations, shopping centres, hotels and existing public car parks. Of the 50 charging stations provided there are 10 currently which facilitate fast charging with the majority of these provided to the south of Cork City. Finally, there is a limited number of on-street publicly available infrastructure chargers (5 No.) to support residents who do not have access to a drive or a private off-street car park.

### *Future Charging Infrastructure Requirements*

As noted previously the Cork City Council’s Electric Vehicle Infrastructure Strategy is primarily focused on the delivery of residential neighbourhood charging infrastructure through the delivery of both **Neighbourhood Charging Stations and Community Charging Stations**. The neighbourhood charging stations will be focused on areas of the city where the majority of the residents do not have access to a driveway or a private off-street parking space while the community charging stations will be more evenly distributed across the city but with a greater focus in areas where there is limited off-street parking (i.e. the city centre and inner suburbs).

The spatial distribution of both the neighbourhood charging stations and the community charging stations has been based on estimated walk times within the built-up area of Cork City. The estimated built-up area of Cork City including its neighbouring towns of Ballincollig, Glanmire, Tower/ Cloghroe and Blarney is approximately 70 km<sup>2</sup> with approximately 20% of this area (14km<sup>2</sup>) where the majority of residents do not have access to a driveway or private off-street car park.

A number of strategies are presented below to derive an estimate of the number of charging stations needed to meet the future needs of the population based on walking distances to allow for an even geographical distribution of stations which in time can then be monitored to determine a subsequent investment as a greater number of Electric Vehicles come on street beyond 2030.

- **Scenario 1:** Normal Speed Chargers within a 72 metre walk (approximately a **one** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure within a 360 metre walk (approximately a **five** minute walk) of those living in homes without access to private off-street parking and within a 720 metre walk (approximately a **10** minute walk) of those living in homes with driveways.
- **Scenario 2:** Normal Speed Chargers within a 144 metre walk (less than a **two** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure within a 360 metre walk (approximately a **five** minute walk) of those living in homes without access to private off-street parking and within a 720 metre walk (approximately a **10** minute walk) of those living in homes with driveways.
- **Scenario 3:** Normal Speed Chargers within a 216 metre walk (less than a **three** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure within a 360 metre walk (approximately a **five** minute walk) of those living in homes without access to private off-street parking and within a 720 metre walk (approximately a **10** minute walk) of those living in homes with driveways.
- **Scenario 4:** Normal Speed Chargers and Fast Charging infrastructure co-located within a 360 metre walk (approximately a **five** minute walk) of those living in homes without access to private off-street parking and within a 720 metre walk (approximately a **10** minute walk) of those living in homes with driveways.
- **Scenario 5:** Normal Speed Chargers within a 144 metre walk (less than a **two** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure provided within a 800 metre walk (approximately a **10** minute walk) of those living in homes both with and without access to private off street parking.
- **Scenario 6:** Normal Speed Chargers within a 216 metre walk (less than a **three** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure provided within a 720 metre walk (approximately a **10** minute walk) of those living in homes both with and without access to private off street parking.
- **Scenario 7:** Normal Speed Chargers within a 144 metre walk (less than a **two** minute walk) of those living in homes without access to a driveway or private off-street parking; Fast Charging infrastructure within a 720 metre walk (approximately a **10** minute walk) of those living in homes without access to private off-street parking and within a 1080 metre walk (approximately a **15** minute walk) of those living in homes with driveways.

Based on the above scenarios the following table presents an estimate of the number of charging stations utilising both normal and fast speed infrastructure.

	<b>Normal Speed Stations</b>	<b>Fast Speed Stations</b>	<b>Charge Points</b>
<b>Scenario 1:</b>	860	69	1850 – 2000
<b>Scenario 2</b>	215	69	550 – 700
<b>Scenario 3</b>	96	69	350 – 500
<b>Scenario 4</b>	34	69	200 - 350
<b>Scenario 5</b>	215	43	500 – 600
<b>Scenario 6</b>	96	43	300 – 350
<b>Scenario 7</b>	215	24	500 - 550

The Electric Vehicle Charging Infrastructure Strategy 2022-2025 identified a potential requirement for 3,310 publicly accessible charge points to cater for the projected uptake of Electric Vehicles to 2025 (195,000 EV units), with a potential increase to over 15,000 to cater for 845,000 Electric Vehicles by 2030. Based on the current percentage of the national car fleet registered in Cork City (4.3%) this would amount to the delivery of 650 charge points in the jurisdiction of Cork City upto 2030 which would align best with the delivery of **Scenario 2** which includes for a total of 284 charging stations with the capacity to support between 550 and 700 charge points (depending on the number of charge points included at fast charging station).

It is worth noting that the delivery of the electric vehicle infrastructure will need to be phased to match the delivery of electric vehicles on street with a more modest roll-out of between now and 2025 and ramping up significantly as we move towards 2030. In addition, the delivery of an extensive network of electric vehicle charging stations in Cork will require upgrades to the ESB Network both at a regional and local level and there is a requirement for continual dialogue between ESB Networks and Cork City Council with respect to the roll out and phased delivery of any new infrastructure.

Finally, it is proposed to carry out a review of this Electric Vehicle Charging Strategy following the delivery of the first tranche of publicly accessible infrastructure. This review will examine the spatial demand for the different types of electric vehicle chargers in the city and will assist inform where to focus investment in the delivery of the second tranche of infrastructure. This review will also be able to embrace any changes in technology with respect to either electric vehicles and/ or their charging infrastructure (i.e. induction charging, mobile charging, battery swapping, etc..).



## 5.0 Charging Infrastructure Deployment Strategy

### Introduction

The following section presents the key approach used in identifying potential locations for both the roll out of both the neighbourhood charging infrastructure and the community charging infrastructure based on the spatial requirements presented under **Scenario 2**. Scenario 2 included the following:

- **Normal Speed Chargers** within a **two** minute walk (average) of the majority of those living in homes without access to a driveway or private off-street parking (for some suburban residents without access to private parking, walking distances may be longer);
- **Fast Charging infrastructure** with a **five** minute walk (average) of those living in homes without access to private off-street parking and within a **10** minute walk (average) of those living in homes with driveways.

As noted previously the spatial distribution of Community Charging Points (Fast) will reflect the current and potential delivery of destination charging stations as both charging infrastructure types have the potential to serve similar charging demands of the community. There is the potential to expand the mobility services on offer at community charging points to include car-share, bike share (including e-bike, cargo bikes, etc..) and potentially other community services (i.e. parcel collection services etc..)

### Key Siting Principles

The following are the key approach principles with respect to the identification of potential sites to support both normal and fast speed charging stations.

#### Ultra-Fast Charging Stations

- Ultra-Fast En-route Charging will be available in the Cork City region and the most appropriate sites will be identified by Transport Infrastructure Ireland as part of their wider study looking at supporting electric vehicle charging infrastructure along the entire national road network.

#### Fast Charging Stations

- The hierarchy of provision of Fast Charging Infrastructure will be as follows:
  - Publicly managed car parks
  - Publicly controlled lands
  - Private retail car parks
  - Community car parks (i.e. sports grounds, church grounds, etc..)
- It is preferable that the Fast Charging Infrastructure is provided within a separate parking area segregated from the neighbouring road/street, but with ease of access to the primary road/street network;
- The Fast Charging stations should also allow for Normal Speed Charging;
- The design of the Fast Charging Stations should facilitate Access for All to include those who are disabled and/or mobility impaired;
- At Fast Charging Stations any existing parking regulations (i.e. parking disc zone, residential parking permits) will be replaced with universal access to all Electric Vehicles. (Non electric vehicles may be liable to parking fines and/ or temporary removal). The duration of stay of such electric vehicles will be managed by the charge point operator which will likely include

time limiting access to the charging infrastructure to ensure the facilities have good turn over and can be used by wider part of the population

- Ensure the deployment of fast speed charging stations at appropriate locations while having due regard to environmental sensitives such as cultural heritage and archaeology, traffic and transport conditions, people and businesses, and material assets.

### **Normal Speed Stations**

- Normal speed residential neighbourhood charging infrastructure should where possible replace existing on-street parking spaces,
- It is preferable to place normal speed residential charging infrastructure on side streets and not on roads/ streets which have been designated key bus routes or cycle routes. Should it be necessary to place charging infrastructure on bus routes, there needs to be sufficient buffer to ensure the charging cables to not impact on either the safe movement of pedestrians/ cyclists or vehicles.
- At Normal Speed Charging Stations existing parking regulations (i.e. parking disc zone, residential parking permit) will remain in place, ensuring that such chargers are reserved primarily for those actively charging from the local community who do not have access to a driveway or private off-street parking space.
- At a minimum each disk parking zone will be provided with one Normal Speed Charging Station.
- Access to normal speed charging stations will be actively managed by the operator to ensure the facilities are not monopolised by one or two users and that there is fair access to the wider residential community in terms of their use. Such fair access may include, the requirement to book a charging session (i.e. morning, afternoon, evening, night, etc..), limiting access to an individual charge point to every second, third, etc.. day.
- Charging Stations are proposed in estates where the roads have been taken in charge by the Local Authority. In the other estates, the development management company will need to provide the charging infrastructure, ZEVI currently have grants to facilitate such investment by private property management companies.
- Normal speed charging stations will not be provided on any privately owned (or leased) parking spaces in estates which have been taken in charge.
- Ensure the deployment of normal speed charging stations at appropriate locations while having due regard to environmental sensitives such as cultural heritage and archaeology, traffic and transport conditions, people and businesses, and material assets.

### **Proposed Fast Charging Infrastructure Network**

The following section presents the proposed locations to support the delivery of the Fast Charging Infrastructure Network to serve Cork City. As noted earlier the delivery of the entire network will require a detailed phasing plan to both meet the expected increase in the delivery of Electric Vehicle on street but also the upgrade to the regions Electrical Network to ensure sufficient capacity is provided to service the Charging Infrastructure Network. Maps showing the indicative locations of both the fast charging stations and the normal speed charging stations are presented in Appendix A, however it is important to note that further design and assessment are required before finalising the location and layout of each proposed station. There is likely to be changes to the final number and location of charging stations taking into account local requirements including access (and upgrades) to the existing ESB network and other street side activities (waste collection, local access etc..).

## Ballincollig

In total, 6 fast charging stations are proposed for Ballincollig, 2 of which have been delivered already at Lidl Westend, Ballincollig and Oriel House Hotel. In the short to medium term it is proposed to deliver the fast charging infrastructure at Ballincollig Regional Park and The Plaza Car Park.

	Name	Ownership	Phase
1	Old Macroom Road, Ballincollig	Cork City Council	2025-2030
2	Ballincollig Regional Park, Inniscarra Road	Cork City Council	2024-2025
3	Lidl, Westend, Ballincollig	Lidl Ireland	Existing
4	Oriel House Hotel	Oriel House Hotel	Existing
5	The Plaza Car Park, Ballincollig	Cork City Council	2024-2025
6	Poulavane Roundabout, Carrigrohane	Cork City Council	2025-2030

## Cork City North

In total, 16 fast charging stations are proposed for the northside of Cork City, 1 of which has been delivered already at the Circle K petrol filling station on the Commons Road. In the short term (Year 2024-2025) it is proposed that Cork City Council will facilitate the delivery of fast charging infrastructure at the following four locations:

- Churchfield Sports Complex – Knockfree Avenue
- Belgrave Place
- Old Youghal Road (Collins Barracks)
- Glen Avenue (Girls National School)

In addition, Cork City Council will liaise with the owners of both the Blackpool Shopping Centre and the Ballyvolane Shopping Centre to encourage them to provide fast charging stations within their existing stock of car parking.

	Name	Ownership	Phase
7	Harbour View Road -Hollyhill Lane	Cork City Council	2025-2030
8	St Vincent’s Church, Sunday’s Well	Church Property	2025-2030
9	Kinvara Road – Kinvara Drive	Cork City Council	2025-2030
10	Commons Road – Circle K	Circle K	Existing
11	Bride Valley Park – Fair Hill	Cork City Council	2025-2030
12	Blackpool Shopping Centre	Shopping Centre	2024-2025
13	Ballyvolane Shopping Centre	Shopping Centre	2024-2025
14	Churchfield Sports Complex	Cork City Council	2024-2025
15	Mayfield Library	Cork City Council	2025-2030
16	Wolfe Tone Street	Cork City Council	2025-2030
17	Belgrave Place	Cork City Council	2024-2025
18	Kent Station	Irish Rail	2025-2030
19	Old Youghal Road (Collins Barracks)	Cork City Council	2024-2025
20	Cork City and County Archives Watercourse Road	Cork City Council	2025-2030
21	Glen Avenue (Girls National School)	Cork City Council	2024-2025
22	Silverheights Drive	Cork City Council	2025-2030

## Cork City South (including the city centre)

A total of 32 fast charging stations are proposed for the southside of Cork City of which 5 have been delivered through private investment in existing petrol filling stations, shopping centres, hospitals and hotels and 1 is under construction. In the short term (Year 2024-2025) Cork City Council will facilitate the delivery of fast charging infrastructure at the following five locations:

- Ballyphehane Community Centre (upgrade)
- DeanRock Avenue
- Curraheen Community Car Park
- Lions Car Park – Church Road, Douglas
- Ballinlough Road – Community Car Park

In addition, Cork City Council will liaise with the owners of Wilton Shopping Centre and City Hall Car Park to encourage them to provide fast charging stations within their existing stock of parking.

	<b>Name</b>	<b>Ownership</b>	<b>Phase</b>
23	Paul Street Car Park	Cork City Council	2025-2030
24	City Hall Car Park	Car Park Operator	2025-2030
25	River Lee Hotel	River Lee Hotel	Existing
26	St Finbar’s Church, South Parish	Church Property	2025-2030
27	Thomand Square	Cork City Council	2025-2030
28	St Finbar’s Hospital, Douglas	HSE	2025-2030
29	The Lough Church	Church Property	2025-2030
30	Noonan Road	Cork City Council	2025-2030
31	Bon Secours Hospital, College Road	Bon Secours	Existing
32	Wilton Shopping Centre	Shopping Centre	2024-2025
33	Carrigrohane Road Car Park	Cork City Council	2025-2030
34	Kenley Road – Model Farm Road	Cork City Council	2025-2030
35	Bandon Road – O’Brien’s (under construction)	Retail Owner	2024-2025
36	Ballyphehane Community Centre	Cork City Council	2024-2025
37	DeanRock Avenue	Cork City Council	2024-2025
38	Curraheen Community Car Park	Cork City Council	2024-2025
39	Sarsfield Road – Elm Park	Cork City Council	2025-2030
40	Frankfield Road – Circle K	Circle K	Existing
41	Hollyville – Grange	Cork City Council	2025-2030
42	Lions Car Park – Church Road, Douglas	Cork City Council	2024-2025
43	Greenhills, South Douglas Road	Cork City Council	2025-2030
44	Rochestown Road - Circle K	Circle K	Existing
45	Rochestown Church	Church Property	2025-2030
46	Garryduff Road – Foxwood Drive	Cork City Council	2025-2030
47	Broadale – Centra	Cork City Council	2025-2030
48	Scairt Cross (Donnybrook Hill)	Cork City Council	2025-2030
49	Mahon Point Shopping Centre (Tesla Only)	Shopping Centre	Existing
50	Skehard Road – Dog Park	Cork City Council	2025-2030
51	Ballinlough Road – Community Car Park	Cork City Council	2024-2025
52	St Michael’s Cemetery, Mahon	Cork City Council	2025-2030
53	Blackrock Village	Cork City Council	2025-2030
54	Monahan Road (Pairc Ui Chaoimh)	Cork City Council	2025-2030

## Other Locations

In addition to the City Centre and Ballincollig the following additional fast charging stations are proposed to serve the other urban towns and surrounding hinterland. A total of 11 stations are proposed to serve the remainder of Cork City with one station already delivered by Cork Airport. In the short term (Year 2024-2025) a further two stations are proposed to be delivered by Cork City Council at Clogheenmilcon Car Park and at Copperalley in Glanmire.

	<b>Name</b>	<b>Ownership</b>	<b>Phase</b>
53	Clogheenmilcon Car Park, Blarney	Cork City Council	2024-2025
54	Killeens	Cork City Council	2025-2030
55	Castlejane Road –The Elms, Glanmire	Lidl Ireland	2025-2030
56	Copperalley, Glanmire – Primary School	Cork City Council	2024-2025
57	Riverstown Road, Brooklodge – The Brook Inn	Cork City Council	2025-2030
58	Riverview Estate, Tower	Cork City Council	2025-2030
59	Cloghroe Road – Upper Woodlands	Cork City Council	2025-2030
60	Covent Road – Blarney	Cork City Council	2025-2030
61	Ard na Greine – Station Road	Cork City Council	2025-2030
62	Kerry Pike	Community Hall	2025-2030
63	Cork Airport	daa	Existing

## Normal Speed Charging Infrastructure Network

As presented previously the recommended strategy with respect to the delivery of electric vehicle charging infrastructure includes the delivery of both a fast charging network in tandem with a normal speed network. The normal speed network has focused on the areas of the city where the majority of residents do not have access to private off-street parking. The following list presents the streets and roadways where normal speed charging is proposed and those highlighted in green are recommended to be delivered in the short term (Year 2024-2025). As with the fast charging network the delivery of the normal speed network will need to be phased and the utilisation of the charging network will be monitored to assist in refining the investment in the second wave of delivery.

### Ballincollig

A total of 17 normal speed charging stations are proposed for Ballincollig with an initial delivery of 5 stations proposed in the short term (Year 2024-2025).

Inishmore Grove	<b>Leslie’s Arch (South)</b>	CastlePark (North)
<b>Inishmore Lawn</b>	Coopers Grange	The Square
Tuarin Glas (North)	Waltham Abbey	Bothar Sacley
<b>Tuarin Glas (South)</b>	Miller’s Court	<b>Barley Grove, Station Road</b>
An Caislean	CastlePark (South)	The Maltings, Station Road
Leslie’s Arch (North)	<b>CastlePark (West)</b>	

### Cork City North

With respect to the northside of Cork City a total of 96 normal speed station locations have been identified with an initial delivery of 19 stations proposed in the short term (Year 2024-2025).

<b>Barney Street – Mount Eden</b>	Exchange Street
Lee Road	Lee Road – Rose Hill
Convent Avenue	Sunday’s Well Road – Ferry Walk
Sunday’s Well Road – Sunday’s Well Avenue	<b>John Redmond Street</b>

Sunday's Well Road – River Lane	Pope's Quay – West of Shandon Bridge
Sunday's Well Road- St Vincent's Church	Redforge Road
Boyce's Street/ Friar's Avenue	Dublin Hill
Cathedral Road/ Mount Eden Road	Dublin Street – Spring Lane
Sprigg's Road	Glen Avenue – Mount Farren Place
<b>Sunvalley Drive</b>	Mangerton Close
Mary Aikenhead Place	Arderin Way
St Theresa's Road	<b>The Glen Girls School</b>
<b>Glen Ryan Road</b>	Glen Avenue – Errigal Heights
Cock Pit Lane	Comeragh Park
North Mall	Mourne Avenue
Inniscarra Road	Brendan Crescent
Knockfree Avenue	Rathmore Park
Peacock Row	<b>Audley Place</b>
Redemption Road (South)	Pope's Road
Redemption Road – Seminary Road	Assumption Road
Cushing Road	Old Youghal Road – Bellview Mews
Commons Road – Popham's Road	<b>Old Youghal Road – Rathmore Road</b>
<b>Commons Road – Orchard Court</b>	Military Hill/ Military Road
Great William O'Brien Street (Blackpool Church)	Bellevue Park
Watercourse Road – Berwick Lane	Gardiner's Hill – Ballyhooly Road
<b>O'Connell Street</b>	Gardiner's Hill - Herbert Park
Hillgrove Lane	Glen Avenue – Glenview Park
Wolf Tone Street	<b>New Road (Kelleher's Buildings)</b>
Heather Walk (not in charge)	<b>Courtown Drive</b>
Mile Avenue (not in charge)	Ardmore Avenue
Stone Ridge (not in charge)	Glanmore Park – Knocknaheeny Avenue
Hollywood Estate	Lotabeg Terrace
<b>Briarscourt</b>	Iona Place
Blarney Street – Hollyhill	Avonmore Close
Gordon's Hill	Knockpogue Avenue
Blarney street – Baker's Road	Killeen's Place
Sunday's Well Road – Carlisle Terrace	Fairfield Avenue/ Fairfield Road
St Anne's Drive	Farranferris Green
Ard na Laoi	Farranferris Avenue (Seminary Walk)
<b>Smithgrove Terrace</b>	Glenheights Park
O'Mahony's Avenue – Grattan Hill	<b>Glenfields Avenue</b>
Military Hill – Wellington Road	Glenfields Court
Wellington Road – Waterloo Terrace	<b>Mount Brown</b>
Lower Glanmire Road – Summerhill North	<b>Shannon Lawn –Mayfield</b>
<b>Belgrave Place</b>	Liffey Park
Sidney Hill	Ballinderry Park
St Patrick's Hill	Glenamoy Lawn
Richmond Hill	<b>Boyne Crescent</b>
Pine Street	Corrib Lawn
Churchfield Square	Churchfield Place
<b>Churchfield Avenue – Churchfield Road</b>	Churchfield Green
	Bantry Park

Cork City South (including the city centre)

With respect to the southside of Cork City a total of 110 normal speed station locations have been identified with an initial delivery of 19 stations proposed in the short term (Year 2024-2025).

Dean Street	Liberty Street
Desmond Square – Mount Sion Road	St Paul’s Avenue
Upper Pouladuff Road – Marian Park	Connell Street
<b>Pouladuff Road – Nun’s Walk</b>	Pearse Road/ Pouladuff Road
Pearse Road – Spar	Fitton Street
Lower Friar Walk – Joe Murphy Road	Elm Park
Hyde Park	<b>Palmbury – Togher Road</b>
St Patrick’s Road –Friars Walk	Palmbury Orchard
Derrynane Road –Friars Walk	White Oaks – Harley Court
Reendowney Place	Market Green
Maiville Terrace – Evergreen Road	Sheridan Park – Tramore Road
Murphy’s Gardens	Blackwater Grove –Deanrock
<b>Evergreen Road – Evergreen Court</b>	Araglen Court – Deanrock
Friar Street - Tower Street	<b>Deanrock Avenue</b>
Mount Carmel Road – Mount Sion Road	Togher Road
<b>Prosperity Square</b>	Edward Walsh Road
Cove Street	Charles Daly Road
Blackrock Castle Car Park	Glandore Avenue
<b>Mahon Amenity Centre</b>	<b>Dundanion</b>
<b>Margaret Street</b>	Father Dominic Road – Pearse Place
White Street – Douglas Street	Connolly Green
Douglas Street – Summerhill South	The Green
Windmill Road – High Street	O’Growney Crescent
<b>Thomond Square</b>	Clarke’s Road
Capwell Road	Galway Lane
<b>Ballinlough Road – Marble Hall Cottages</b>	Grange Park
Carrigreina Park	Grange Wood
Knockrea Park – Ballinlough Road	<b>Hollyville</b>
Bellair Estate	<b>Greenhills Court</b>
Cherry Drive –Cross Douglas Road	James Connolly Place
Haig Gardens	Donnybrook Hill – Bromley
Victoria Avenue – Old Blackrock Road	<b>Welwyn Road</b>
Carrigview Terrace	Silverbirch
<b>Hibernian Buildings – Elizabeth Terrace</b>	Belmont Avenue
Angelsea Terrace	Foxwood
Henry Street – Coach Street	Post Office Avenue
<b>Glasheen Road (Sheraton Court)</b>	Maryborough Woods (Greenlodge)
Victoria Village	Wycherley Terrace
Liam Lynch Park	Connaught Avenue
Cherry Tree Road	<b>Noonan Road</b>
Glasheen Road- Clashduv Villas	Bandon Road
Tara Lawn	Croaghtamore Square
Croaghta Park	Greenmount Avenue
Magazine Road – Coolgarten Park	Lough Villas
Gaol Walk	Lough Road – Ophelia Place
College View	Lough Road – Fairy Lawn

Westbourne Park	Pearse Road – Pouladuff Road
Elderwood Avenue	Dyke Parade
Ascroft	Dyke Parade – Mardyke Street
Marian Park	Blackrock Road –Ardfoyle
<b>Clontarf Estate</b>	Drumcora Mews
<b>Avenue De Rennes – Retail Units</b>	Mardyke Walk – Ferry Walk
Loughmahon Road – Elm Close	Mardyke Walk – Noel Cantwell Walk
St Michael’s Cemetery	<b>Mardyke Walk – Skate Park</b>
Carrigmore Park	O’Donovan Rossa Road

#### Other Locations

With respect to the remainder of Cork City a total of 12 normal speed stations are proposed with one station at Brooklodge Square to be delivered in the short term (Year 2024-2025).

Sean a Bothar, Killeens (North)	Castlejane Road –The Elms
Sean a Bothar, Killeens (South)	Heathervue
Dunkettle Road	<b>Brooklodge Square, Glanmire</b>
St Philomenas Crescent, Cloghroe	Brooklodge Close, Glanmire
Station Road, Blarney	Convent Road – Waterloo Road
Station Road - Woodfield	The Square - East

In addition, to the above electric vehicle charging stations the supply of normal speed charging infrastructure at the **Blackash Park and Ride** should be continually expanded (based on recorded demand) to meet the needs of commuters working in the city centre. All future Park and Rides serving the city centre, as identified in the Cork Metropolitan Area Transport Strategy, should also include for a significant proportion of their parking spaces to be electric vehicle charging enabled.

#### Summary

Cork City Council’s Electric Vehicle Infrastructure Strategy has identified a network of normal speed and fast charging electric vehicle stations to serve the projected growth in the uptake of electric vehicles in Cork. In total, the Strategy has identified 244 normal speed charging infrastructure stations and 65 fast charging infrastructure stations. A summary of the spatial distribution of charging station infrastructure is presented in the following table.

	Upto Year 2025		Year 2025- 2030	
	Normal Speed	Fast Speed	Normal Speed	Fast Speed
Cork City North	19	7	77	9
Cork City South	19	12	91	20
Ballincollig	5	4	12	2
Remainder of the City	1	3	11	8
<b>TOTAL</b>	<b>44</b>	<b>26</b>	<b>200</b>	<b>39</b>

The first wave of delivery has focused on the provision of fast speed charging infrastructure to provide a broader provision of infrastructure therefore allowing a greater number of people to avail of the new charging infrastructure. This will give confidence to the people that charging their electric vehicles should not be a hinderance in their decision to purchase such a vehicle or not. The utilisation of the first wave of infrastructure will also be evaluated before finalising the delivery of subsequent infrastructure to ensure locations with higher demand are catered for and that there is continuous equal access to such infrastructure from all parts of society.



## 6.0 Implementation Plan

### Business Model

There are several business models available to Cork City Council to facilitate the roll out of Electric Vehicle Charging Infrastructure in the city and the final operating model employed in Cork City will be informed by ongoing work in this area being carried out by Zero Emission Vehicles Ireland.

The current business model in terms of delivering Electric Vehicle charging infrastructure upto 2025 being considered by Cork City Council is a concession type arrangement which would include the following key elements:

- Cork City Council would obtain any required planning permission for the proposed electric vehicle charging infrastructure stations in Cork. All EV charging stations will be subject to the necessary environmental assessment during development planning in accordance with the land use framework defined in the Cork City Development Plan.
- The current strategy includes the delivery of 13 new fast charging stations and 44 normal speed charging stations in the community upto Year 2025;
- Cork City Council will manage the design and construction of the proposed electric vehicle charging infrastructure stations including any requirements to upgrade the electrical power network to supply the EV stations. This design work will require external consultants and resources/ funding will need to be sourced to ensure the timely delivery of this infrastructure.

Cork City Council are likely to tender a number of concessions (5 years) to Charge Point Operators for the supply, operation and maintenance of the electric vehicle charging infrastructure in Cork. The current vision is to create three electric vehicle charging infrastructure bundles to provide competition in the marketplace. The bundles include both fast charging and normal charging infrastructure. Cork City Council will seek to source providers that can carry out the relevant works and services in an environmentally sustainable manner - in accordance with public sector green public procurement requirements.

### Environmental Mitigation Measures

Cork City Council intend on implementing all environmental mitigation measures that have been defined during the SEA process and which have been integrated into the Strategy. The SEA process has identified additional measures clarifying environmental protection related obligations and environmental enhancement opportunities which have been included in the Strategy (Section 4.0). These additional measures will ensure that environmental considerations are appropriately taken into account during the strategy's implementation stage minimising the level of negative environmental effects and the maximising the level of positive environmental effects.

The following set of additional environmental mitigation measures will be adopted during the implementation stage of the Strategy and Cork City Council are committed to carrying out the SEA Monitoring Programme as defined in the SEA Environmental Report that accompanies the Strategy.

- Any developments resulting from the implementation of the Strategy which would be likely to have a significant negative effect on amenity or population and human health in the Strategy area through dust, noise or traffic impacts shall be mitigated in order to eliminate significant negative impacts or reduce them to relevant limit levels.

- Any developments arising from the implementation of the Strategy shall be subject to the relevant environmental assessments, as required (i.e. Environmental Impact Assessment, Environmental Impact Assessment Screening, Appropriate Assessment).
- When designing and planning for the development of an EV Charging Station, appropriate consideration shall be given to how the siting and operation of an EV charging stations may influence the existing traffic dynamics
- Due regard shall be had to archaeological, cultural, historic and architectural sensitivities, and conservation when siting and designing EV Charging Stations.
- Appropriate archaeological monitoring shall take place where the installation of EV Charging infrastructure involves excavation at locations where unknown archaeology remains may potentially exist (such as within Cork City's historic core).
- Suitable noise and dust mitigation measures shall be implemented during the construction of charging stations so as to prevent the occurrence of nuisance impacts upon people, residences and businesses, particularly where the development is occurring in built up areas of the city centre.
- Consideration of likely noise impacts/effects associated with charging station development projects. This includes being cognisant of proximity to sensitive receptors when siting charging points.
- Cork City Council, as a policy, will consult with ESB Networks as soon as practicable upon confirming the location and Maximum Import Capacity required for charging stations proposed under the Strategy.
- The development of charging infrastructure in the city will be appropriately phased so as to ensure the operation of charging infrastructure in the city does not put pressure on grid capacity or lead to any unintended adverse effect of electricity supply.
- A Connection Agreement shall be made with ESB Networks for all proposed charging stations.
- Cork City Council will – through appropriate advocacy and influence – promote the development of renewable energy generation capacity to serve the needs of Cork City and the EV charging network.
- Where necessary, Construction Traffic Management Plans shall be prepared for any charging station development that may lead to significant adverse traffic and transport effects during construction.
- Charging infrastructure development shall not lead to net biodiversity loss.
- Aim to avoid siting charging stations (particularly sizeable charging stations) at or near to biodiversity sensitive areas, such as protected sites or important habitats.
- Aim to avoid designing and siting charging stations in a manner that may result in landtake affecting important habitat or habitat fragmentation.
- Undertake appropriate ecological assessment in cases where supported charging infrastructure development has the potential to impact on sensitive ecological receptors. Ensure the adoption of appropriate ecological mitigation where necessary.
- Promote the incorporation of nature-based solutions and biodiversity enhancement, including the use of appropriate native landscaping of local provenance, into charging point development projects, where practicable.
- Ensure the development of charging point infrastructure aligns with Compact Growth principles defined in the National Planning Framework. As a preference, aim to locate charging stations at brownfield areas that have a good infrastructural baseline and which are in close proximity to suitable grid connection locations.

- Ensure potential cumulative environmental effects are appropriately considered – where charging stations development projects overlap between one another or with other active travel projects, or where such development projects intersect and/or are within close proximity to one another.

Full details on the environmental assessment undertaken for the Strategy, on how environmental considerations were integrated into the Strategy and on the SEA Monitoring Programme are provided in the SEA Environmental Report that accompanies this Strategy.'

### Capital Costs

The estimated costs in terms of implementing the strategy have been based on the infrastructure costs presented in the Dublin Local Authority Electric Vehicle Charging Strategy although it is acknowledged that site specific requirements in particular electrical network requirements and additional civil works could impact delivery costs significantly. The estimated delivery cost of the different charging stations is noted below.

- Normal Speed Station €15,000-€25,000 per 22kW Installation
- Fast Speed Station €125,000 - €175,000 per 50kW-150kW Installation

The estimated cost associated with the delivery of the first phase of investment (Year 2024-2025) is between €4.0 and €5.5 million while the total investment upto Year 2030 will be between €11.5 and €17.0 million.

# Ballincollig - West

**On-Street Parking Districts**

5/10 Minute Catchment

Two Minute Catchment

2025      2030



**Existing Proposed**

Normal Destination Charging            

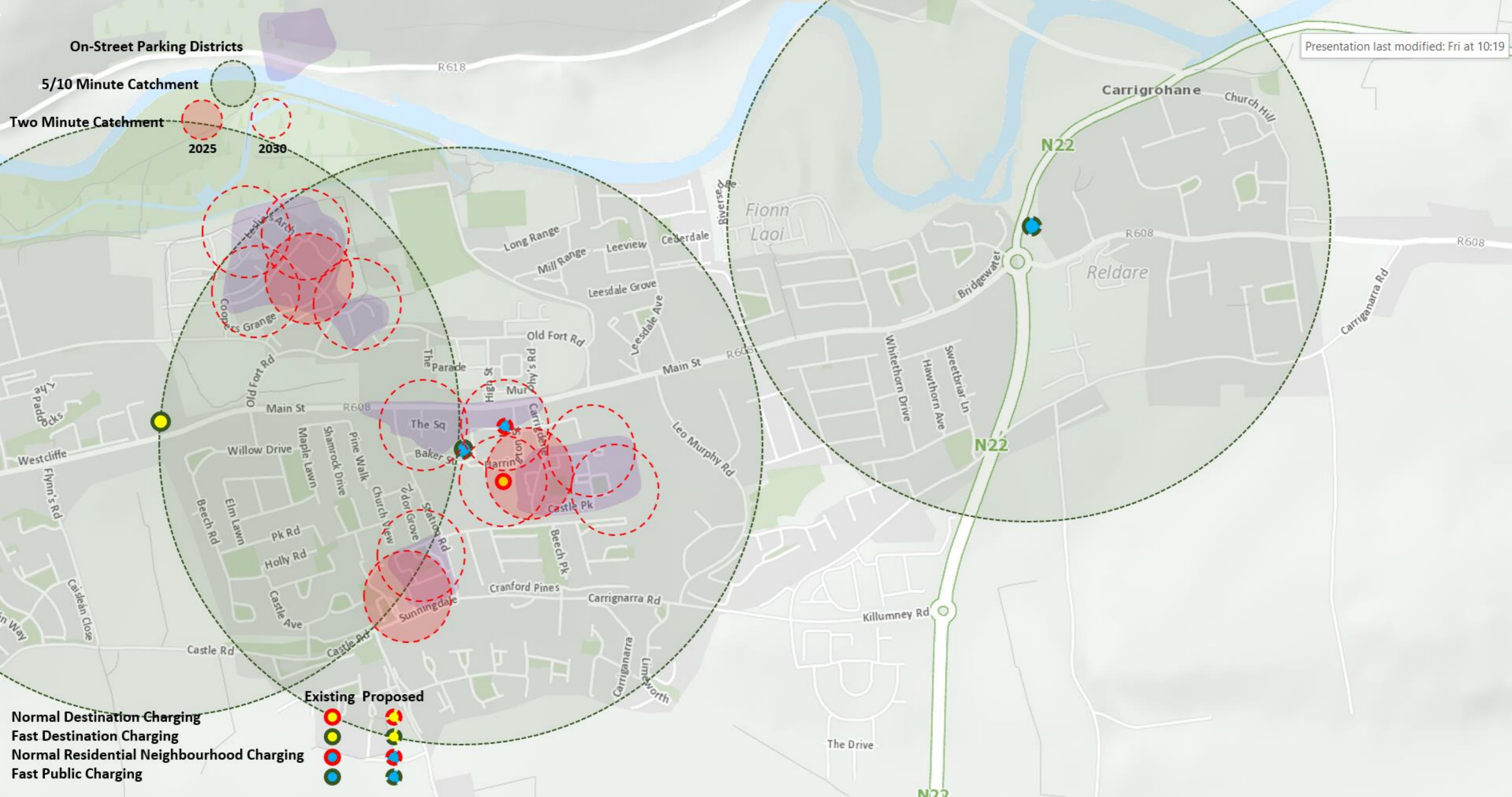
Fast Destination Charging            

Normal Residential Neighbourhood Charging            

Fast Public Charging            

# Ballincollig - East

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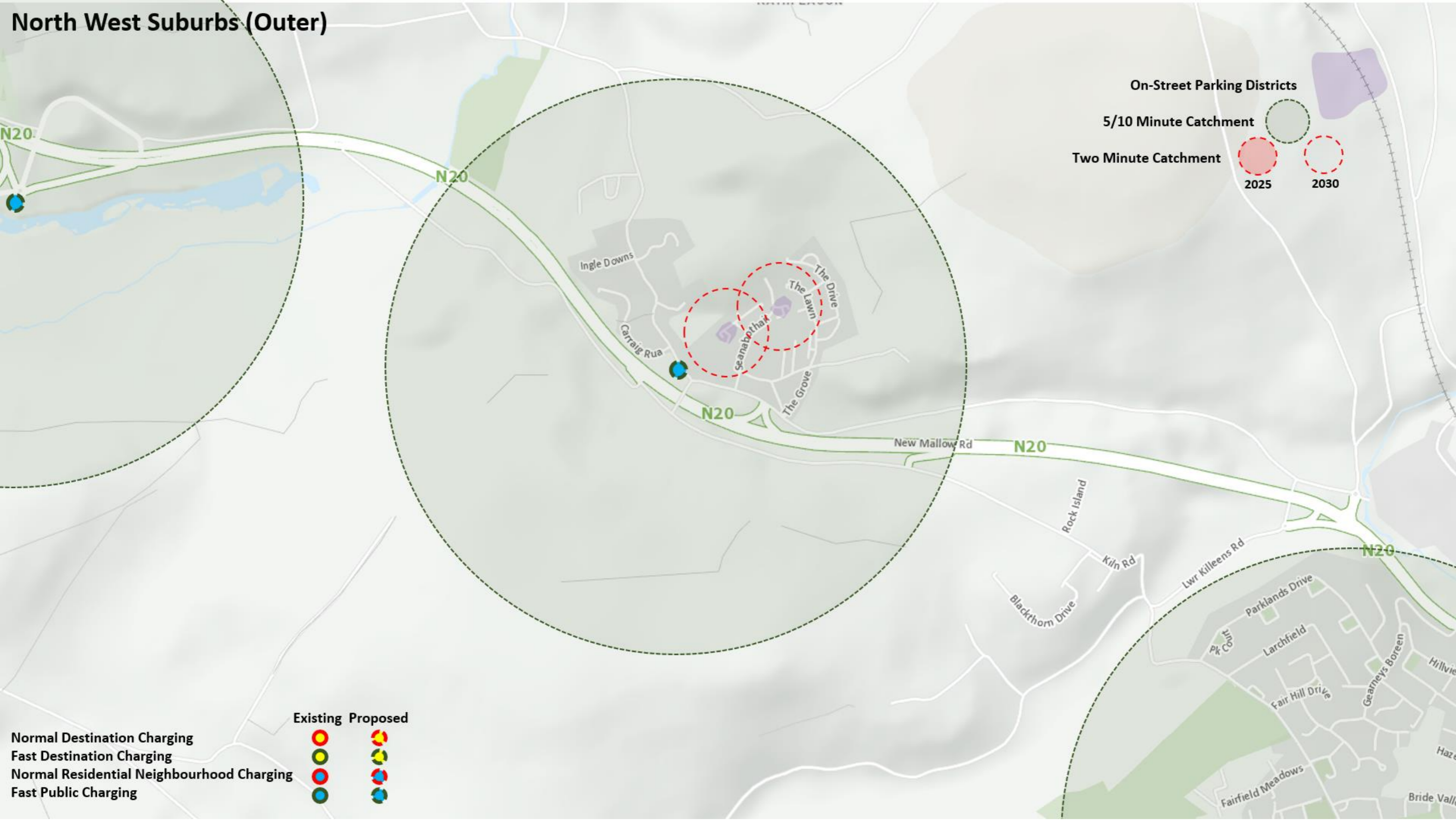


On-Street Parking Districts  
 5/10 Minute Catchment  
 Two Minute Catchment  
 2025 2030

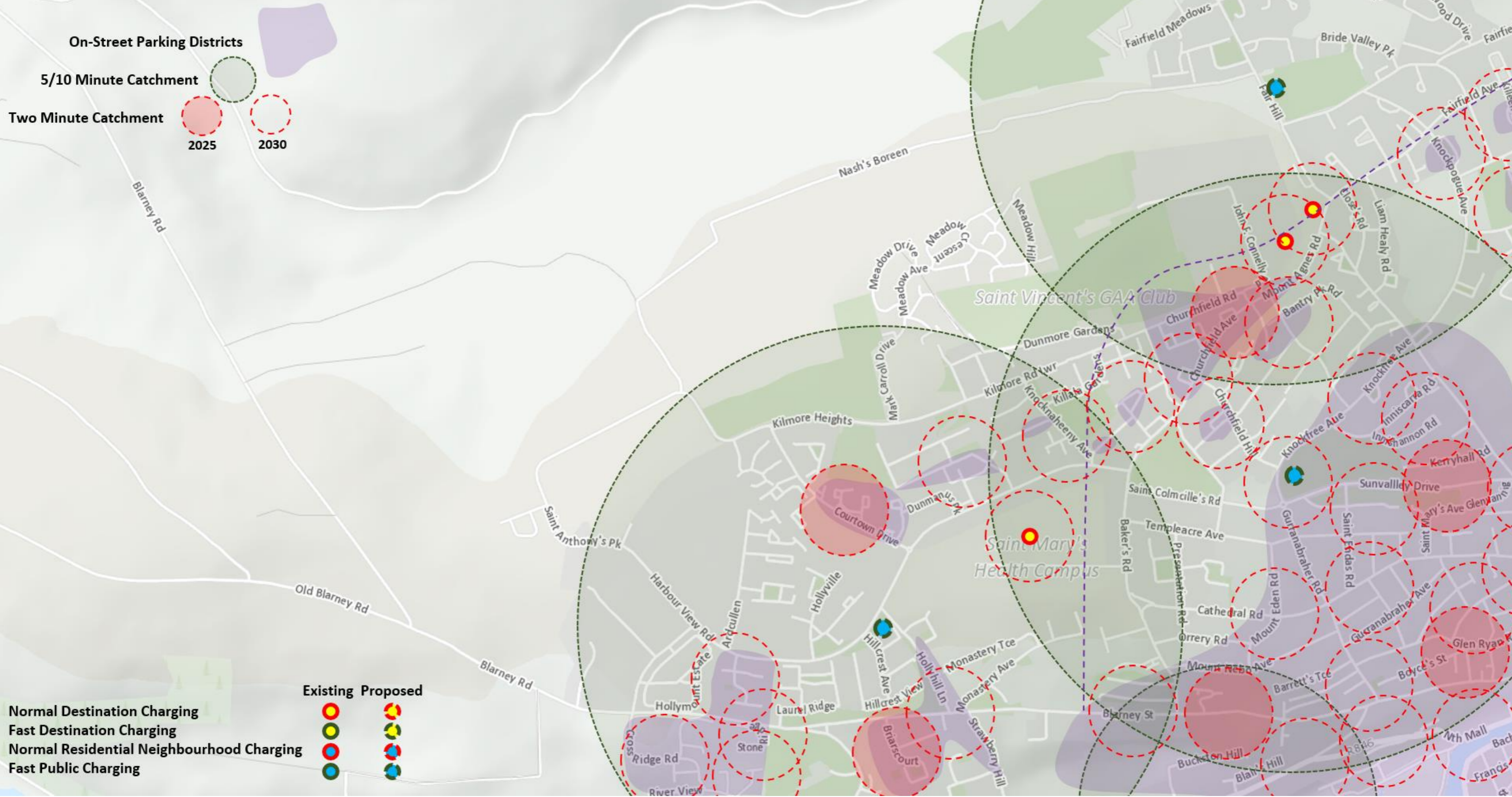
Existing Proposed

Normal Destination Charging  
 Fast Destination Charging  
 Normal Residential Neighbourhood Charging  
 Fast Public Charging

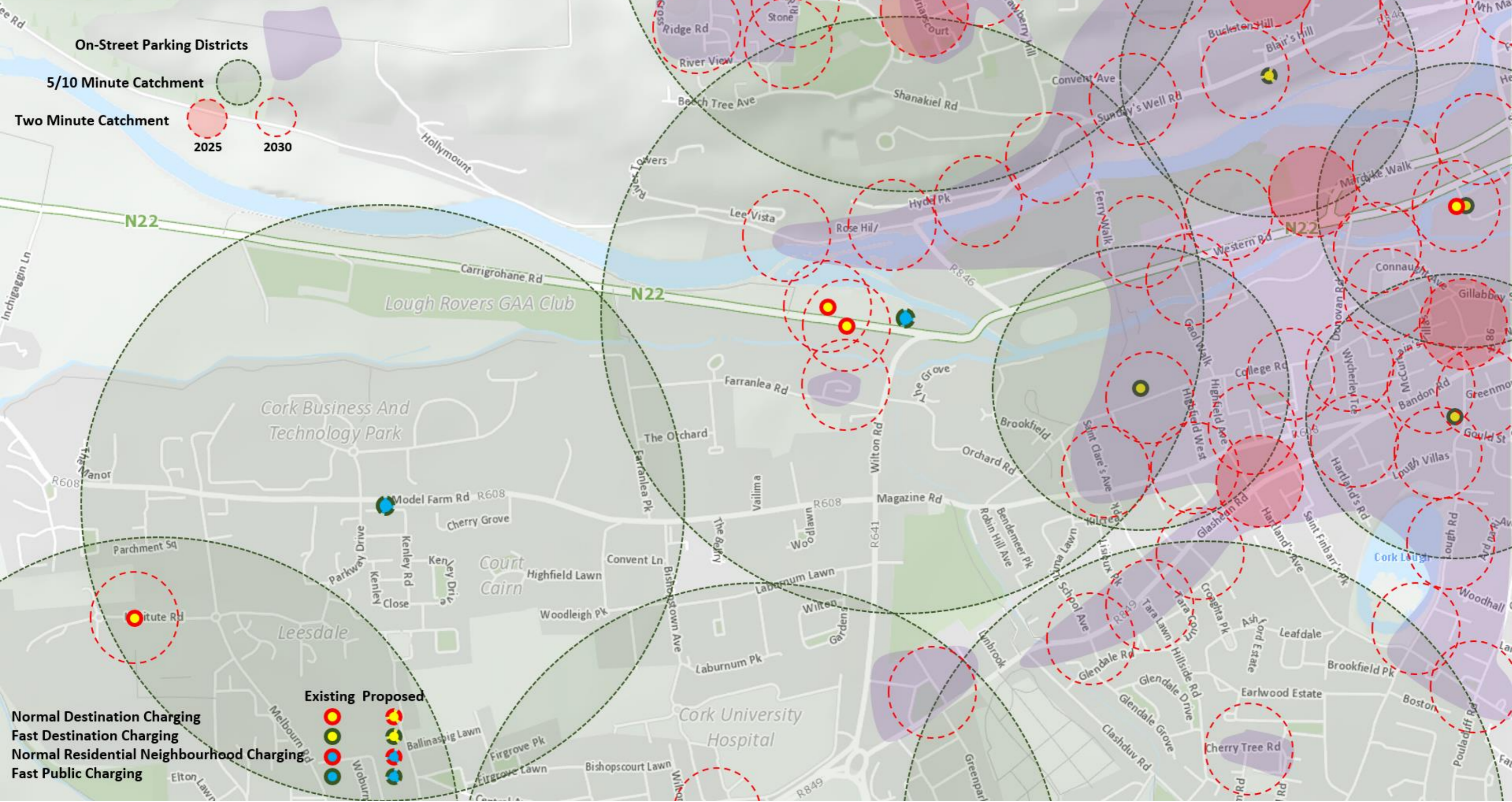
# North West Suburbs (Outer)



# North West Suburbs Inner

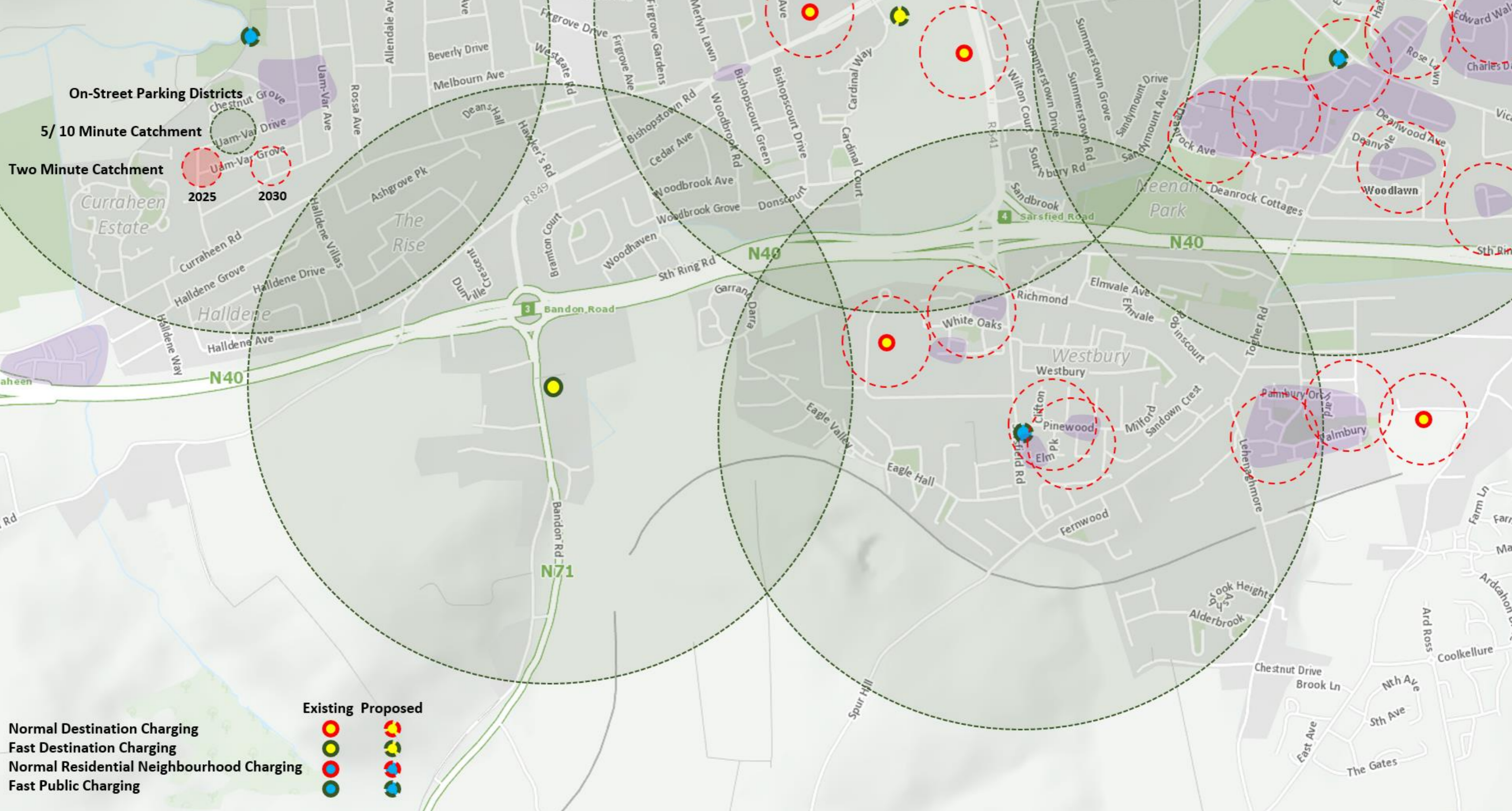


# South West Suburbs (Inner)

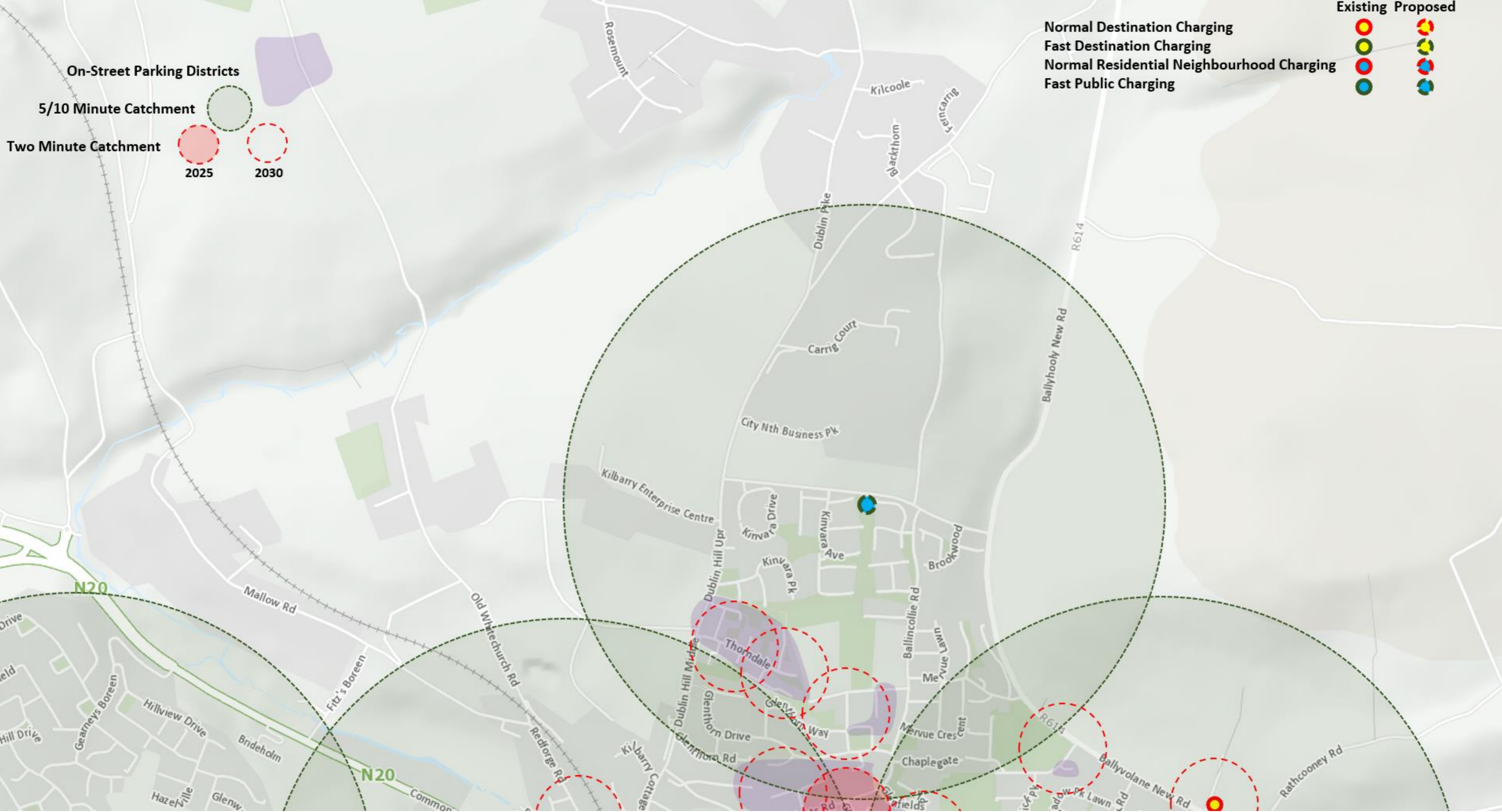




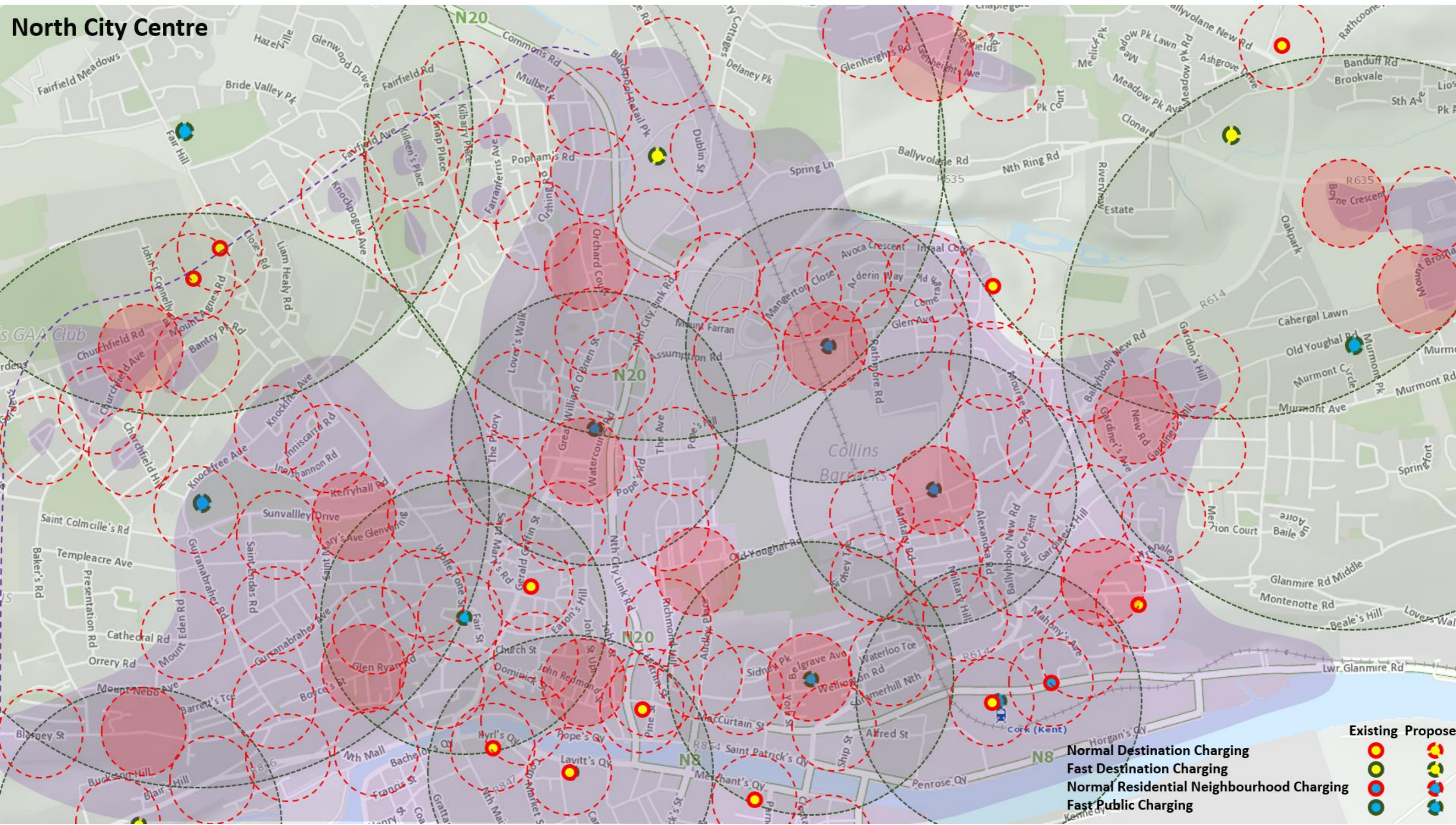
# South West Suburbs (Outer)



# North Central Suburbs



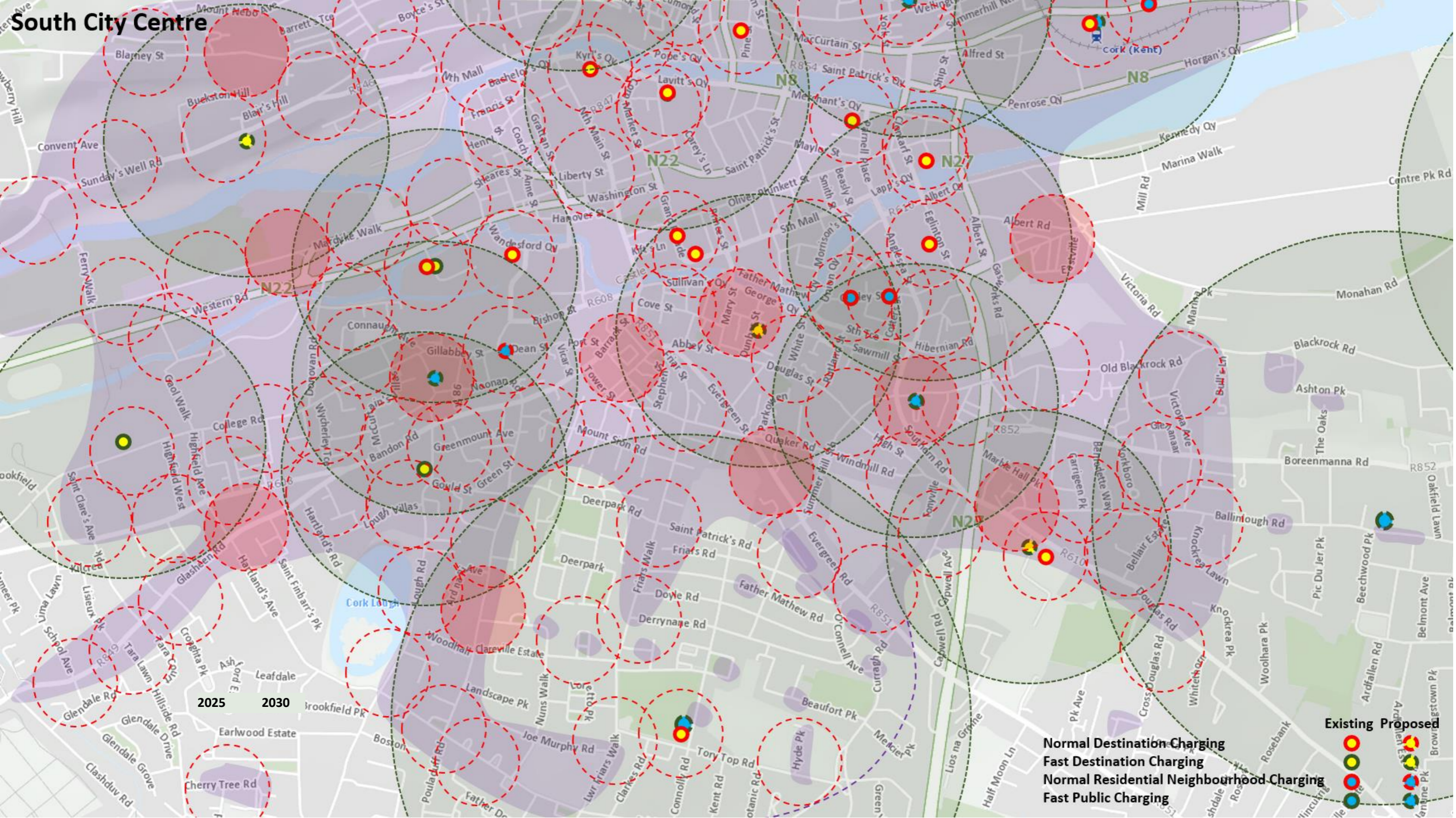
# North City Centre



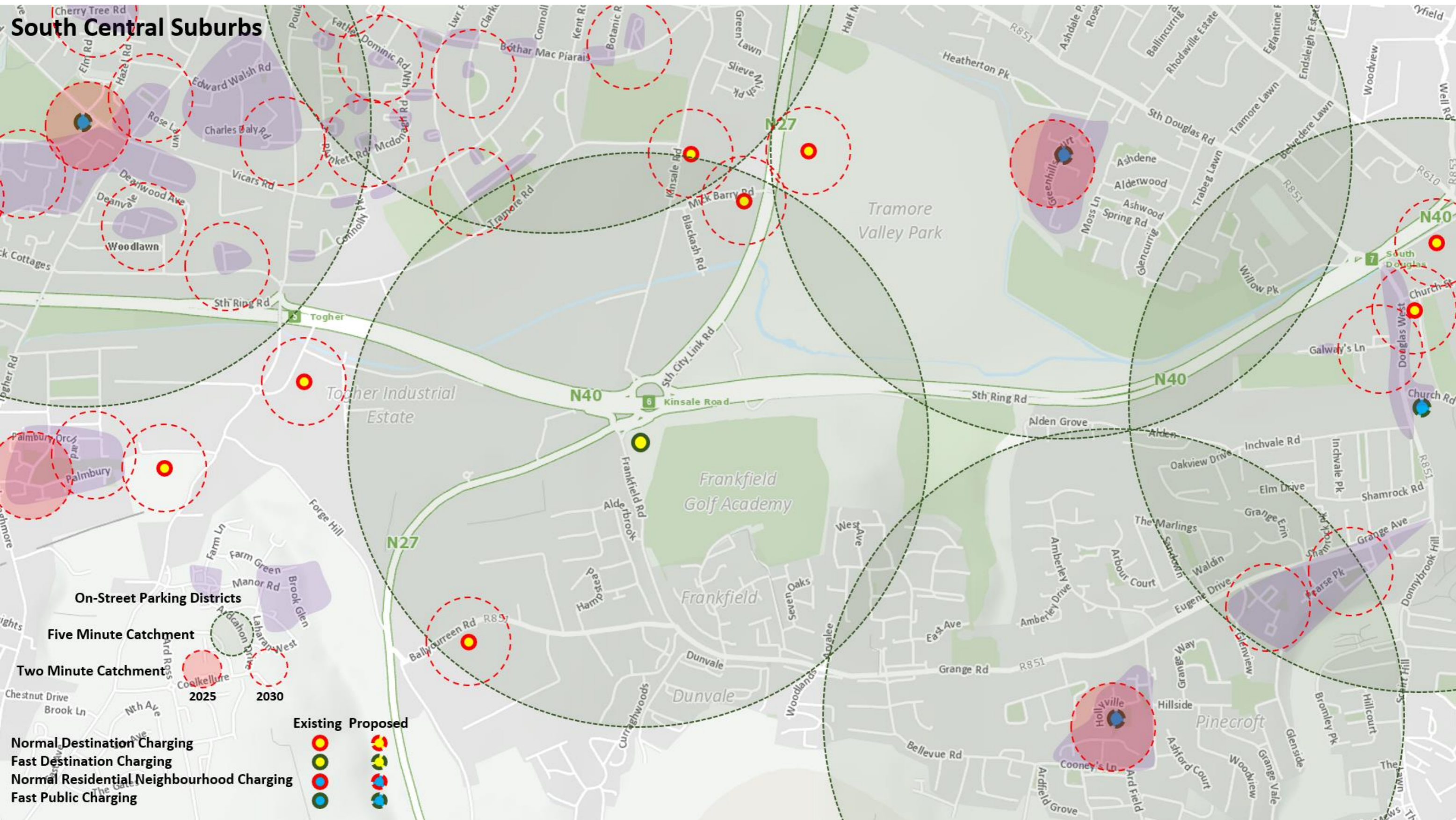
**Existing Propose**

Normal Destination Charging		
Fast Destination Charging		
Normal Residential Neighbourhood Charging		
Fast Public Charging		

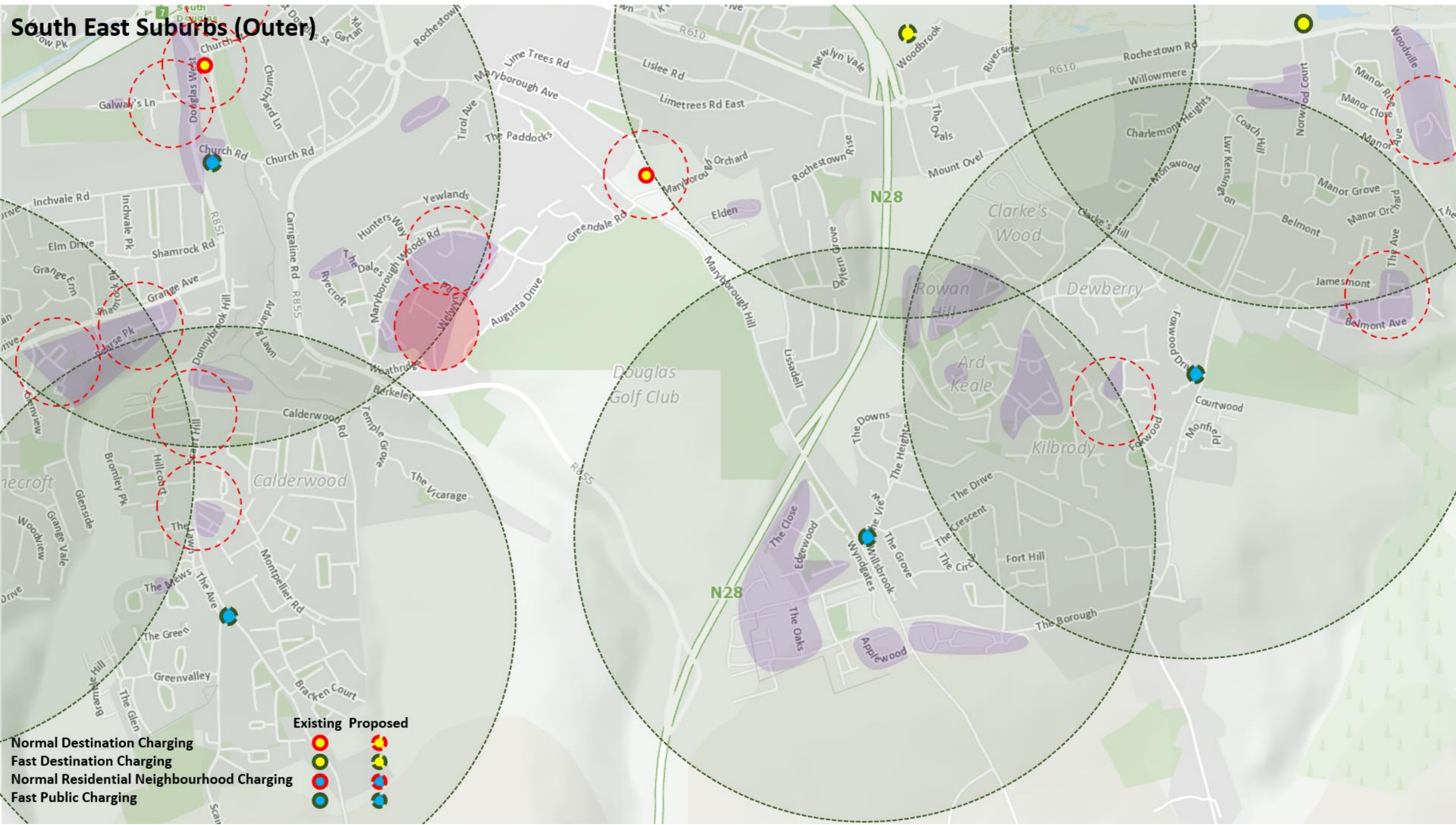
# South City Centre



# South Central Suburbs



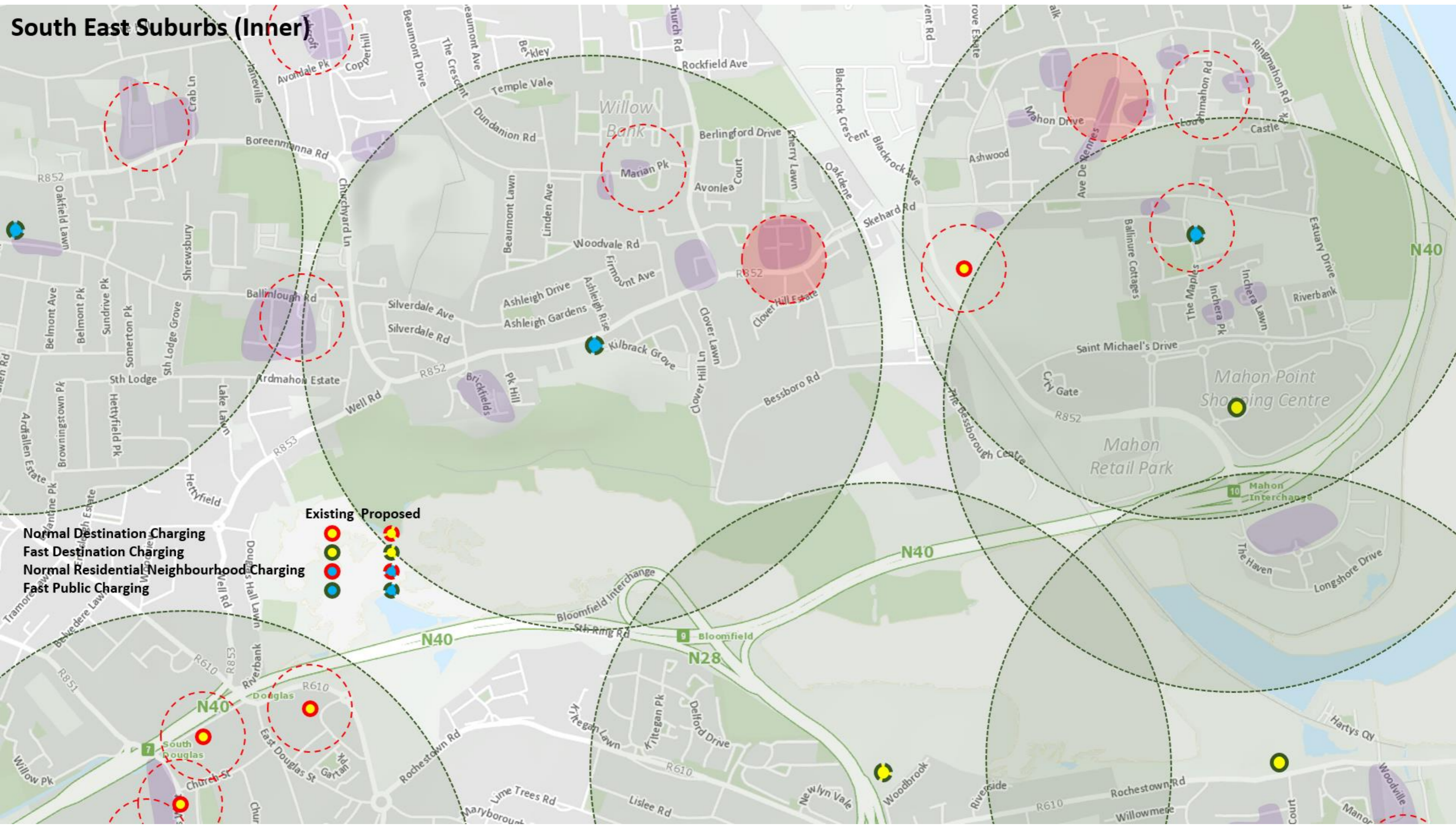
# South East Suburbs (Outer)



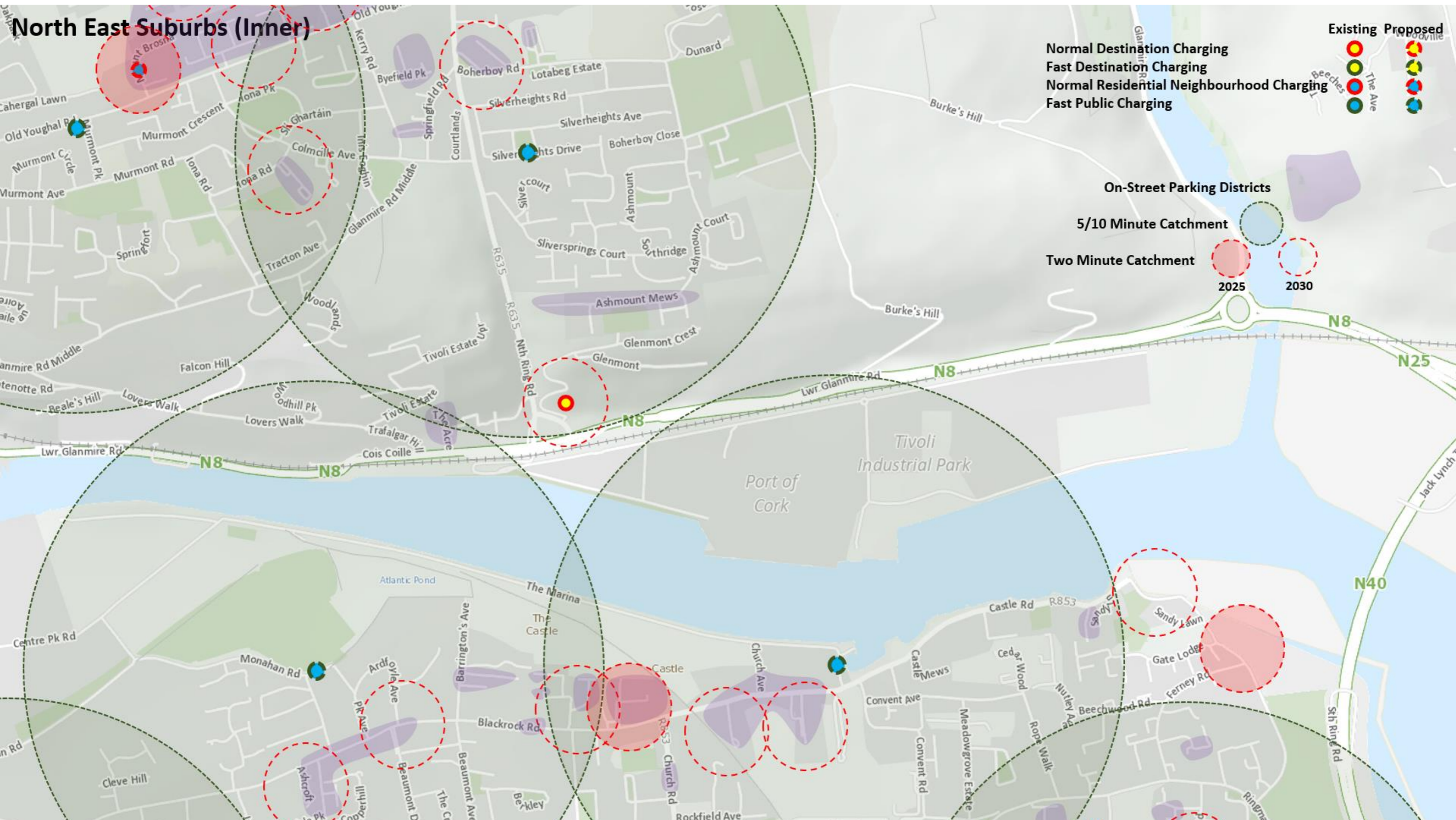
**Existing Proposed**

- Normal Destination Charging ● ●
- Fast Destination Charging ● ●
- Normal Residential Neighbourhood Charging ● ●
- Fast Public Charging ● ●

# South East Suburbs (Inner)

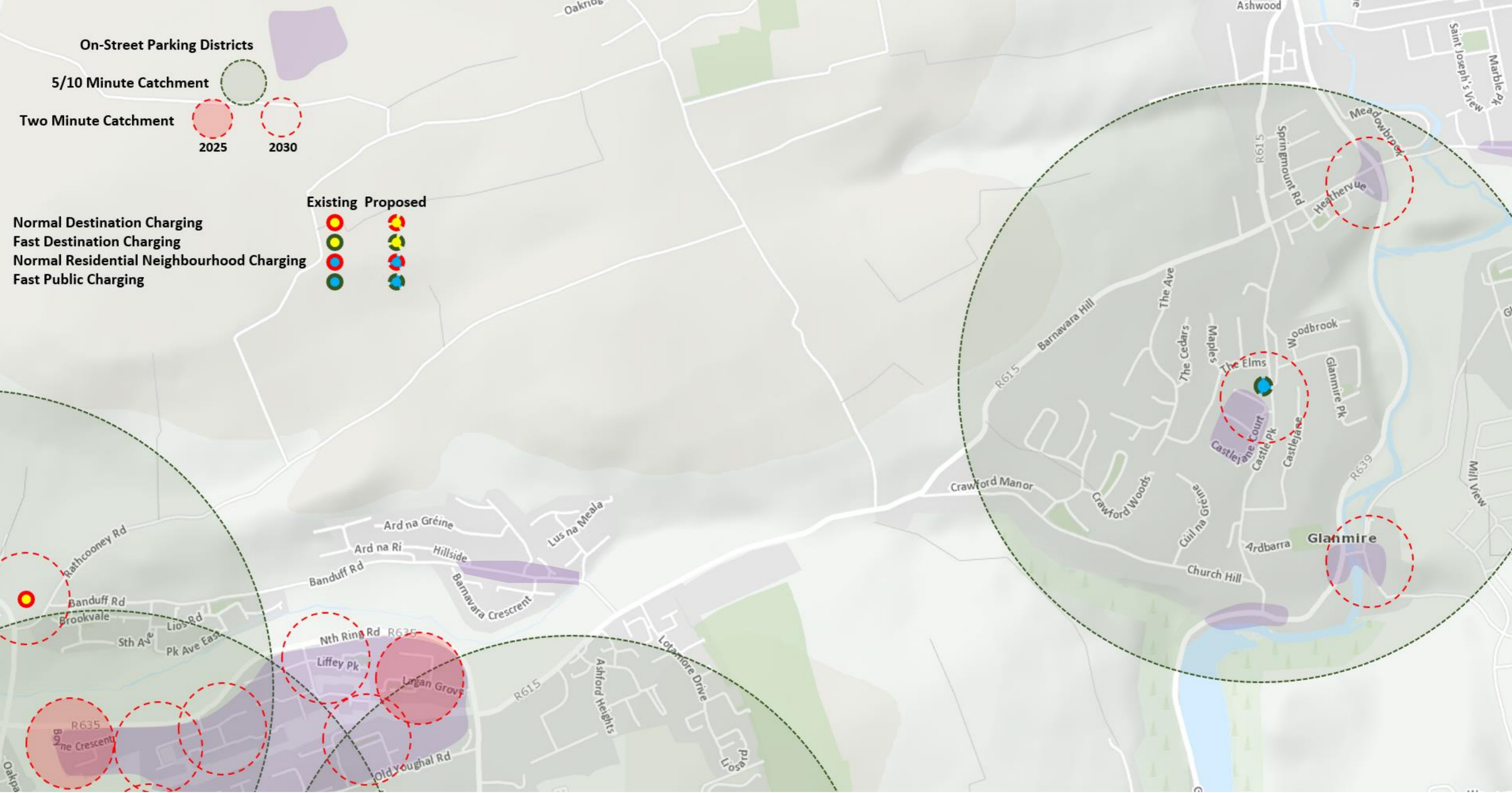


# North East Suburbs (Inner)

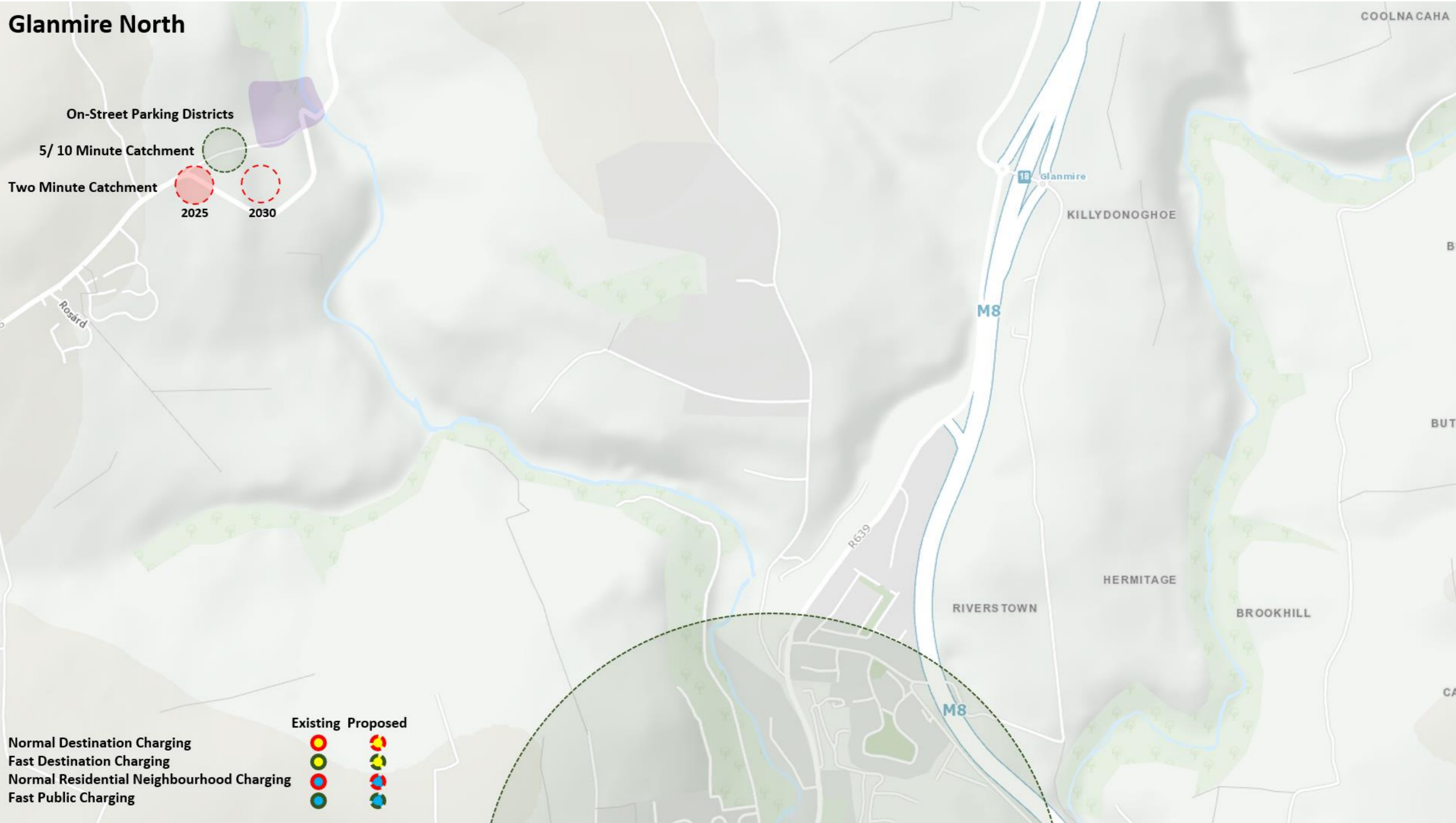




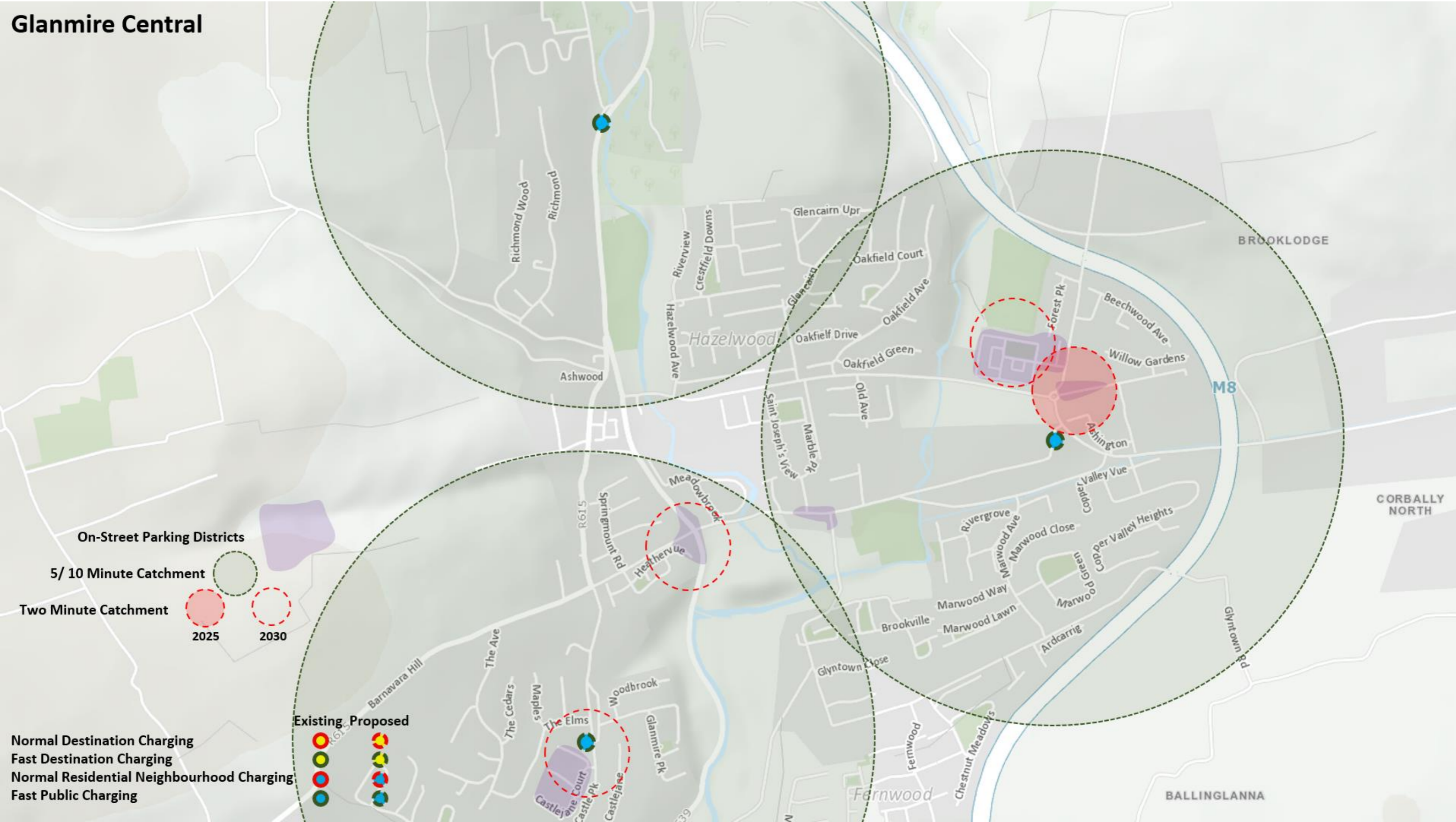
# North East Suburbs (Outer)



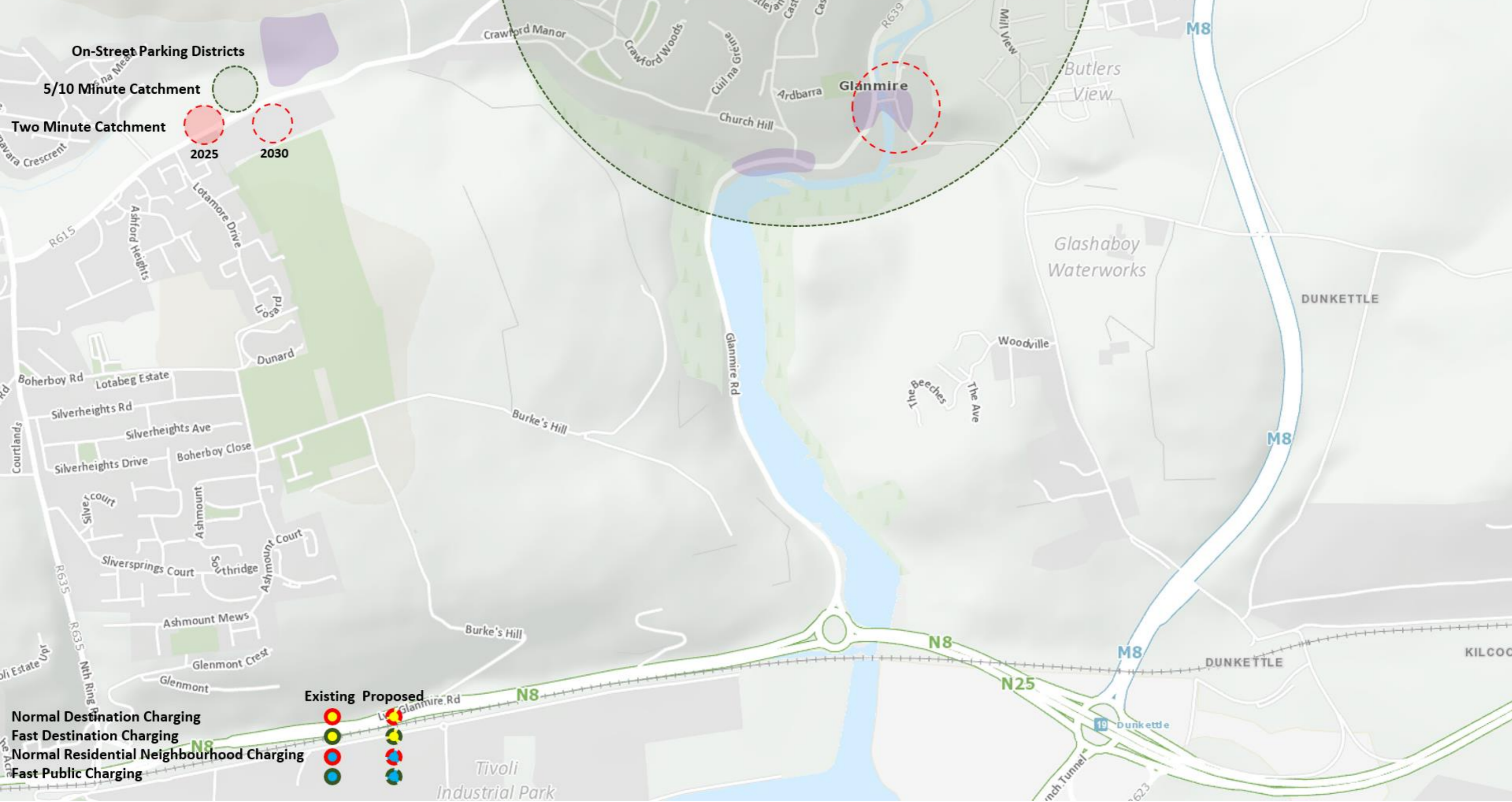
# Glanmire North



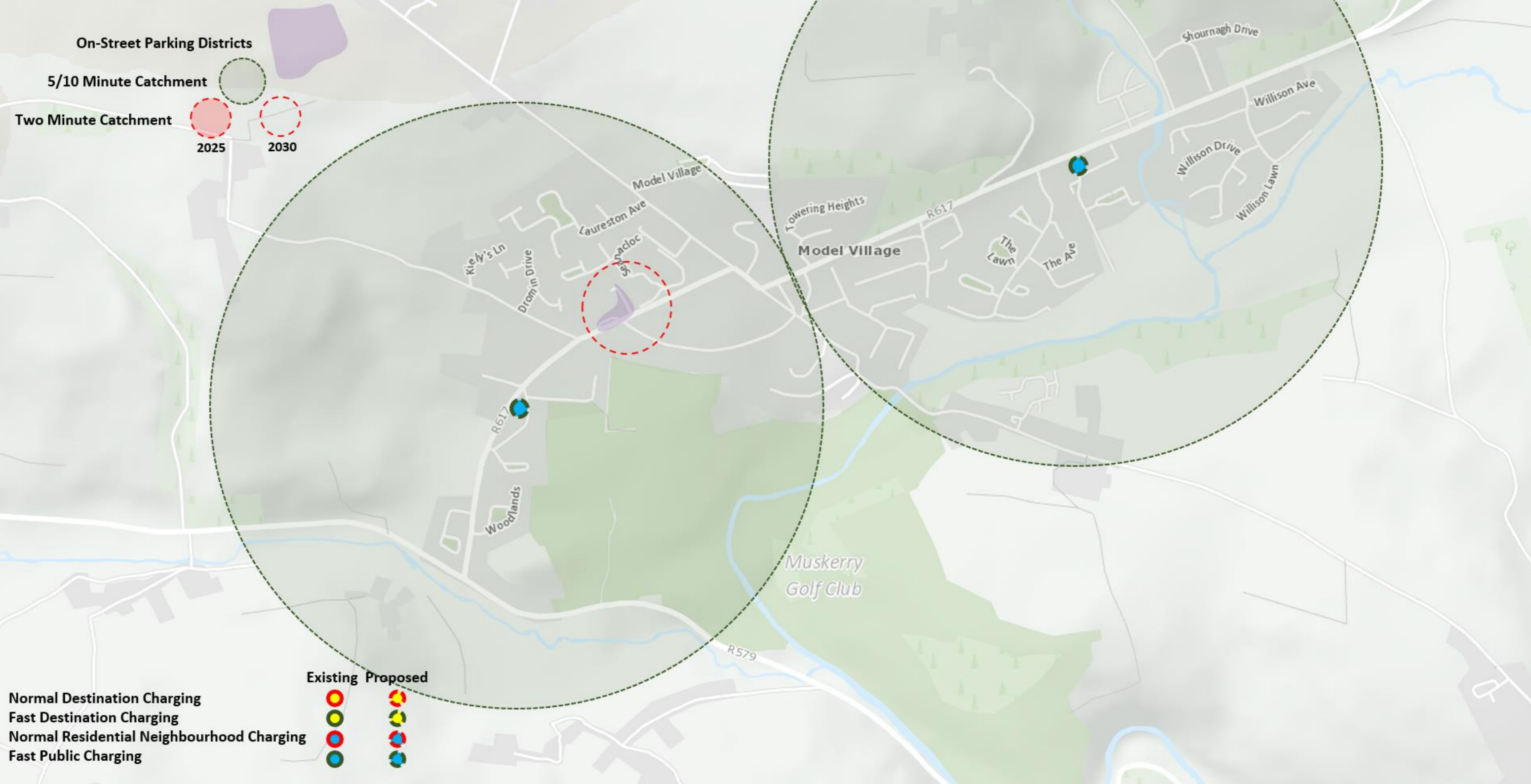
# Glanmire Central



# Glanmire South



# Tower - Cloghroe

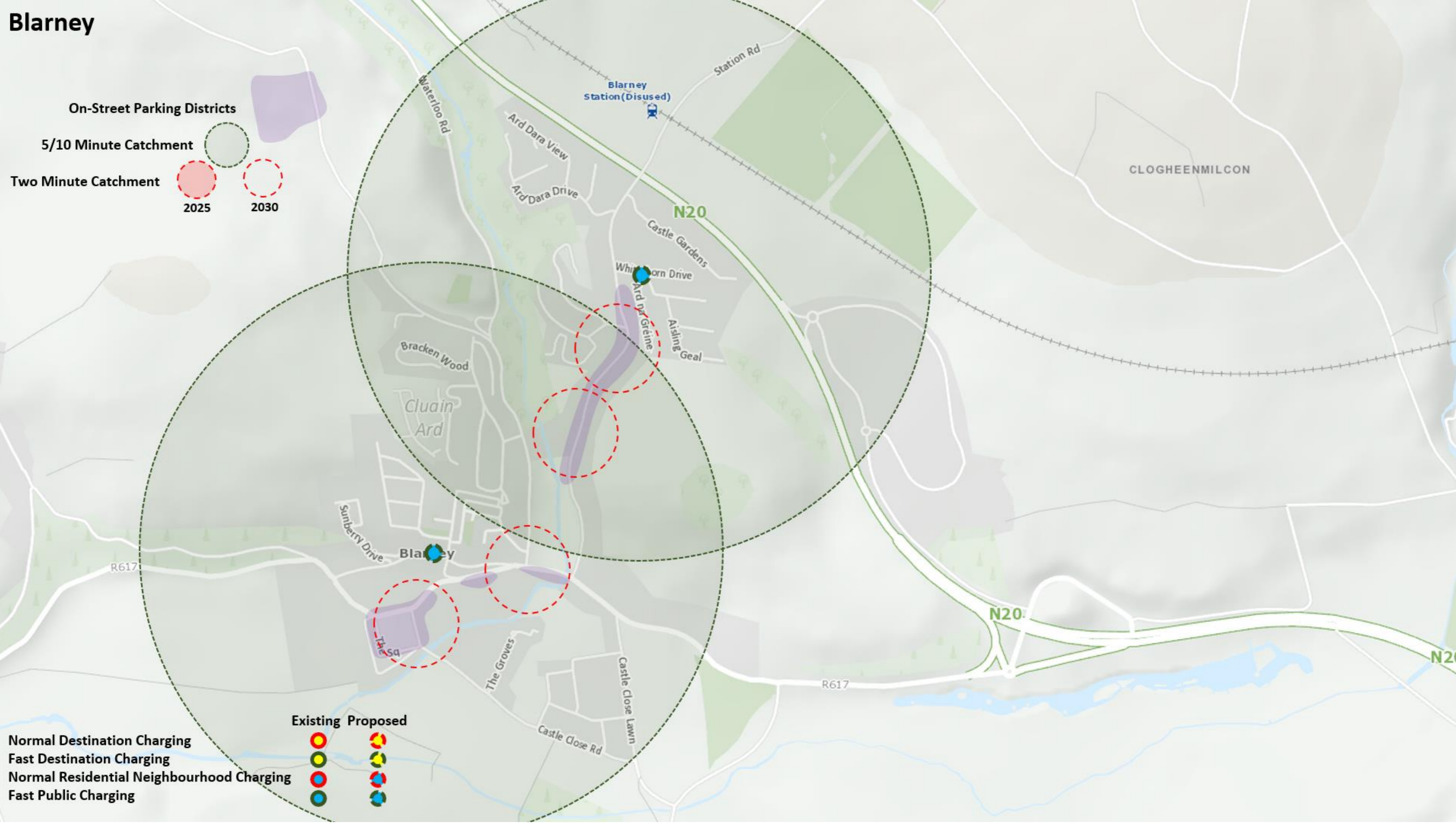


# Blarney


**On-Street Parking Districts**

5/10 Minute Catchment 


Two Minute Catchment  2025  2030



**Existing Proposed**

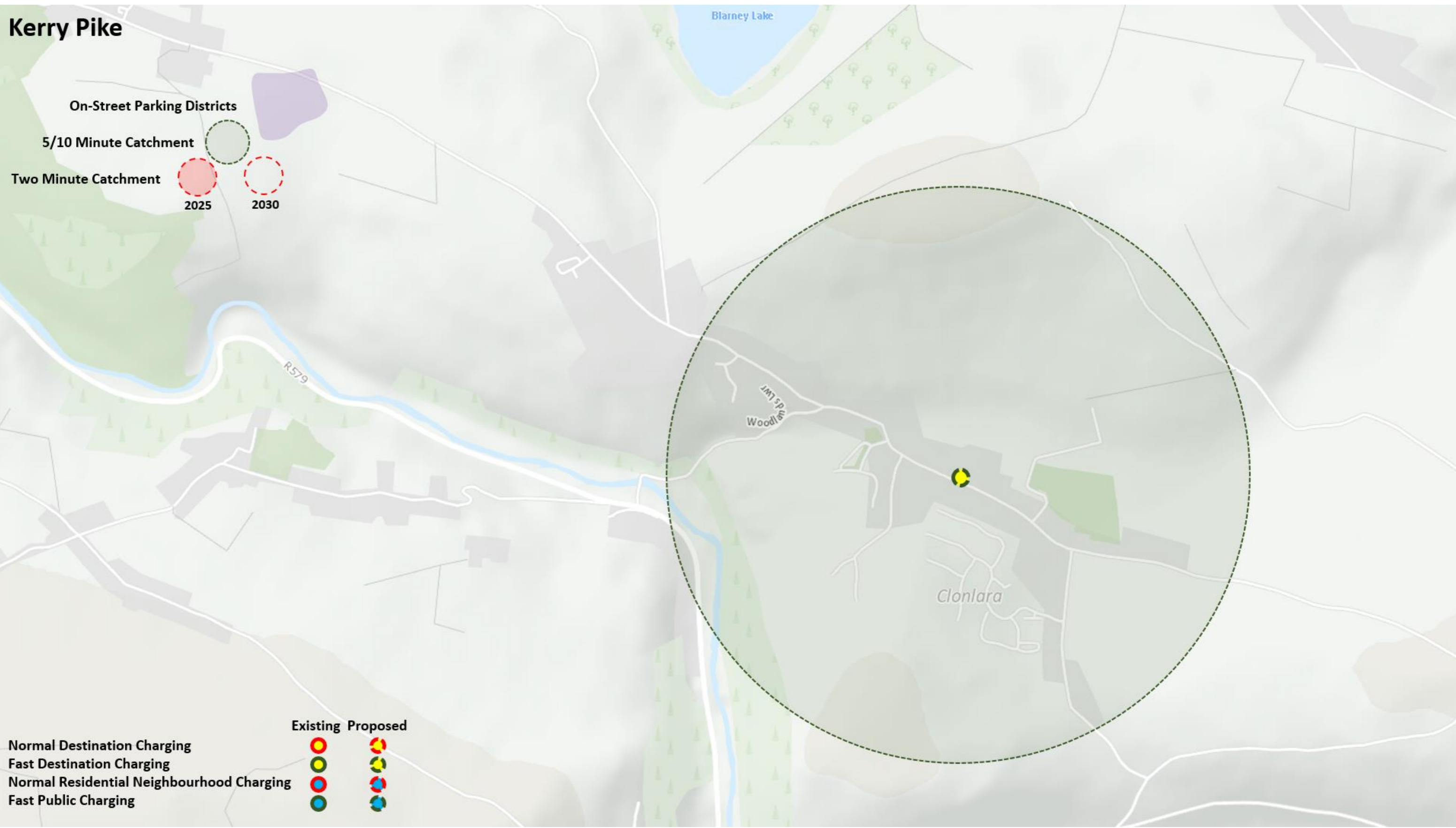
Normal Destination Charging  

Fast Destination Charging  

Normal Residential Neighbourhood Charging  

Fast Public Charging  

# Kerry Pike



# Cork Airport

