

Table 2-4 Drainage Infrastructure

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Water	Storm Water	Old Connaught: <ul style="list-style-type: none"> • Develop new gravity stormwater drainage networks to serve new roads, public realm and development sites within the LAP area. • 1 no. regional pond for stormwater attenuation and treatment. Rathmichael: <ul style="list-style-type: none"> • Develop new gravity stormwater drainage networks to serve new roads, public realm and development sites within the LAP area. • 3 no. regional ponds for stormwater attenuation and treatment.

2.6 Utilities – Power Supply and Telecommunications

Both electrical and telecoms infrastructure are available within the LAP areas.

In the wider area, there are three existing zone substation supplies at Carrickmines, Cherrywood and Fassaroe. At Old Connaught, an existing 38kV substation is located near Bray Emmet's GAA Club. ESB have indicated that there may be existing residual capacity to cater for c. 1,000 additional residential homes on an interim basis. ESB has also indicated that a deep reinforcement including a new 38kV substation would be required to cater for total residential demand in Old Connaught and Rathmichael. While the ultimate location of a new 38kV substation is to be determined it is noted that lands at and adjacent to the existing 38kV substation at Old Connaught may be appropriate. Local network upgrades would also be required across both LAP areas to support anticipated levels of residential growth.

In terms of telecommunications infrastructure, fibre connections are available within the vicinity of the LAP areas. New development can connect to these networks but would require new fibre cabinet capacity and applications for new connections would need to be submitted to the telecom’s providers.

Table 2-5 Power Supply and Communications Infrastructure

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Power Supply and Telecommunication	Power Supply	1 no. 38kV substation
	Telecommunication	New fibre cabinet capacity

2.7 Social Infrastructure – Community Facilities and Education

2.7.1 Community, Cultural and Civic Facility Provision

A component of sustainable neighbourhood infrastructure is the provision of an appropriate range of community, cultural and civic facilities. The ICAS Part 3 Report - Options Development and Assessment - includes a preliminary assessment of the indicative quantitative floorspace requirement for community, cultural and civic facilities in the LAP areas, based on planned residential growth levels, and also considers indicative spatial locations for such uses.

The preliminary quantitative assessment based on Core Strategy growth levels (see Table 2-6) indicates that both LAP areas (Old Connaught and Rathmichael) may require a 'neighbourhood' level provision of community facilities. It is noted that the specific quantitative requirement for community, cultural and civic facilities will be further assessed as part of the LAP plan making process for each area taking into account additional considerations including inter alia existing population, changes in residential density guidance, the scale, location and function of existing community infrastructure, and potential planned infrastructure in the wider environs.

Table 2-6 Preliminary Assessment of Community, Cultural and Civic Facility Provision

Area	dlr CDP 2022-2028 Core Strategy Residential Yield	Approx. Population Increase (2.5 Average Household Size)	Approx. provision of community facilities based on 130sqm per 1,000 population
Old Connaught	2,005	5,013	652
Rathmichael	2,431	6,078	790
Total	4,436	11,091	1,442

The spatial location of community, cultural and civic facility provision will be determined through the local area plan plan-making process. Notwithstanding, a preliminary assessment undertaken as part of the ICAS Part 3 Report indicates that suitable locations for such uses include close to the inner core of each settlement and at locations adjacent to other land uses where synergies can be harnessed. Potential locations within both LAP areas are indicated in Figure 2-11 and Figure 2-12.



Figure 2-11 Potential Locations for Community, Cultural and Civic Provision at Old Connaught

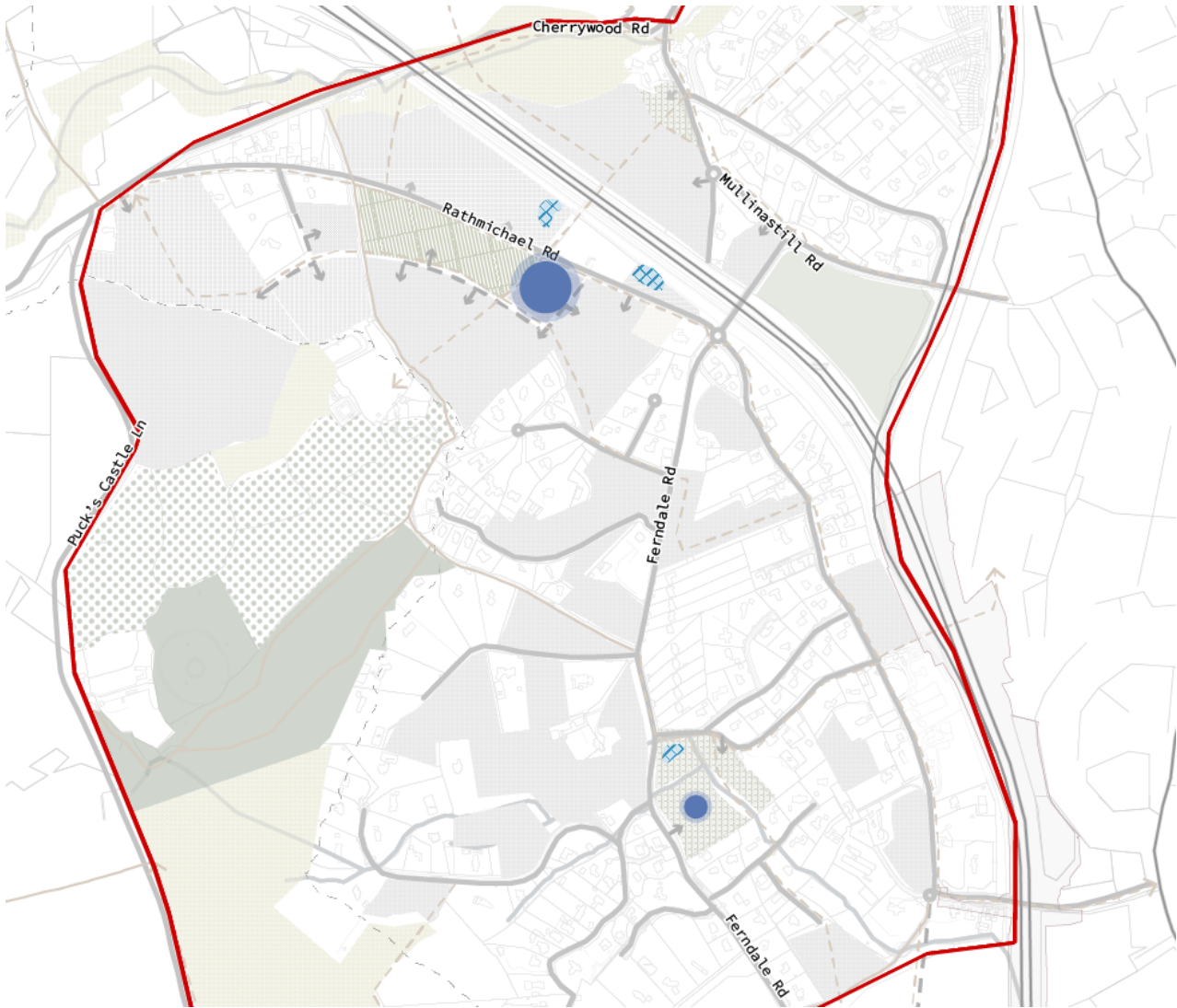


Figure 2-12 Potential Locations for Community, Cultural, and Civic Provision at Rathmichael

Table 2-7 Community Facilities Infrastructure

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Sustainable Communities	Community Facilities	<ul style="list-style-type: none"> Neighbourhood level community facilities at Old Connaught. Neighbourhood level community facilities at Rathmichael.

2.7.2 Educational Facilities

As set out in the ICAS Part 3 Report - Options Development and Assessment and Part 4 Report - the Local Authority is engaging with the Department of Education (DoE) on an ongoing basis, discussing the school requirements for the two LAP areas. Through this engagement the DoE has identified a requirement for one or more primary schools in both Old Connaught and Rathmichael, and the DoE have also identified the potential requirement for a post primary school to serve the overall ICAS and wider area.

Figure 2-13 identifies the proposed location of a primary school in Old Connaught. This location is consistent with that identified on Land Use Zoning Map No. 14 of the dlr CDP 2022-2028. An indicative area of approx. 1.6 hectares has been identified for the primary school site at Old Connaught. As per the DoE Technical Guidance Document TGD-025 'Identification and Suitability Assessment of Sites for Primary Schools', a school site area of approx. 1.6 hectares would provide for a 16-24 classroom primary school and associated components including play areas / ball courts etc. It is noted however that the exact size and

location of educational facilities at Old Connaught will be subject to further assessment as part of the local area plan-making process for the area.

The location of educational facilities at Rathmichael is not indicated in the Land Use Zoning Maps of the dlr CDP 2022-2028. The size and location of the educational facilities at Rathmichael will be considered and identified as part of the local area plan-making process for the area, which will be subject to further engagement with the Department of Education.

It is noted that the Local Authority will continue to engage with the DoE with respect to specific school requirements as part of the local area plan-making process for both LAP areas.

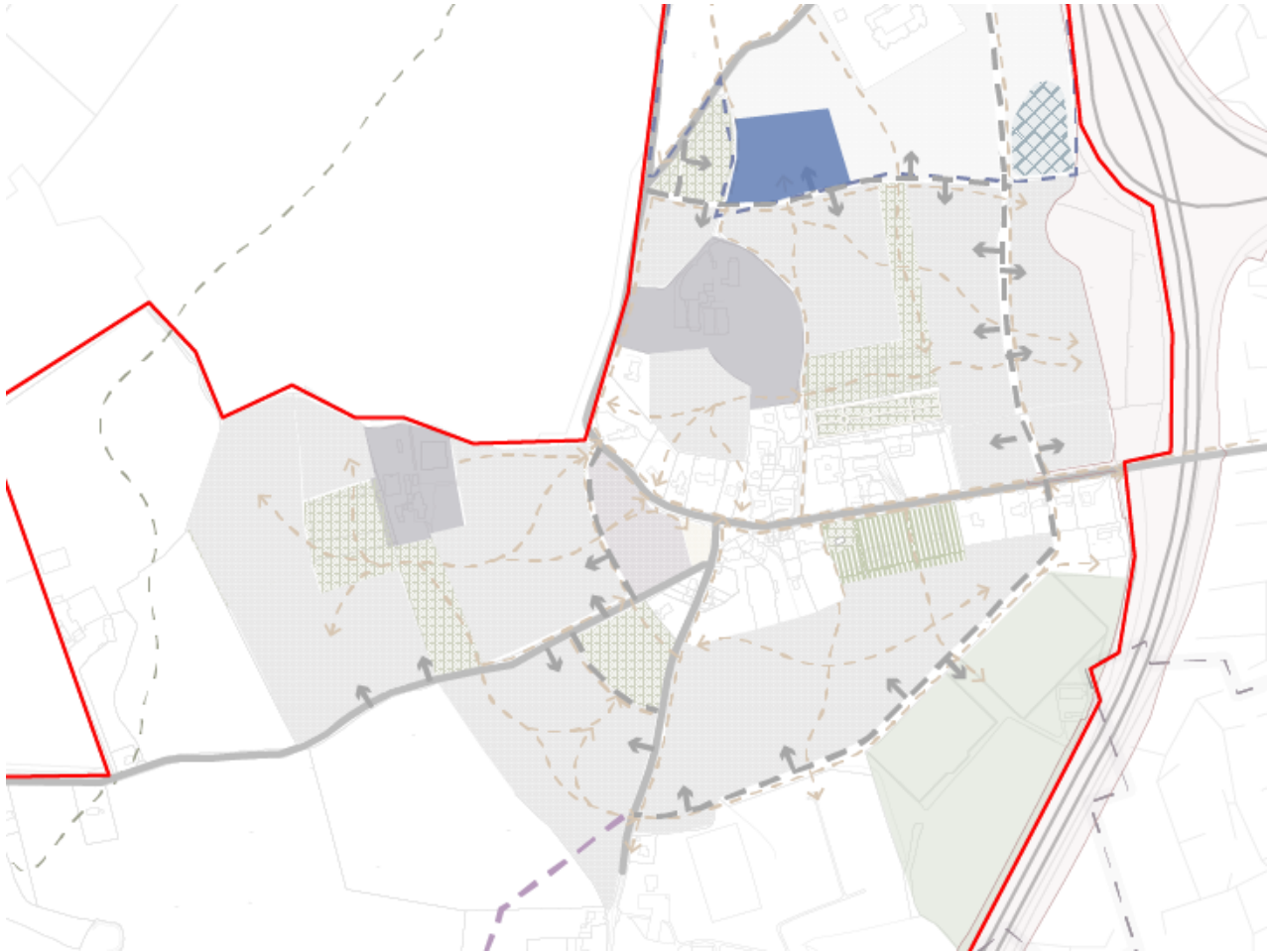


Figure 2-13: Proposed Education Site at Old Connaught

Table 2-8 Education Facilities Infrastructure

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Sustainable Communities	Education Facilities	Old Connaught: <ul style="list-style-type: none"> • 1 or more primary schools. Rathmichael: <ul style="list-style-type: none"> • 1 or more primary schools. ICAS area: <ul style="list-style-type: none"> • Potential provision of a post primary school

2.8 Open Space, Parks and Recreation

The availability of accessible and high quality public open spaces is important in creating sustainable settlements. The development and assessment of parks and open space options and the subsequent identification of parks and open space infrastructure to support the plan-led development of Old Connaught and Rathmichael was undertaken in the ICAS Part 3 Report - Options Development and Assessment Report. Please refer to the ICAS Part 3 Report for further information on the analysis process.

Figure 2-14 illustrates the recommended indicative strategic level approach for parks and open space provision to support the sustainable development of the LAP areas, as identified in the ICAS Part 3 Report and as carried forward into the Part 4 Report. The indicative strategy recommends the inclusion of village greens and civic spaces at central locations at both Old Connaught and Rathmichael to enhance the sense of place. The Strategy recommends the enhancement of Rathmichael Woods and the provision of a new active focussed recreation park at Old Connaught. A range of larger strategic open spaces are identified throughout the LAP areas providing a network of open spaces which maximise accessibility and take advantage of views of the surrounding landscape. Furthermore, the Strategy seeks to integrate Nature Based Solutions, enhance local important biodiversity areas and integrate heritage elements.

The overarching strategy illustrated in Figure 2-14 was progressed to a greater level of detail and comprises part of the preliminary development frameworks for the LAP areas. It is noted that the indicative strategic open space network for the LAP areas indicated in the preliminary development frameworks does not factor in additional local level provision of public open space which, as appropriate, would be assessed through the plan-making process and subsequently through the development management process and serve to supplement the overarching strategic network.

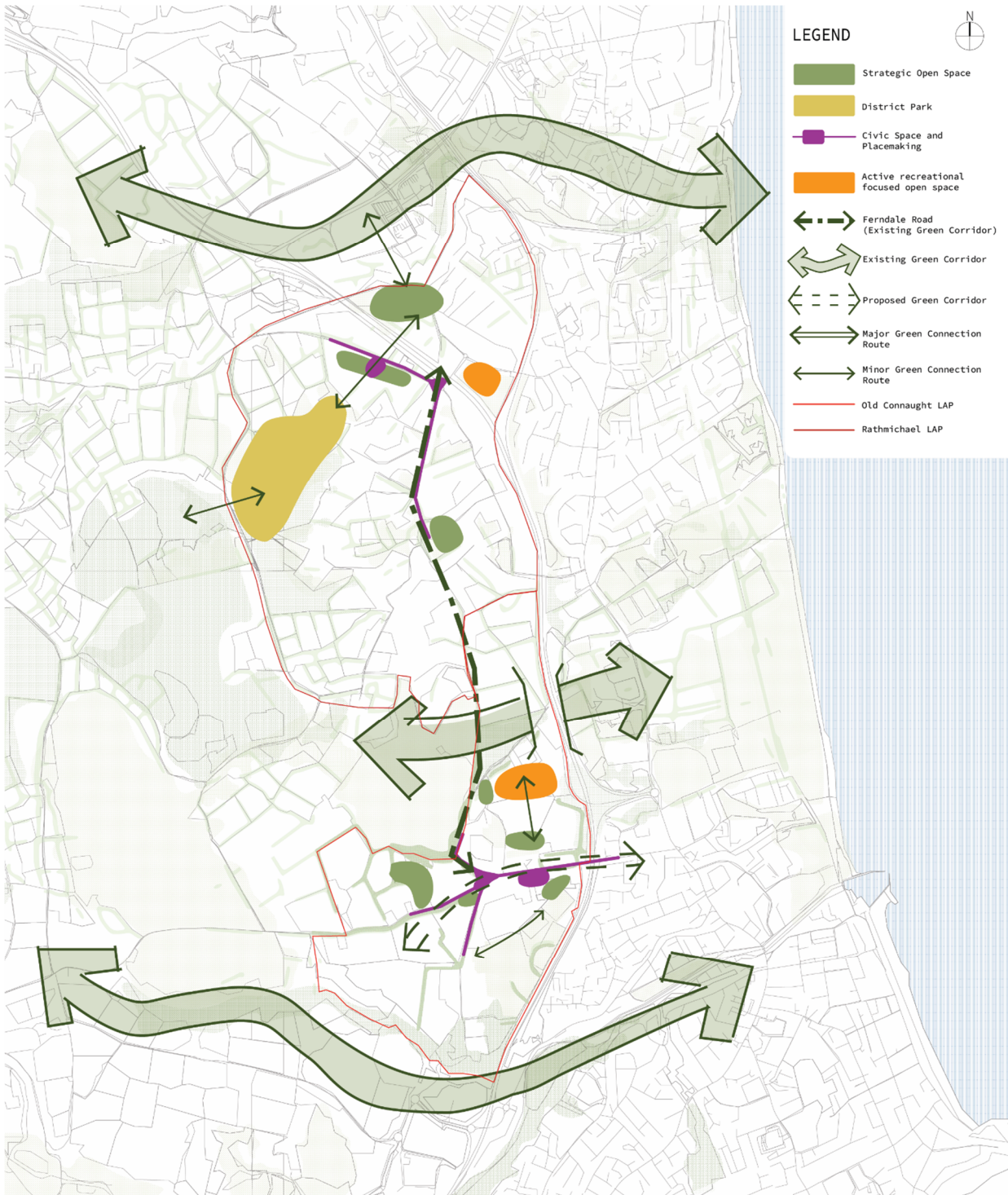


Figure 2-14: Indicative Strategic Level Parks and Open Space Network

Table 2-9 Open Space, Parks and Recreation Infrastructure

Sub-Element	Infrastructure Requirements
Open Space, Parks and Recreation	<ul style="list-style-type: none"> • Enhancement and extension of Rathmichael Woods as a Gateway/District Park. • New Active Park at Old Connaught • A range of other Strategic Open Spaces • New Village Green's at both Old Connaught and Rathmichael • Civic spaces/village centres. • Provision of greenways network and linear green connecting spaces

2.9 Heritage and Conservation

Heritage is recognised as an important social, cultural, and economic asset. The cultural heritage of Old Connaught and Rathmichael contributes to the well-being, shared community identity and social cohesion of these communities.

The ICAS Part 3 Report - Options Development and Assessment - identifies the key contributors to landscape character in the LAP areas and sets out recommendations for preservation, enhancement and management of these. An assessment of the potential impact and/or enhancement of existing heritage features was undertaken by capturing the existing baseline information and by measuring the impact and the perceived change in landscape character against preliminary settlement strategies for the LAP areas.

Landscape character change at Old Connaught will occur in and around the existing settlement patterns adjoining Old Connaught Avenue. It was found that the introduction of buildings and infrastructure at Old Connaught would change the visual, ecological and cultural aspects of the area.

Landscape character change in Rathmichael will occur primarily south of the existing M50. Aspects of current landscape character can be retained and enhanced by the conservation of biodiversity, and the conservation/management of key identified heritage elements within public open space areas. Cultural heritage elements are dispersed throughout and many fall within privately owned lands. Enhancement of Rathmichael Woods can be achieved through the conservation/interpretation of the Iron Age hillfort and provision of safe universal accessibility to the Old Rathmichael Church, its historical burial ground, and other nearby heritage features. Any enhancement would take account of the proximity of archaeological monuments. Appropriate signage can provide wayfinding and interpretation of these heritage features, fostering community engagement, appreciation and education.

The analysis of heritage assets informed the preparation of preliminary settlement frameworks for development at Old Connaught and Rathmichael. A summary of the analysis undertaken is illustrated in Figure 2-15. The preliminary settlement strategy for the LAP areas seeks to enhance the landscape by integrating cultural heritage, green spaces, sustainable design features and amenities that harmonise with the surroundings while minimising fragmentation of natural habitats and loss of scenic views.

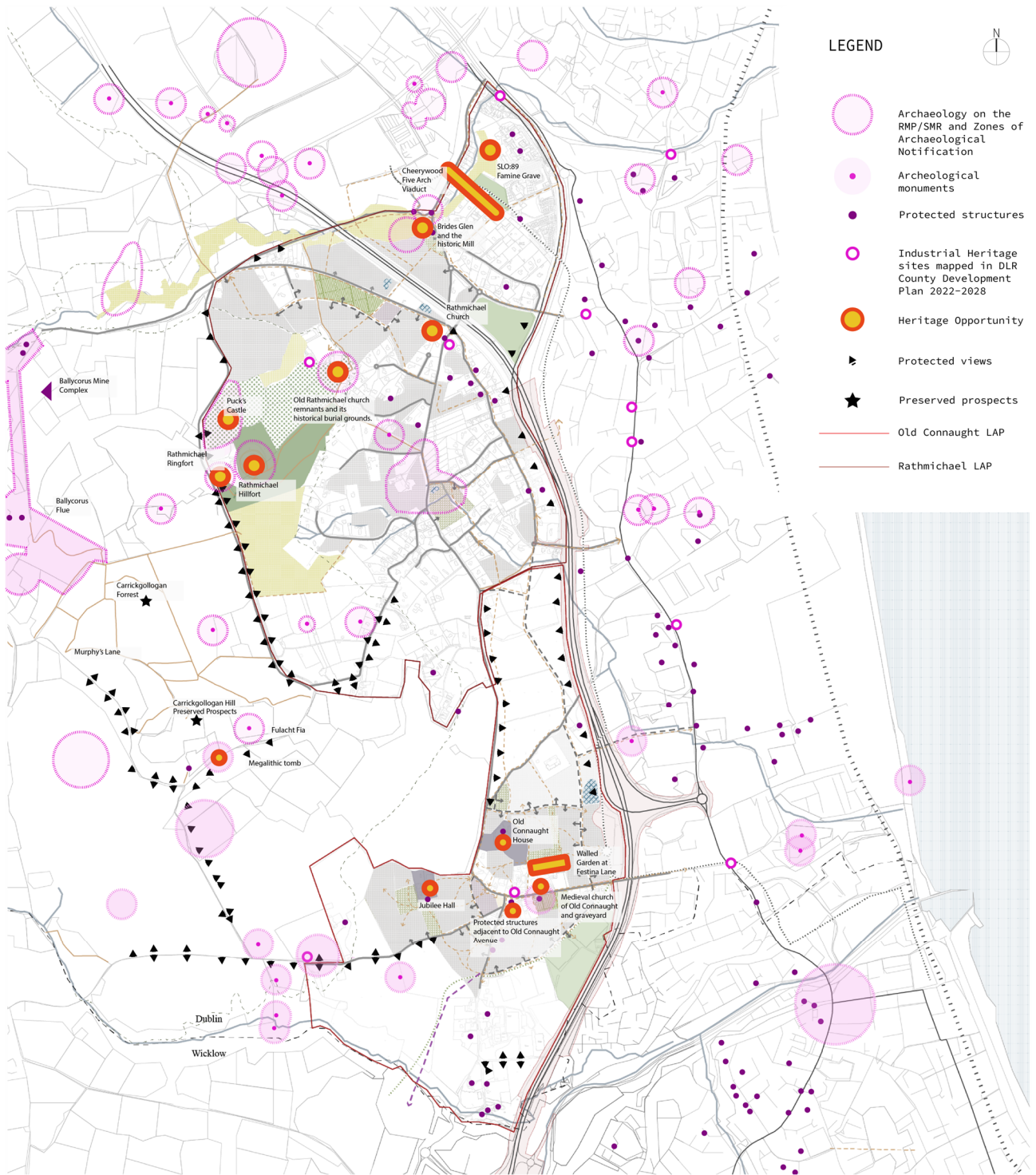


Figure 2-15: Analysis of Heritage Assets

Table 2-10 Heritage & Conservation Infrastructure

Sub-Element	Infrastructure Requirements
Heritage & Conservation	Protect, encourage and facilitate the conservation, development, design and management of cultural heritage assets.

2.10 Green Infrastructure and Biodiversity

From a policy perspective, the starting point for developing the approach to green infrastructure and biodiversity is the dlr CDP Green Infrastructure Strategy 2022-2028, which includes a high level county-wide network connected to surrounding and regional green infrastructure. The overarching objective (as per dlr CDP Policy Objective PO GIB1) for green infrastructure and biodiversity is to protect existing green infrastructure and encourage and facilitate, the development, design and management of high quality natural and semi-natural areas.

As part of the ICAS Part 3 Report - Options Development and Assessment – key habitats, and species of higher conservation value associated with the key habitats, were identified across the LAP areas. Based on the analysis undertaken, options were proposed for the maintenance and enhancement of ecological integrity in accordance with the Lawton principles. Consideration was also given to where habitat heterogeneity could be improved, in particular based upon the species and habitats noted to be of conservation status in the area in the base-mapping phase.

The below options include three overarching objectives illustrated in red, orange and green. It should be noted that all four options are not exclusive and the overarching objectives should be considered as a general direction for management rather than each management objective to be considered exclusive. It may be that protection i.e. red outline, is recommended for a site, but that in some options this is also given a green management option which relates to restoration.

Red highlights areas for protection of existing designated sites including Ballyman Glen SAC/pNHA and Loughlinstown Woods pNHA. The protection of these designated sites is of primary importance and is a minimum requirement for the area. This will maintain existing biodiversity and function with the aim of preventing any future damage. Protection measures are likely those already required under existing nature conservation regulations and policies. It should be noted that all options provide for protection of including Ballyman Glen SAC/pNHA and Loughlinstown Woods pNHA with an extended buffer around those sites and therefore they are not discussed in any further detail under the options.

Orange highlights areas for enhancement of existing known existing ecological features such as between Carrickgollogan, wooded areas adjacent to Puck's Castle Lane and locally important biodiversity site adjacent to the Annex 1 habitat in that general location. This would encompass woodland, heath and grassland habitats which are of high nature conservation value but are not formally designated as a nature conservation site. focuses on improving the existing condition of habitats with knock on effects for a variety of species with the goal to enhancing the ecological value and resilience these ecological features beyond their current state. Key actions are likely to include change in management techniques such as reducing negative impacts from human activities through maintaining buffers for dog walking etc., and management to improve habitat quality including changes in mowing/grazing regime for grassland. These areas could be given some level of formal protection in the future through council policy.

Green highlights areas for restoration of ecological features which aims to reverse any degradation of damaged habitats to good condition through active management. These management actions could include woodland planting, removing invasive species and removing sources of diffuse or point water pollution, and other active management regimes which may include mowing and grazing, or extending the coverage of certain habitats through planting. Change in management could also include change in how, where and when the public access certain areas specifically identified as important for nature conservation.

Option 1

Option 1 is shown in Figure 2-16 below. As well as the basic level of protection for Ballyman Glen SAC/pNHA Loughlinstown Woods pNHA this option focuses on extending wooded vegetation connectivity between the Loughlinstown Woods pNHA and the Ticknick LIA along the Shanganagh River incorporating Bride's Glen east and Heron Bridge LIAs. By focusing on wooded habitats this option would also help to provide connectivity between two parcels of Annex I habitat (Alluvial Woodland) and result in greater connectivity for two lengths of County Important hedgerow.

This option would benefit a variety of habitats and species including the woodland habitat itself and any watercourses associated with Loughlinstown Woods pNHA. A variety of species would benefit from enhancing the woodland and Shanganagh River corridor including all bat species, badger and otter. If areas

of rough grassland and open scrubby areas could be incorporated this would amplify positive effects on the small sawfly mining bee *Enicoceros exsculptus*, common furrow bee and tawny mining bee.

The areas for enhancement (in orange) including areas within and between Carrickgollogan, wooded areas adjacent to Puck's Castle Lane and locally important biodiversity site adjacent to the Annex 1 habitat.

These orange enhancement areas in Option 1 are provided in order to form better connections to Loughlinstown Woods pNHA which is also promoted for further restoration through implementation of Option 1.

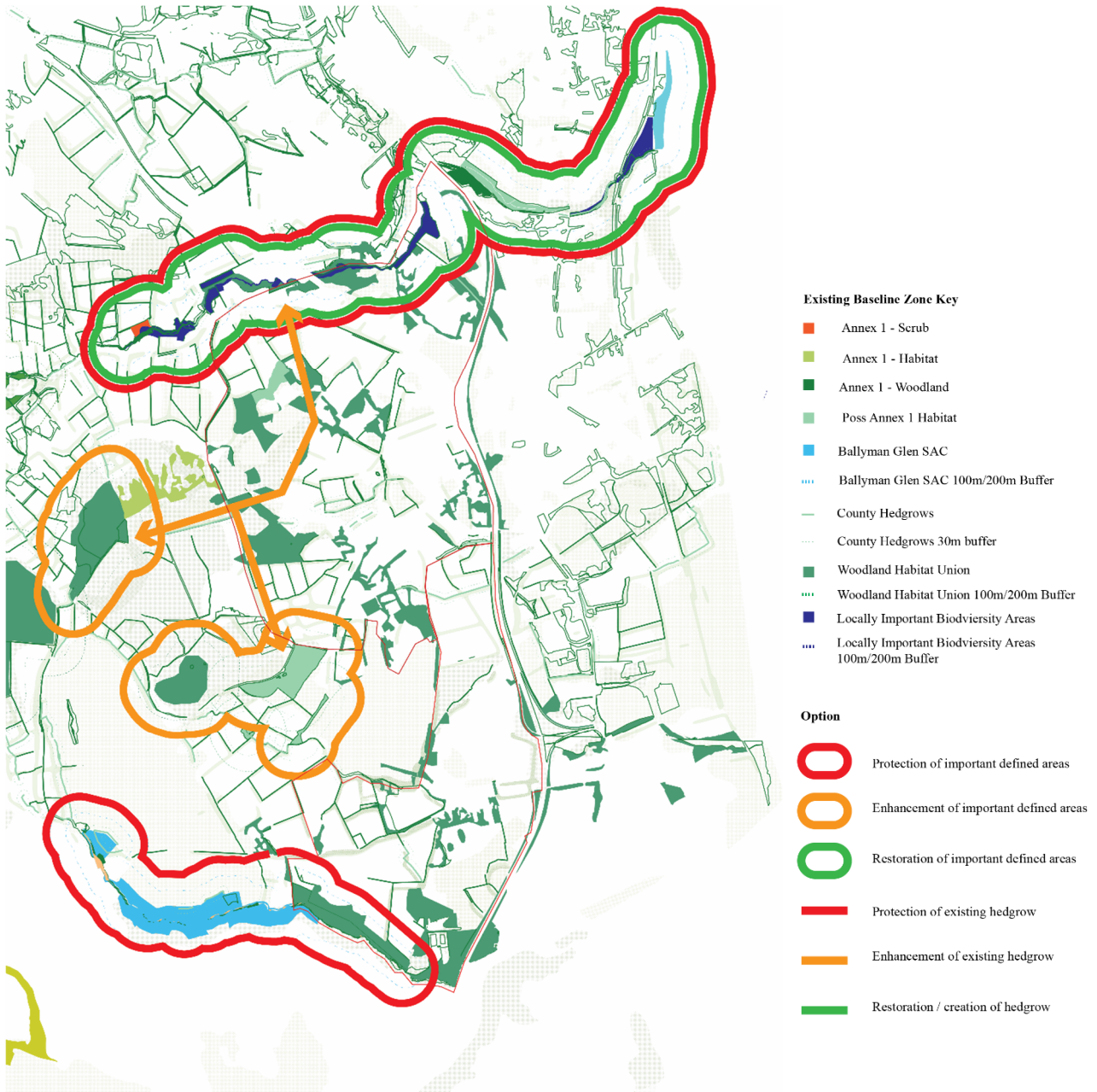


Figure 2-16 Ecology Option 1

Option 2

Option 2 is shown in Figure 2-17 below. This option differs from Option 1 in that attention and resources are directed at improving overall connectivity throughout the area as instead of focusing on restoring habitat for the entirety of Loughlinstown Woods pNHA resources would be directed at restoring dry heath and grassland habitats, enhancing connectivity between Rathmichael Wood, Carrickgollogan and Brides Glen.

This option would also help to create a matrix of habitat types encompassing Annex I dry heath and potential Annex I semi-natural dry grassland and scrubland facies on Calcareous substrates whilst also accommodating c. 1km of County Importance hedgerow and enhancing connectivity between large areas dedicated to nature conservation.

This option would benefit a wide variety of habitats and species. The dry heath and grassland habitats will be valuable for wider biodiversity interest and efforts should be made to enhance the habitat to accentuate this value. As well as benefitting mammals such as bats and badger and birds and such as skylark through creating areas easier for these species to move through and that are more attractive to feed or nest in, invertebrates such as dark green fritillary, common furrow bee, grey banded mining bee would have significantly more area to support their populations. Particular value from the option will come from the heterogeneity of the matrix that can be included and potentially enhanced.

These orange enhancement areas are the same as Option 1, forming a connection from Ballycorus and Carrickgollogan up through Rathmichael to Loughlinstown Woods which will work with the restoration of the grassland and heath habitats being restored between to provide greater levels of ecological connectivity.

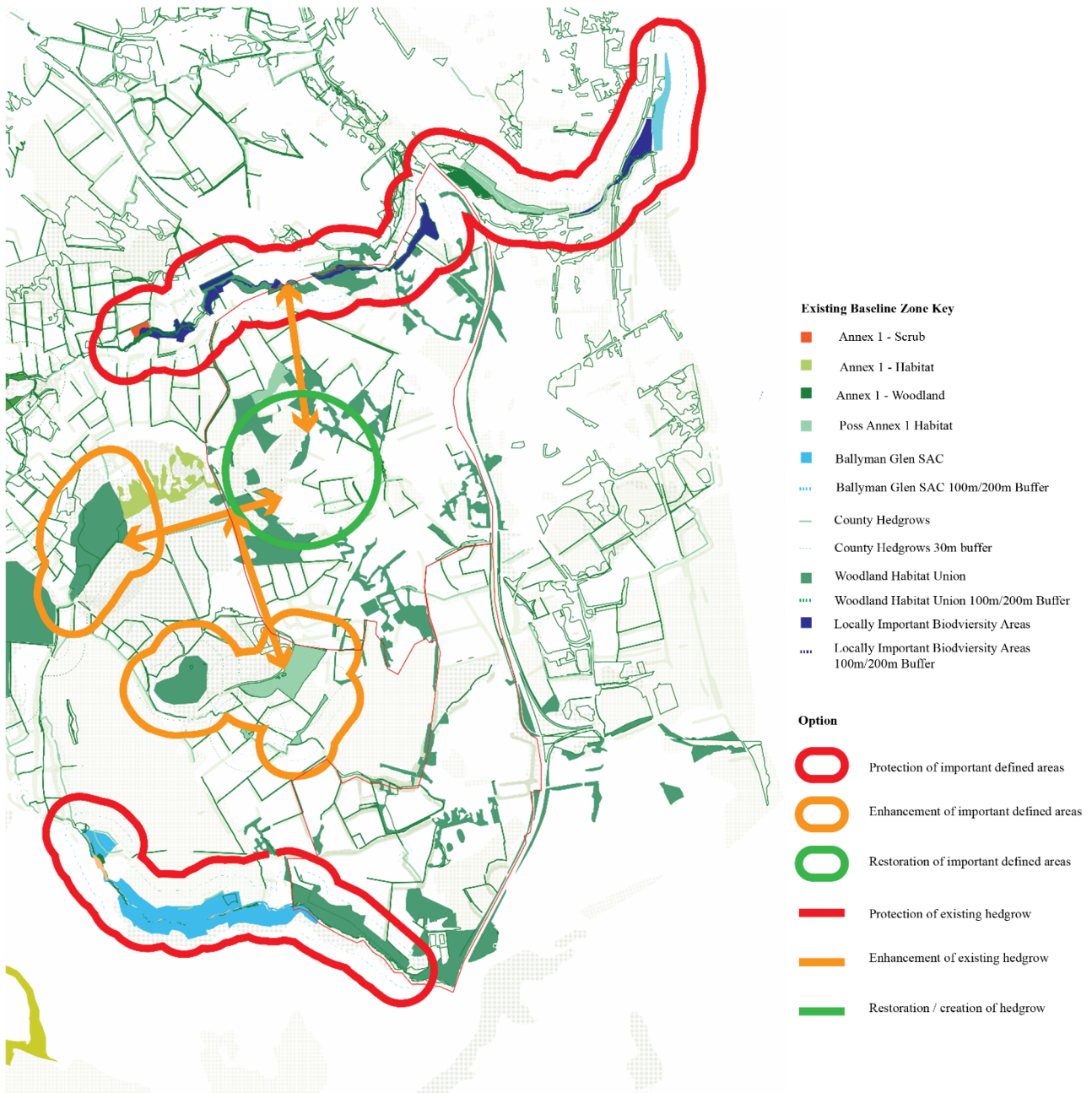


Figure 2-17 Ecology Option 2

Option 3

Option 3 is shown in Figure 2-18 below. This option would focus on enhancing connectivity along the M11, providing more linear strips of connectivity between Ballyman Glen SAC /pNHA and Loughlinstown Woods pNHA. Under this option resources would not be focused on restoring a central area of Annex I habitat but would be used to enhance existing important hedgerows to east of the area and restoring a relatively long network of continuous length of hedgerow all the way from Ballyman Glen to Loughlinstown Woods east of the M11.

This option would provide benefits for many habitats and species but would differ in the level of resource being focused on linear hedgerow/woodland restoration rather than towards restoration of Loughlinstown Woods or of other larger areas of habitat between Ballycorus and Carrickgollogan up through Rathmichael to Loughlinstown Woods, as per Option 2. This Option would provide connectivity which benefits mammals and birds but also would see benefits for invertebrate species such as common furrow bee and grey banded mining bee. The overriding benefit of this option would be enhancement of areas to the east and restoration of those linear corridors on a north-south axis.

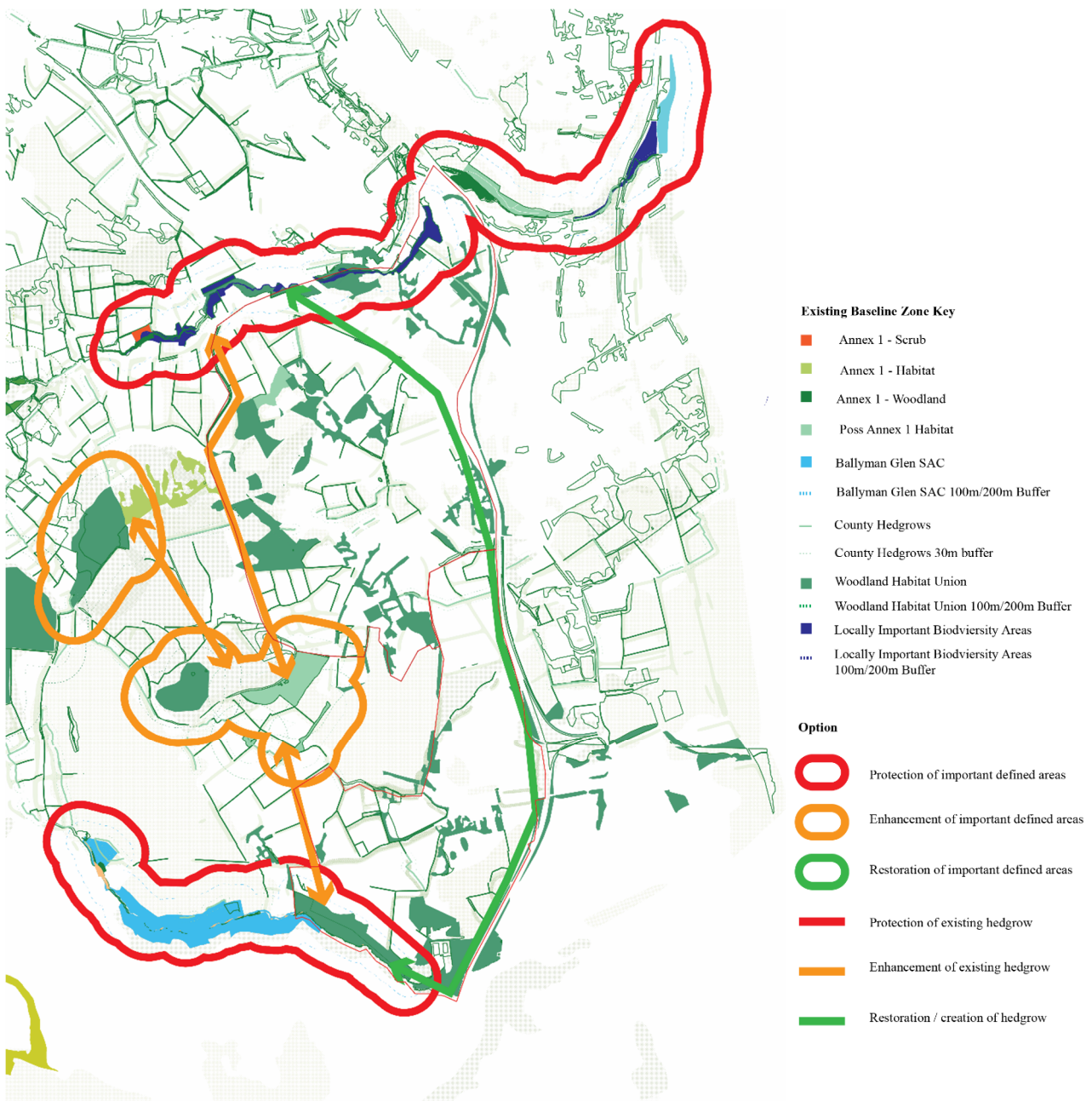


Figure 2-18 Ecology Option 3

Option 4

Option 4 is shown in Figure 2-19 below. This option differs from all other options in directing resources focusing nature conservation efforts on restoring connectivity along the east of the M11 corridor as included as part of Option 3 and restoring those areas in green, Carrickgollogan, the wooded areas adjacent to Puck's Castle Lane, and locally important biodiversity site adjacent to the Annex 1 habitat. As per Option 3, this option would help provide connectivity from north to south along the eastern spine of the site as well as provide connectivity perpendicular to 750m of county importance hedgerow and 750m of moderate importance hedgerow. Heterogeneity of good quality habitat is limited in this option but would enhance connectivity between the Ballyman Glen SAC and pNHA to the south and Loughlinstown Woods pNHA and Ticknick, Bride's Glen east and Heron Bridge LIAs to the north.

As per Option 3, this option would benefit all species including mammal and bird species and would most likely benefit grey banded mining bee and small sallow mining bee.

Resources are therefore focused on restoration of the key areas to the west and a linear strip of woodland/hedgerow habitat to the east. This may mean more benefits being realised in core areas to the east with however less connectivity to and from those areas.

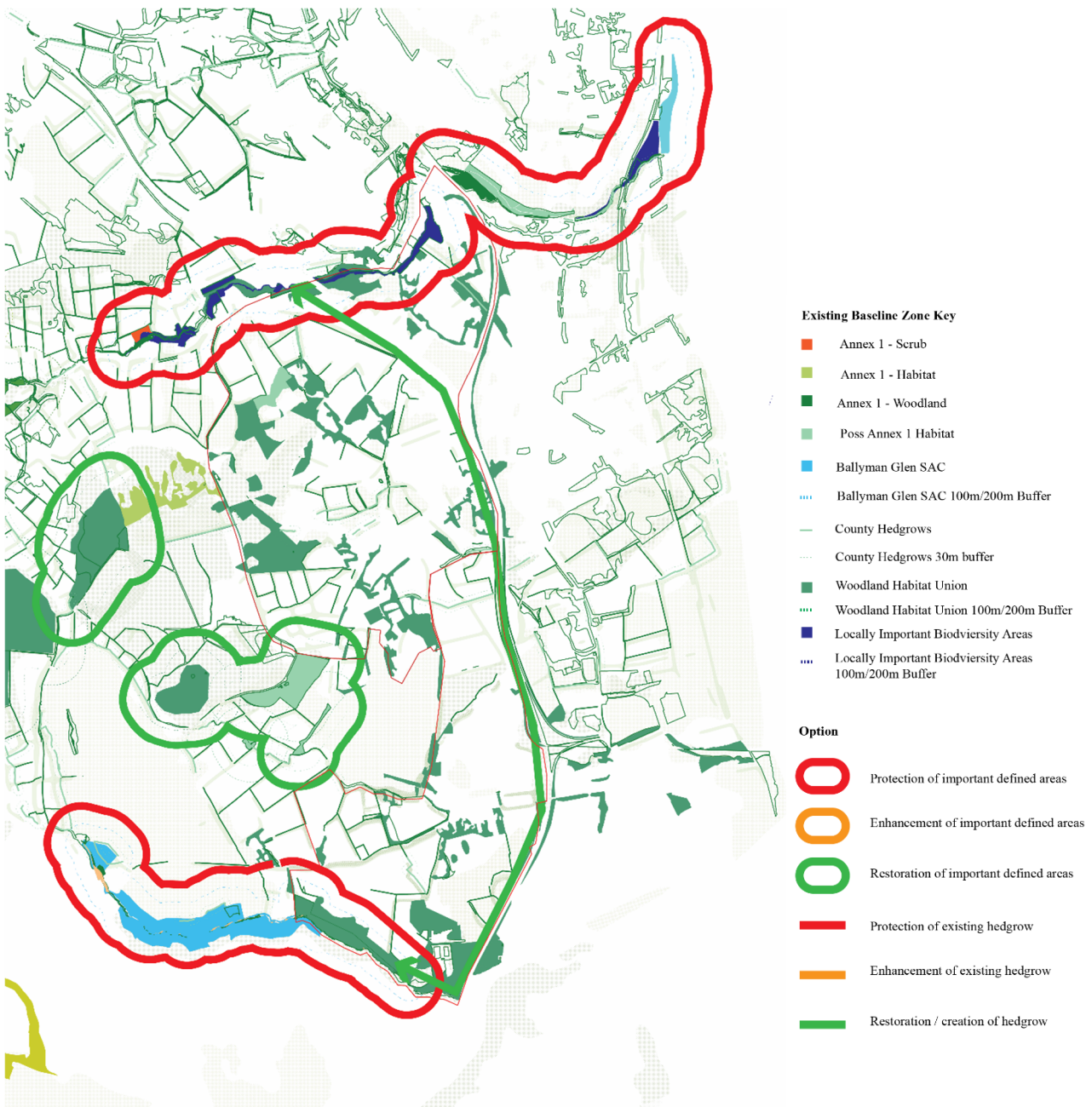


Figure 2-19 Ecology Option 4

A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the options was undertaken utilising an options scoring system to provide a holistic evaluation of habitats, considering multiple factors crucial for biodiversity conservation. The analysis sought to prioritise conservation efforts, identifying areas for habitat restoration and guide land use planning to support and enhance biodiversity.

In terms of biodiversity Option 2 is preferred and opportunities to include semi-natural habitats as part of proposed parks in a sympathetic way is encouraged. Habitats will be enhanced and restored with consequential benefits for all species including bats, birds and badgers with invertebrates also benefitting. While no direct connection is achieved regarding policy ambition to connect Shanganagh Park to Rathmichael Wood, this option may assist in improving east west connections.

However operational pressures will be considerable in this option, and this would need to be managed to protect the wider ecological interest the option could cater for, in particular taking measures to manage light pollution and dog walking. Core nature conservation areas should be clearly demarcated and realised in any proposals with restrictions placed as necessary on any activities which might have adverse effects on those nature conservation areas. For example dog walking is a highly disturbing activity for any species such as birds and mammals. In particular if skylark is seen as a target species for nesting in an area then human recreational activities including dog walking would need to be excluded.

Pursuit of Option 2 in itself should not preclude the development from also pursuing Options 1, 3 and 4, and indeed thoughtful consideration could de-risk proposals as well as provide for a more pleasant living environment. Pressures around options 1, 3 and 4 are much less substantial and embedding the options, even partially, could be synergetic to the wider project and policy ambitions. For instance, incorporation of measures for Option 1 would facilitate the extension of the Cherrywood Green Infrastructure into the plan area as well as provide a buffer between the project proposal and locally important biodiversity areas and a watercourse to the north.

Table 2-11 below outlines the proposed Green Infrastructure & Biodiversity infrastructure requirements as outlined in Table 6-1 in the Part 3 Options Development and Assessment Report and as carried forward into the Part 4 Report.

Table 2-11: Infrastructural Requirements – Green Infrastructure & Biodiversity

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Green Infrastructure & Biodiversity	Green Infrastructure & Biodiversity	<ul style="list-style-type: none"> • Protect existing green infrastructure and encourage and facilitate, the development, design and management of high quality natural and semi-natural areas • Expansion of the Rathmichael Woods Gateway Park and the Brides Glen to incorporate areas of biodiversity • The potential integration of attenuation ponds as part of the green infrastructure network

2.11 Preliminary Settlement Strategy

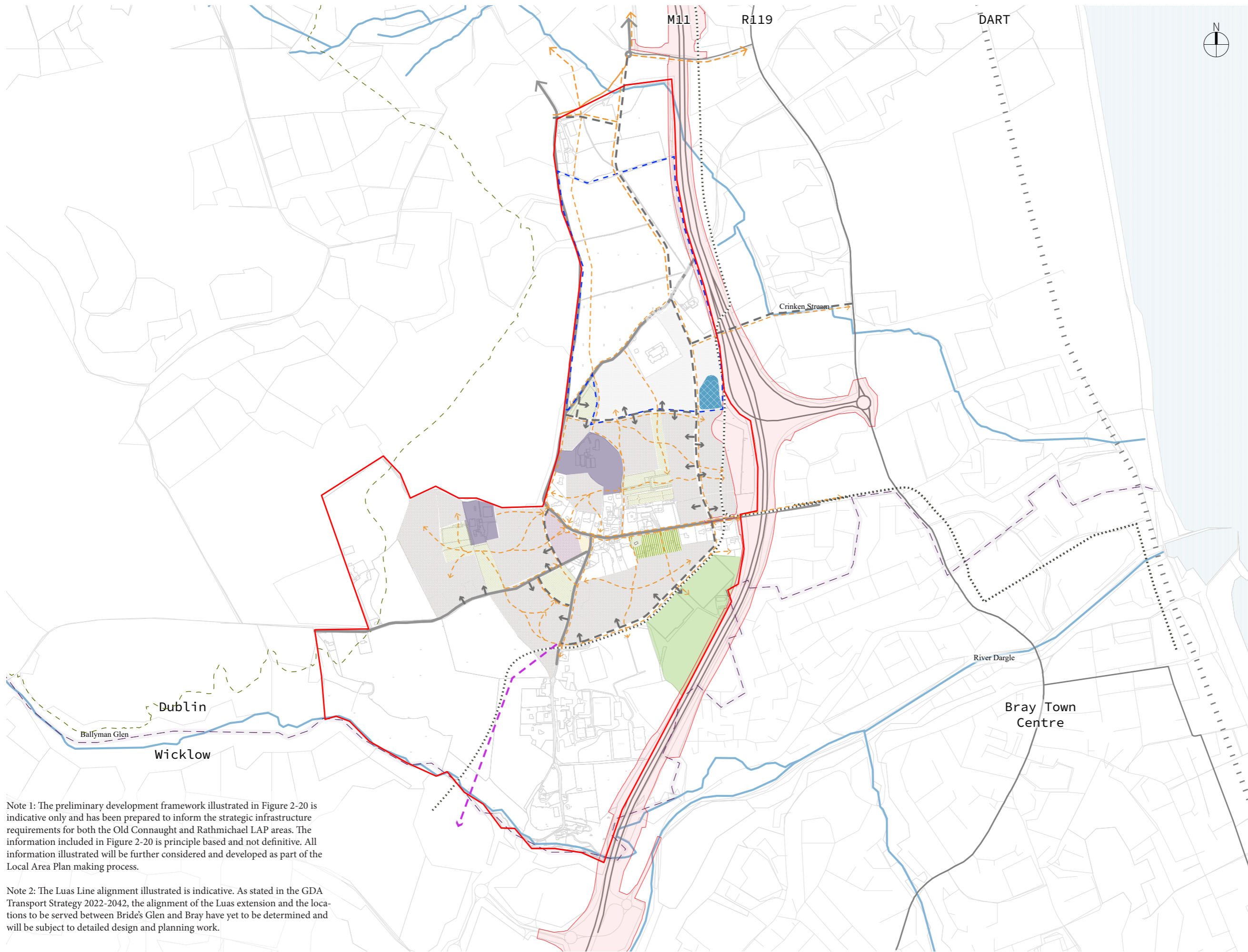
2.11.1 Overview










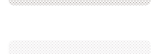







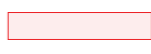




The Old Connaught and Rathmichael LAP areas exhibit distinct characteristics, each presenting unique challenges that require tailored spatial approaches to effectively provide for proper planning and sustainable development. The starting point in the development of a preliminary Settlement Strategy is to outline the context in terms of planning policy and objectives. A comprehensive assessment of relevant policy is contained in the ICAS Baseline Report.

As set out in the previous sections, the ICAS addresses a variety of infrastructural elements including green infrastructure and biodiversity, heritage and conservation, open space, parks and recreation, water and wastewater, drainage, social infrastructure - community and education facilities, utilities - power supply and telecommunications, and spatial planning and housing. The consideration of these infrastructural elements was progressed in parallel with the ABTA process to understand the transport needs for the LAP areas. Based on the analyses undertaken, existing assets and constraints and both existing and proposed infrastructural elements, were considered and integrated in order to develop a multidisciplinary infrastructure framework to support the proper planning and sustainable development of the Old Connaught and Rathmichael LAP areas. In tandem with this integrated analysis approach a high-level preliminary settlement strategy and preliminary development framework was developed for both areas. Details of the process undertaken is provided in the ICAS Part 3 Report - Options Development and Assessment and this analysis is carried forward to the Part 4 Report.

Through the above integrated analysis approach, high-level development frameworks were developed for both Old Connaught and Rathmichael and these are illustrated in Figure 2-20 and Figure 2-21.

It is highlighted that the preliminary development frameworks were prepared for the purpose of the ICAS Study and to provide a more detailed framework and evidence basis to establish and inform the strategic enabling infrastructure requirements to facilitate plan-led development in the two LAP areas. The preliminary development frameworks are principle based, preliminary in format and not definitive. It is acknowledged and recommended that the frameworks are further considered and assessed as part of the Local Area Plan making process for each respective area.

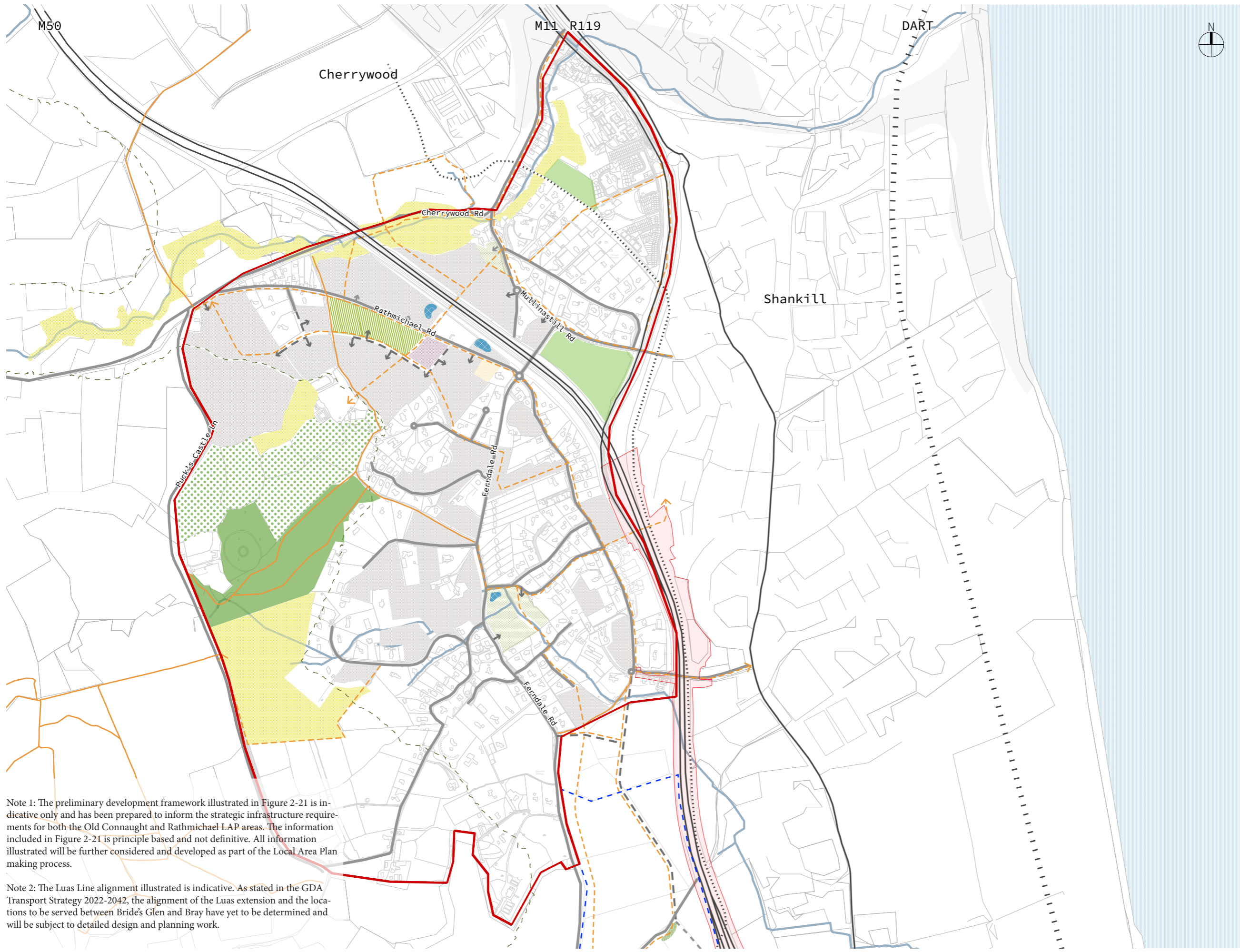


- LEGEND**
-  Existing built fabric
 -  Existing sports facility
 -  Open setting around protected structure
 -  Strategic Land Reserve (SLR)
 -  Strategic open space
 -  Proposed attenuation
 -  Mixed use neighbourhood centre
 -  Civic space
 -  Potential residential use
 -  Primary school and active park
 -  Village green
 -  Existing roads
 -  Proposed busway
 -  Proposed roads
 -  Proposed points of entry
 -  Recreation access & public right of way
 -  Proposed active travel routes
 -  Indicative LUAS line
 -  N11/M11, including Preferred Route Corridor
 -  90m contour line - SLO 92 applicable
 -  County boundary
 -  Old Connaught LAP







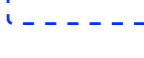













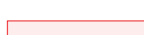
Note 1: The preliminary development framework illustrated in Figure 2-20 is indicative only and has been prepared to inform the strategic infrastructure requirements for both the Old Connaught and Rathmichael LAP areas. The information included in Figure 2-20 is principle based and not definitive. All information illustrated will be further considered and developed as part of the Local Area Plan making process.

Note 2: The Luas Line alignment illustrated is indicative. As stated in the GDA Transport Strategy 2022-2042, the alignment of the Luas extension and the locations to be served between Bride's Glen and Bray have yet to be determined and will be subject to detailed design and planning work.

Figure 2-20: Preliminary Development Framework - Old Connaught



LEGEND

-  Existing built fabric
-  Existing sports facility
-  Rathmichael Woods
-  Potential extension of Rathmichael Woods
-  Biodiversity / ecological / open space
-  Strategic Land Reserve (SLR)
-  Strategic open space
-  Proposed attenuation
-  Mixed use neighbourhood centre
-  Civic space
-  Potential residential use
-  Village green
-  Existing roads
-  Proposed roads
-  Proposed points of entry
-  Recreation access & public right of way
-  Proposed active travel routes
-  Indicative LUAS line
-  N11/M11, including Preferred Route Corridor
-  90m contour line - SLO 92 applicable
-  Rathmichael LAP

Note 1: The preliminary development framework illustrated in Figure 2-21 is indicative only and has been prepared to inform the strategic infrastructure requirements for both the Old Connaught and Rathmichael LAP areas. The information included in Figure 2-21 is principle based and not definitive. All information illustrated will be further considered and developed as part of the Local Area Plan making process.

Note 2: The Luas Line alignment illustrated is indicative. As stated in the GDA Transport Strategy 2022-2042, the alignment of the Luas extension and the locations to be served between Bride's Glen and Bray have yet to be determined and will be subject to detailed design and planning work.

Figure 2-21: Preliminary Development Framework - Rathmichael

2.12 Infrastructure Requirements

The identified infrastructure for the two LAP areas is summarised in Table 2-12 below, and represented visually in Appendix B. This includes infrastructure for all disciplines including transport, green infrastructure and biodiversity, strategic open spaces, parks and recreation, heritage and conservation, water, waste water and drainage, community facilities and education. It is noted that not all infrastructure identified in Table 2-12 may be categorised as strategic enabling infrastructure; that being infrastructure that is strategic in function, and which enables sustainable residential development. Two land parcels are within dlr ownership for which details of the infrastructural requirements are outlined in Sections 3.4.8 and 3.5.7.

Table 2-12: Infrastructure Requirements - Summary

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Transport	Active Travel	<ul style="list-style-type: none"> • Upgrade of Herenford Lane / Lehaunstown Lane • Provision of SLO 150 - Active Travel Link from Rathmichael Road to Cherrywood • Potential active travel link connecting Rathmichael and Cherrywood via the viaduct • Active travel link from Rathmichael Road via Brides Glen Road to Cherrywood • Provision of active travel link between Falls Road and Parc Na Silla Rise • Active Travel upgrades along Stonebridge Road from the roundabout junction of Ferndale Road to the junction with Dublin Road, part of which is proposed as part of the BusConnects Bray to City Centre CBC. • Bus Gates on Old Connaught Avenue • Love Lane and Love Lane Bridge • Active Travel Connection between Love Lane bridge and Fassaroe Lane • Internal Active Travel Network including north-south route parallel to Ferndale Road and an internal connection across M50, approximately 500m west of Stonebridge Road bridge • Designation of a Greenway route connecting Cherrywood to Bray which utilises a potential bridge between Cherrywood and Rathmichael Road, Rathmichael Road, Ballybride Road, a new link between Crinken Lane and Allies River Road, Old Connaught Avenue and Dublin Road. • Crinken Bridge - Active travel upgrades
	Public Transport	<ul style="list-style-type: none"> • Provision of a bus route running along Cherrywood Road, Brides Glen Road, Rathmichael Road, Ferndale Road, linking onto the proposed new North-South Link road and on to Old Connaught Avenue, with an additional route serving Fassaroe. • Accommodate for future Luas provision. • Accommodate for future provision of bus way bridge linking Fassaroe and Old Connaught across the Ballyman Glen.
	Vehicular Circulation	<ul style="list-style-type: none"> • Provision of a new road running North-South, connecting Ballybride Road/Crinken Lane with Old Connaught Avenue. • Provision of new road connecting Ferndale Road and the new North-South link Road • New development roads in the periphery of Old Connaught Village which allow for the removal of through traffic along Old Connaught Avenue • Conversion of Ballybride Road and Lordello Road to one-way circulation to allow for the provision of cycle facilities along these roads without the necessity for road widening. • Provision of a new road and bridge linking Old Connaught to the Old Dublin Road (N11 Overbridge to Dublin Road or N11/M11 Junction 4 to Junction 14 Improvement Scheme in this vicinity.) • Road upgrades

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
Green Infrastructure & Biodiversity, Open Space, Parks and Recreation, Heritage & Conservation	Green Infrastructure & Biodiversity	<ul style="list-style-type: none"> Protect existing green infrastructure and encourage and facilitate, the development, design and management of high quality natural and semi-natural areas Expansion of the Rathmichael Woods Gateway Park and the Brides Glen to incorporate areas of biodiversity The potential integration of attenuation ponds as part of the green infrastructure network
	Open Space, Parks and Recreation	<ul style="list-style-type: none"> Enhancement and extension of Rathmichael Woods as a Gateway/District Park. New Active Park at Old Connaught A range of other Strategic Open Spaces New Village Green's at both Old Connaught and Rathmichael Civic spaces/village centres. Provision of greenways network and linear green connecting spaces
	Heritage & Conservation	Protect, encourage and facilitate the development, design and management of cultural heritage assets
Water	Potable Water	<p>Old Connaught: Develop new looped watermain networks connecting to existing watermains to serve new developments.</p> <p>Rathmichael: Develop new looped watermain networks connecting to existing watermains to serve new developments.</p>
	Wastewater	<p>Old Connaught:</p> <ul style="list-style-type: none"> Develop new gravity wastewater sewer network to serve new developments and existing dwellings within the LAP area. 1 no. wastewater pumping station and associated rising main with trenchless crossing of the M11 motorway to connect the Old Connaught LAP area to the existing Uisce Éireann network to the east of the motorway. Interim temporary proposal for a wastewater rising main in the Old Connaught Avenue bridge and a potential temporary wastewater pumping station <p>Rathmichael:</p> <ul style="list-style-type: none"> Develop new gravity wastewater sewer network to serve new developments and existing dwellings within the LAP area. 1 no. wastewater pumping station and associated rising main with trenchless crossing of the M11 motorway to connect the Rathmichael LAP area to the existing Uisce Éireann network to the east of the motorway.
	Storm Water	<p>Old Connaught:</p> <ul style="list-style-type: none"> Develop new gravity stormwater drainage networks to serve new roads, public realm and development sites within the LAP area. 1 no. regional pond for stormwater attenuation and treatment. <p>Rathmichael:</p> <ul style="list-style-type: none"> Develop new gravity stormwater drainage networks to serve new roads, public realm and development sites within the LAP area. 3 no. regional ponds for stormwater attenuation and treatment.
Sustainable Communities	Community Facilities	<p>Neighbourhood level community facilities at Old Connaught.</p> <p>Neighbourhood level community facilities at Rathmichael.</p>
	Education Facilities	<p>Old Connaught:</p> <ul style="list-style-type: none"> 1 or more primary schools. <p>Rathmichael:</p> <ul style="list-style-type: none"> 1 or more primary schools. <p>ICAS area:</p> <ul style="list-style-type: none"> Potential provision of a post primary school

Infrastructure / Spatial Element	Sub-Element	Infrastructure Requirements
ESB and Telecommunication	ESB	1 no. 38kV substation
	Telecommunication	New fibre cabinet capacity
Energy and Waste	Energy	Explore potential for district heating, renewable energy sources and distribution, geothermal options, heat transfer and climate change heat resilience.
	Waste (Circular Economy)	Reuse and consideration of waste management facilities to serve sustainable development.

Note: Appendix G of the Part 3 - Options Development and Assessment Report provides a full list and descriptions of the transport measures proposed as part of the preferred scenario.