

# feasairoe

Sustainable **Urban Extension** to Bray, County Wicklow

8th October 2010



---

This plan was prepared by Loci on behalf of Cosgrave Property Developments. Loci acknowledges the assistance of the following consultants in the preparation of the report:

Atkins - Infrastructure and roads  
James Toomey Architects  
MCA - Landscape architects  
MCORM Architects  
PM Group - Utilities  
RPS Planning and Environment - Planning consultants  
Scott Tallon Walker Architects  
WSP - Traffic consultants

Loci would also like to acknowledge the assistance of Wicklow County Council, Forward Planning Department in the preparation of the plan.

## 1. Strategic Planning and Development Context

- 1.1 Introduction
- 1.2 Purpose
- 1.3 Consultation
- 1.4 Masterplan area
- 1.5 Strategic planning context
- 1.6 The Bray Environs Local Area Plan, 2009
- 1.7 Strategic development context
  - 1.7.1 *The strategic extension of the Bray urban area*
  - 1.7.2 *Landscape and heritage*
  - 1.7.3 *Urban structure*
  - 1.7.4 *Movement and access*
  - 1.7.5 *Residential*
  - 1.7.6 *Employment*
- 1.8 Fassaroe development context
  - 1.8.1 *Relevant planning history*
  - 1.8.2 *Landscape character*
  - 1.8.3 *Environment and heritage*
  - 1.8.4 *Transport and Access*
  - 1.8.5 *Services and infrastructure*

## 2. Masterplan Strategic Development Concepts

- 2.1 Introduction
- 2.2 Vision
- 2.3 Goals
- 2.4 Development strategy
  - 2.4.1 *Place and hierarchy*
  - 2.4.2 *Urban structure*
  - 2.4.3 *Land use and functions*
  - 2.4.4 *Landscape, heritage, recreation and amenity*
  - 2.4.5 *Movement and access*
  - 2.4.6 *Community development*
  - 2.4.7 *Energy, waste and infrastructure*

## 3. Masterplan Urban Design Framework and Guidelines

- 3.1 Introduction
- 3.2 Urban structure
- 3.3 Landscape framework
  - 3.3.1 *Landscape functions*
  - 3.3.2 *Typology of open spaces*
  - 3.3.3 *Landscape structure*
- 3.4 Guidelines for development
  - 3.4.1 *Streets and open spaces*
  - 3.4.2 *Private domain*
  - 3.4.3 *Parking*
  - 3.4.4 *Key infrastructure*
- 3.5 Phasing
  - 3.5.1 *Introduction*
  - 3.5.2 *Development capacity*
- 3.6 Next steps and funding
  - 3.6.1 *Next steps*
  - 3.6.2 *Environmental study/ assessments*
  - 3.6.3 *Funding*

# 1 Strategic Planning and Development Context

## 1.1 Introduction

Bray is designated in the Regional Planning Guidelines for the Greater Dublin Area, 2004-2016 and the Wicklow County Development Plan, 2004-2010 as a Metropolitan Consolidation Town, to accommodate significant population growth.

The growth of Bray, however, is constrained by a lack of available land. Accordingly, to achieve its designated status, the majority of the future growth of the town will have to be accommodated in the Bray Environs area.

Fassaroe is considered the only location within the Bray Environs within County Wicklow suitable to accommodate significant new population and employment opportunities. Wicklow County Council has rezoned the area under the Bray Environs Local Area Plan (LAP), 2009 to facilitate growth; however it recognises that the preparation of a masterplan is imperative to implement this identified growth.

## 1.2 Purpose

This masterplan has been prepared to progress the requirements and vision of the Bray Environs LAP, 2009. Given the timescale for realisation of Fassaroe, the extensive plan area and the need to provide for flexible outcomes over time, the masterplan focusses on robust strategies and structures for the plan area as a whole.

The purpose of the masterplan is threefold:

- :: To provide a basis for consensus among key stakeholders.
- :: To provide a robust and workable framework for development of the lands as a sustainable urban extension to Bray.
- :: To form the basis for pre-planning consultations and the preparation of applications for planning permission.

In addition, a lower tier of sector frameworks will be prepared by landowners, following the masterplan process to guide and coordinate the development management stage. These frameworks will be more detailed and will be guided by the masterplan. They will reflect existing land ownership patterns and the preferred phasing.

## 1.3 Consultation

The Bray Environs LAP, 2009 has been the subject of statutory public consultation procedures. Further public participation will take place through the statutory development management process. Focussed stakeholder consultation was carried out as part of the masterplan preparation. This included key officers of the Local Authorities, relevant statutory undertakers and the main landowners. The key issues arising from urban analysis, vision and settlement strategy were considered at project workshops.

## 1.4 Masterplan area

The Fassaroe development area covers approximately 156 hectares (385 acres) to the west of the existing built-up area of Bray.

The Fassaroe lands are bounded by the N11 to the east, Ballyman Glen to the north, the Cookstown River to the south and by field boundaries to the west. The existing edge of the built up area of Bray environs is located immediately to the east of the N11.

There are two groups of private dwellings: a row of houses on the southern side of Berryfield Lane, near the centre of the lands, and a cluster of houses accessed from Thornhill Road, adjacent to the north-eastern boundary. There is a further cluster of detached houses at and adjacent to the south-eastern boundary.

While a significant portion of the lands have been extensively quarried for sand and gravel, most of the lands remain in agricultural use. Part of the area, adjacent to the northern boundary of the lands, functioned as a landfill, but has now been returned to agricultural use.

The lands are within the administrative area of Wicklow County Council. The northern boundary is shared with Dun Laoghaire-Rathdown County Council.

Enniskerry is located nearby to the south west of the lands across open fields. Powerscourt Demesne is located c. 2km to the southwest.

Dun Laoghaire Golf Club is located on elevated lands to the north west of the site, accessed from Ballyman Road.

The masterplan area comprises the northwestern portion of the wider Bray Environs within County Wicklow, as shown in the strategic context diagram opposite.

*The plan provides a robust and connected development framework for the sustainable extension of Bray, with employment, high quality housing, local community infrastructure and a complementary range of services intended to serve Bray's existing and future residents.*



Fassaroe site and strategic context with indicative line of wider Bray Environs area shown dashed



Fassaroe Master plan area (ca. 156ha) and surrounding context



## 1.5 Strategic planning context

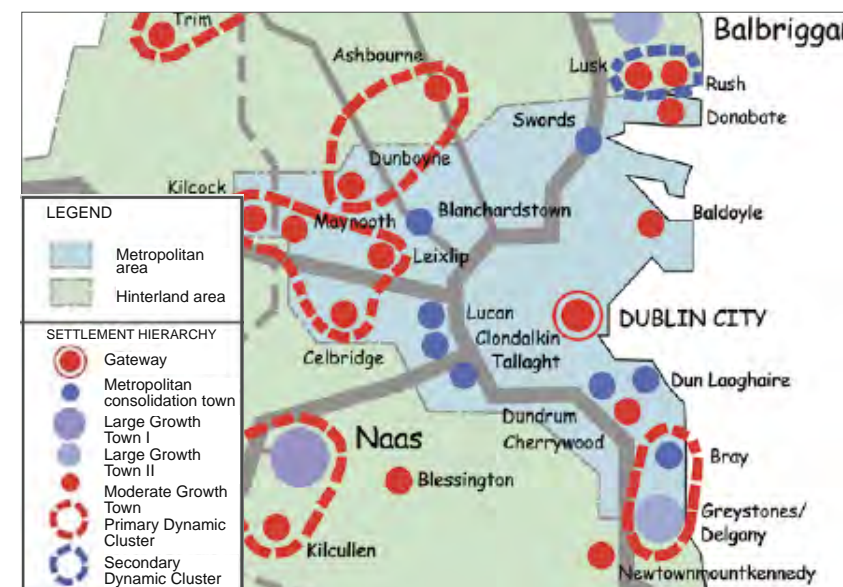
### National Spatial Strategy

The National Spatial Strategy (NSS), 2002-2020 aims, inter alia, to achieve balanced economic and demographic growth around the major gateway cities of Dublin, Cork, Limerick/Shannon and Waterford. A key objective of the NSS is to enhance the competitiveness of the Greater Dublin Area (GDA) so that it continues to perform at the international level as a driver of national development. This entails physically consolidating the growth of the metropolitan area, i.e. Dublin City and suburbs and, at the same time, concentrating development in the hinterland of the metropolitan area in strategically placed, strong and dynamic urban centres

### Regional Planning Guidelines for the Greater Dublin Area

Bray is designated in the Regional Planning Guidelines for the Greater Dublin Area, 2004-2016 as a Metropolitan Consolidation Town with an indicative population range of between 40,000 and 100,000. Metropolitan Consolidation Towns are highlighted as attractors of major investment served by high quality public transport links and are central to the strategy of consolidating development in the Metropolitan Area.

The Guidelines aim to consolidate the urban form of settlements by locating quality employment and residential developments of various sizes in proximity to each other in order to make effective use of suitable lands, reduce the need to travel and reduce dependence on the private car.



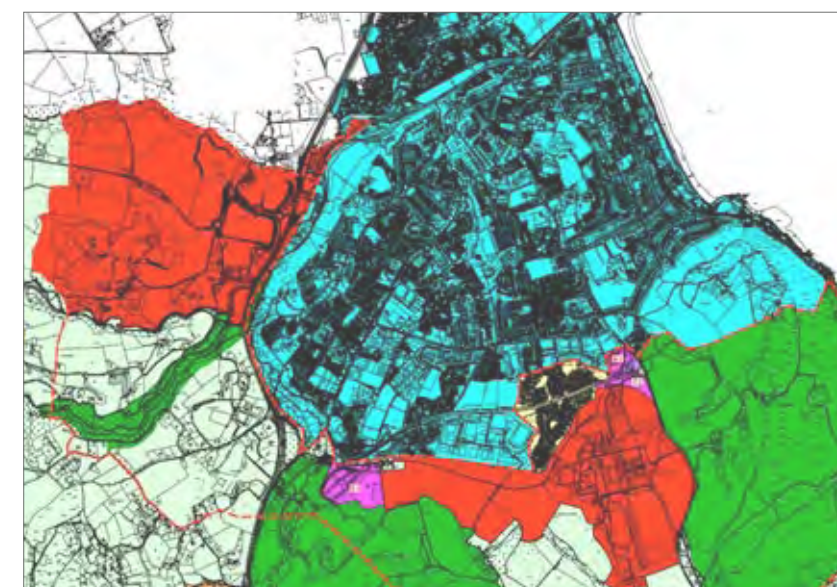
Extract from the current Regional Planning Guidelines for the Greater Dublin Area

The current consultation Draft Regional Planning Guidelines for the Greater Dublin Area, 2010-2022 specifically identifies Fassaroe as part of the Bray Metropolitan Consolidation Area.

### Wicklow County Development Plan, 2004-2010

The role of Bray in the Regional Planning Guidelines is reflected in the Wicklow County Development Plan, 2004-2010 through its placing at the top of the county settlement hierarchy and its target population of 40,000 by 2016. Provision is made in the County Development Plan for Bray to reach critical population mass to ensure the delivery of community, employment and transport facilities.

The Wicklow County Development Plan also identifies the lack of available development land within Bray Town and on this basis provides that the majority of future development necessary for it to fulfil its regional role will take place within the Environs. A study of the Bray Environs undertaken under the County Development Plan concluded that Fassaroe was the most suited to accommodating future development within the Environs. Furthermore, the combination of its accessibility and the planned extension of Luas line B2 to Bray and Fassaroe was considered to afford the area a strategic advantage.



Extract from Wicklow County Council Development Plan 2004-2010 showing the Bray Environs Specific Objectives zone in red and the Bray Town Council area in blue

### North Bray and Environs Land Use and Transportation Strategy (LUTS), 2006

The objective of the LUTS was to ensure that the study area can cater for expected future levels of development as proposed throughout the town and County Development Plans, by investigating a range of policies, infrastructural measures, and land use strategies. The study area encompassed Fassaroe, Woodbrook, Rathmichael, Old Connaught, North Bray and the N11 as far as the junction with the Bray Southern Cross Road. The LUTS study area overlaps with that of the Bray Environs LAP at Fassaroe (see Section 1.6).

The LUTS identified Fassaroe as having the greatest potential within the Bray Environs to deliver the necessary additional capacity for Bray to grow in the future. The Study recommended the revision of the then low density zoning to provide for a higher density mixed use development scenario supported by high quality public transport services.

The LUTS recommended a range of measures to integrate and enhance linkages between Bray and its Western Environs, and ensure high quality connections between the town centre and future development lands. These measures include the upgrade of the Wilford Interchange, the connection of the upgraded Wilford Interchange with a new north-south link road parallel to the N11 through Old Connaught and on to Fassaroe, and the provision of rapid transit public transport connections such as Luas and bus. Complementary infrastructure recommended include a Park and Ride facility, pedestrian/cycleways and supporting road connections.



Extract from LUTS showing roads strategy



# 1 Strategic Planning and Development Context

## 1.6 The Bray Environs Local Area Plan, 2009

The purpose of the Bray Environs LAP, 2009 is to provide a framework within which the settlement of Bray can expand to fulfil its role as a Metropolitan Consolidation Town as designated in the Regional Planning Guidelines for the Greater Dublin Area, 2004-2016. The Environs were identified as the main location for future growth due to the limited availability of development land within the Town Council functional area.

**The Bray Environs Local Area Plan will seek to:**

- Provide a coherent and robust framework for the extension of Bray.
- Enhance the economic, social and environmental offer of Bray and its environs.
- Provide the framework to enhance the employment opportunities of the greater Bray area and north Wicklow.
- Provide direction and guidance for the integration of a range of new uses.
- Address the deficiency in open space and recreation provision in the town.
- Strengthen the spatial linkages between Bray and its environs.
- Provide an integrated approach to land use and transportation.
- Provide guidance for the integration of the natural and built environment, and
- Provide an implementation strategy.

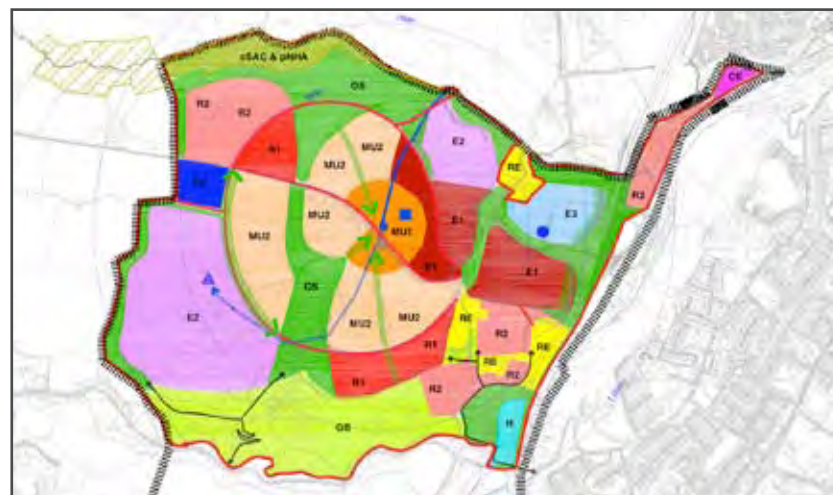
Fassaroe is identified as the main location for development in the LAP area. The LAP provides for the implementation of the plan on a phased basis in accordance with a masterplanning process. The LAP states that the form of the proposed development in Fassaroe will be informed by existing development, the influence of the sensitive landscape and by the proposed alignment of the Luas line.

The form of the settlement proposal that has been adopted consists of a central, mixed use core of high density development of primarily employment use, with outer high density mixed use zones of primarily residential use and high density employment zones radiating out from the core. Medium and lower density residential and employment zones are located towards the edge of the area. A network of roads and linear open spaces intersect throughout the area, and serve to link Fassaroe with the existing urban area of Bray, and the existing environs area, with the Luas Line central to the system of movement and accessibility.

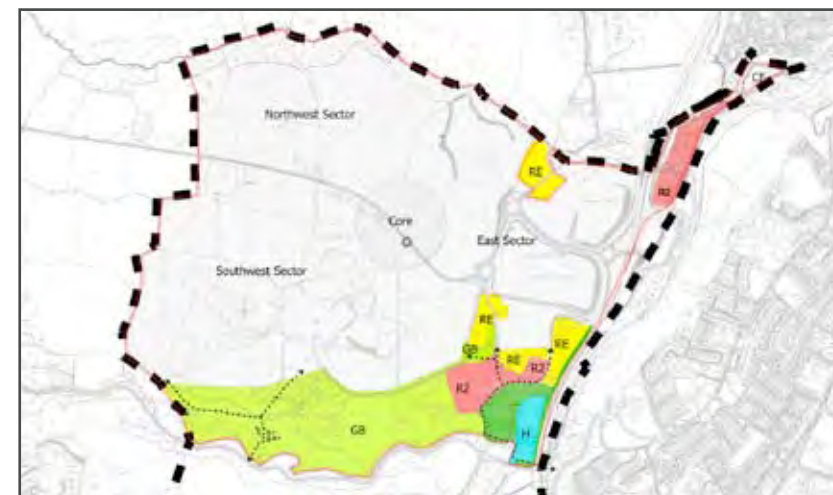
The zones and sectors indicated in the LAP are stated to be concept zones and are not intended to be interpreted rigidly. A degree of flexibility is expected in terms of land uses on either side of the boundaries between zones including the flexibility of the masterplan sector boundaries and within sectors.



*The masterplan is a requirement of the Bray Environs Local Area Plan adopted by Wicklow County Council in 2009, and represents a key first step in the implementation of the LAP.*



Map 4 Bray Environs Local Area Plan 2009-2015: Fassaroe indicative land use zoning



Map 6 Bray Environs Local Area Plan 2009-2015: Indicative Master plan Sectors



Map 3 Bray Environs LAP, 2009-2015: LAP Environs Boundary with development centres



## 1.7 Strategic development context

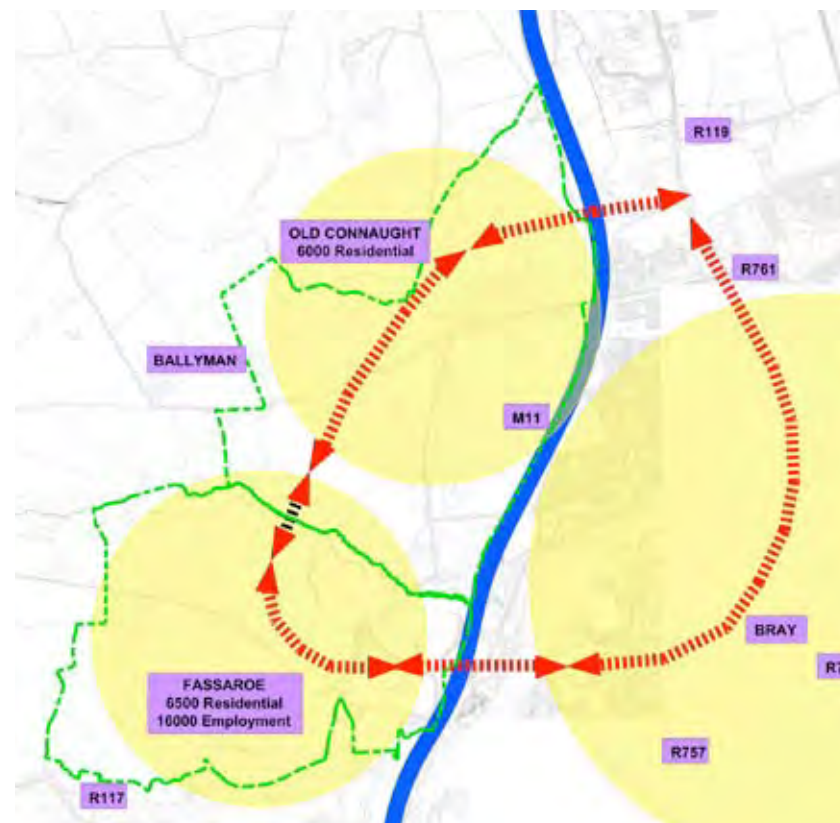
As noted in Section 1.6 above, the Bray Environs Local Area Plan seeks to provide a coherent and robust framework for the extension of Bray, within County Wicklow. In this context, it is essential at the outset that the planned development of Fassaroe is identified and understood in its wider strategic development context as an integral part of Bray and Environs.

This section sets out the existing strategic development context for Bray and Environs. At the outset it is noted that the Environs area of Bray is located within both Counties Wicklow and Dun Laoghaire-Rathdown.

### 1.7.1 The strategic extension of the Bray urban area

As has been already noted, the planned growth of Bray, in accordance with current County and Regional Plan objectives, is currently constrained by the lack of available development land within the existing urban area. The identified objective of the Bray Environs LAP in this regard is to provide a coherent and robust framework for the sustainable extension of Bray into its environs.

The overall Bray Environs include Fassaroe and the southern environs of Bray, within County Wicklow, as well as Woodbrook/Shanganagh and Old Connaught, within the administrative area of Dun Laoghaire-Rathdown. Local Area Plans (LAPs) have been, or are in the process of being, prepared for these Environs areas, including the identification of key development areas within the Bray Environs where such extension of the urban area may most appropriately occur. The sustainable strategic extension of Bray into its environs must ensure appropriate connectivity and linkage between the identified existing and planned development centres of the town. It is in this context that Fassaroe must be understood as part of the wider planned strategic expansion of Bray.



Strategic movement concept for the urban extension of Bray. (Atkins Consulting Engineers)



Context map showing Local Area Plan (LAP) boundaries



# 1 Strategic Planning and Development Context

## 1.7.2 Landscape and heritage

Open space, both public and private, is an essential amenity in the urban environment, as it both provides for recreational activities, and ensures a visual relief in built up areas. The adequate distribution of a range of types and sizes of open space is a key determinant in the quality of the resulting urban living environment.

Formal spaces may provide for active recreation including organised sport (e.g. sports grounds and golf courses), and other recreational activities (e.g. the People's Park). In this regard, Bray and Environs is relatively well served by private open space facilities such as golf courses, sports grounds, and indoor and outdoor sports facilities. However, there is a considered deficiency in provision of active public open space facilities, such as public sports grounds.

In addition, notwithstanding their general extent and scale, the provision and distribution of public amenity areas is somewhat restricted, essentially comprising the linear promenade and beach, and the hillside of Bray Head. The People's Park comprises the only larger-scale formal park facility in the town.

Such deficiency is identified in the Bray Environs LAP, which seeks to address the deficiency in open space and recreation provision in the town. Specifically, it is a stated objective of the LAP to provide a district park and a network of linear parks within Fassaroe, consisting of both active and passive open space, to provide for the recreational amenity requirements of the Fassaroe area, of Bray Town, and of the wider Bray Environs.



Open space provision as existing



### 1.7.3 Urban structure

The urban structure of the existing Bray area is relatively well defined, with the established built-up area centred around a distinct commercial and civic core – primarily focused upon Main Street. The town centre includes both retail activity, but also core civic uses, including local Council offices, hotel, theatre and cinema. Recent Permitted development at the former Bray Golf Club lands, located to the north of the existing Town Centre, will provide for the sustainable expansion of the Town Centre, thereby ensuring its renewed vitality and viability.

Outside the Town Centre area, the various existing districts and neighbourhoods of Bray are served by lower hierarchy district and neighbourhood-scale retail and civic centres. These include the shopping centres at Little Bray, the Vevay Road and Boghall Road. In terms of function and urban structure, these are subservient to the Town Centre, essentially providing appropriate and adequate convenience retail and community services for the residents and employees of these areas.

Other community facilities, such as primary and secondary schools, and places of worship are generally spread throughout the existing built-up areas which they serve. In contrast however, the under-developed part of the Environs of Bray do not currently accommodate any significant extent of associated community infrastructure. Notable exceptions to this are St. Gerard's School on Thornhill Road, within the area designated for the Old Connaught Local Area Plan, and St. Brendan's School on the Old Dublin Road, within the area of the Woodbrook Local Area Plan.



Community centres as existing





# 1 Strategic Planning and Development Context

## 1.7.4 Movement and access

Road and public transport connections currently serving Bray cater for a predominantly north-south pattern of travel and have had a significant bearing on the growth of the town. Such connections, including the M11, Main Street and the Dublin Road (which carries a regular public bus service), and the DART and mainline rail line, reflect the proximity and influence of South Dublin, and Dublin City as currently the primary regional employment, retail and services centres.

The predominance of north-south strategic linkages serving Bray contrast significantly with the comparative deficiency of east-west linkages between Bray and its environs. In this regard, the existing corridor of the M11/N11 currently constitutes an obstacle to movement and access, with only three such links currently existing: Old Connaught Avenue to the north of the town, Dargle Road and the Fassaroe Interchange at the centre of the town, and the Southern Cross and Kilcrone Lane at the southern end of the town.

Other east-west linkages lead directly from the existing built-up area of Bray westwards but only to the M11/N11 corridor.

In strategic terms, therefore, it is the case that the development of the Environs of Bray is currently significantly constrained by the current deficiency in key strategic east-west linkages between the Environs area and the existing built-up area of Bray. In this context, it is the aim of the Bray Environs LAP to support improvements to local traffic and transport infrastructure which will strengthen spatial linkages between the LAP area and Bray Town Centre, as well as improving connectivity with the Greater Dublin Area. It is also a key objective of the LAP in this regard to provide an integrated approach to land use and transportation.

It is currently proposed to extend Luas from Cherrywood to both Fassaroe and Bray Town Centre, as provided for in the North Bray and Environs LUTS. Whilst this will facilitate a reinforcement of north-south movement of public transport, it equally will provide a new east-west public transport alternative between Fassaroe and the Bray Town Centre area, via Old Connaught and the Old Dublin Road.



Movement and access as existing





## 1.7.5 Residential

The urban structure of Bray includes a significant quantum of residential land use (and resulting residential population) surrounding the Town Centre, though all primarily contained on the eastern side of the M11/N11 corridor. With the exception of the former Bray Golf Club lands, which are planned to comprise a new mixed use extension of the Town Centre, the future growth of a residential population in Bray is significantly constrained by lack of available development land within the existing Bray urban area. This is identified in the Bray Environs LAP, 2009 which notes that the existing urban area of Bray is unable to meet the requirements for the proper planning and sustainable development of its area.

Notwithstanding the recent upgrades of infrastructure, there remains, within the Environs of Bray, a deficiency on the western side of the M11/N11 corridor, and to the north of the existing Bray urban area, that has meant that these areas have hitherto not been capable of facilitating any significant quantum of new residential development to meet current and forecasted future demand.

It is therefore concluded that there is insufficient capacity in the existing built-up area of the town to meet future housing demand, and to reach the key strategic population targets set out in the Regional Planning Guidelines.



Residential development areas as existing

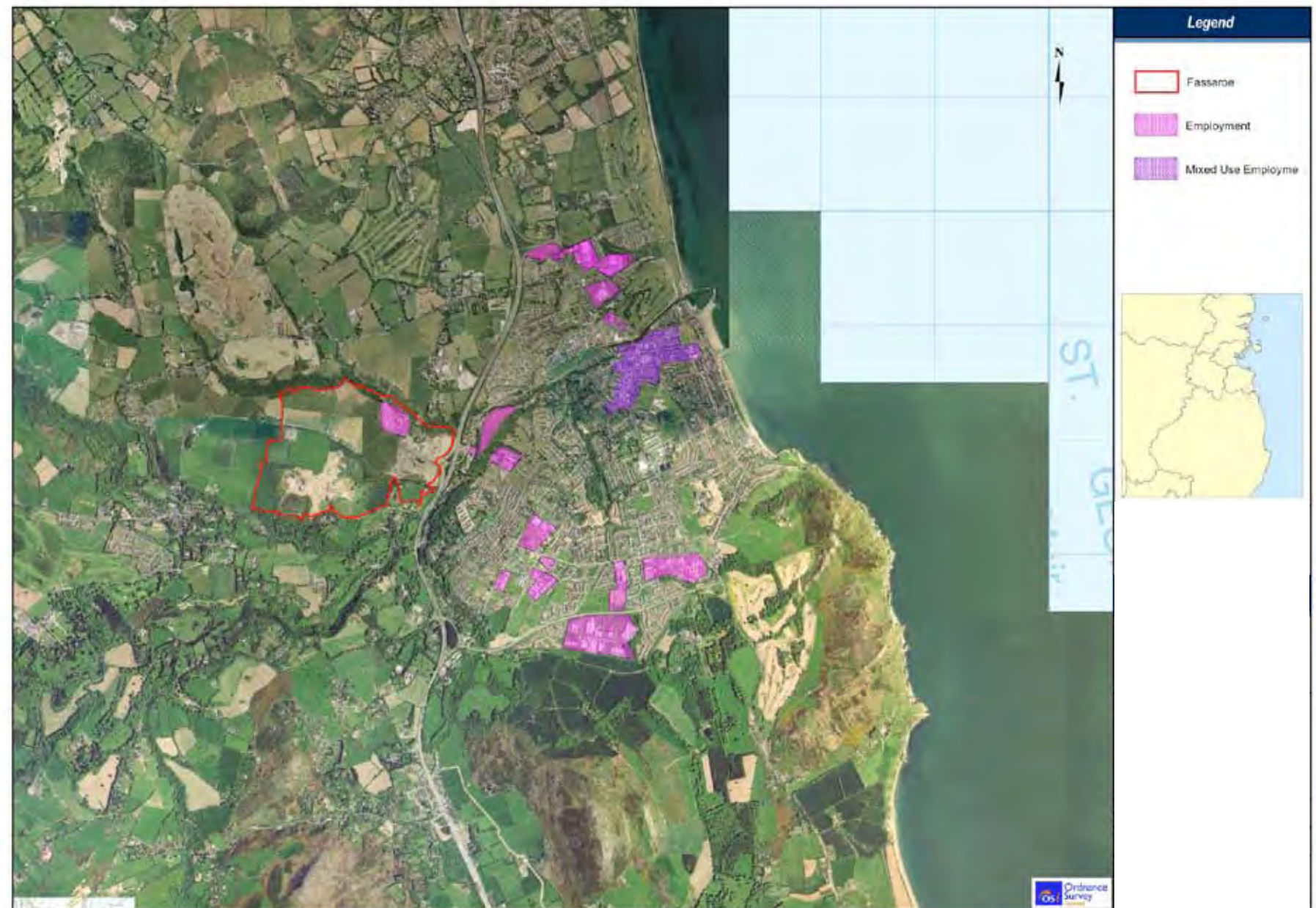


# 1 Strategic Planning and Development Context

## 1.7.6 Employment

As with the issue of residential land use, the existing deficiency in available development land in Bray severely limits its capacity to provide for new employment development. This has resulted in the town becoming progressively reliant on the employment opportunities offered by larger employment landbanks within South Dublin, and within Dublin City Centre, to the detriment of its self-sustainability.

The imbalance in the flow of working commuters has undermined the vitality of the town and in the process weakened its identity within the metropolitan area as a key employment centre. Making available significant additional lands for employment purposes is essential to correcting this trend. It is thus a stated objective of the Bray Environs LAP to provide the framework to enhance the employment opportunities of the greater Bray area and North Wicklow.



Employment areas as existing



## 1.8 Fassaroe development context

The County Development Plan projects a population for Bray and Environs of 32,012 in 2010 and 40,000 by 2016. The Bray Environs LAP anticipates that 6,660 persons may be accommodated in the Fassaroe area, based on assumptions concerning density and household occupancy rates. Approximately 16,000 employment opportunities may be provided.

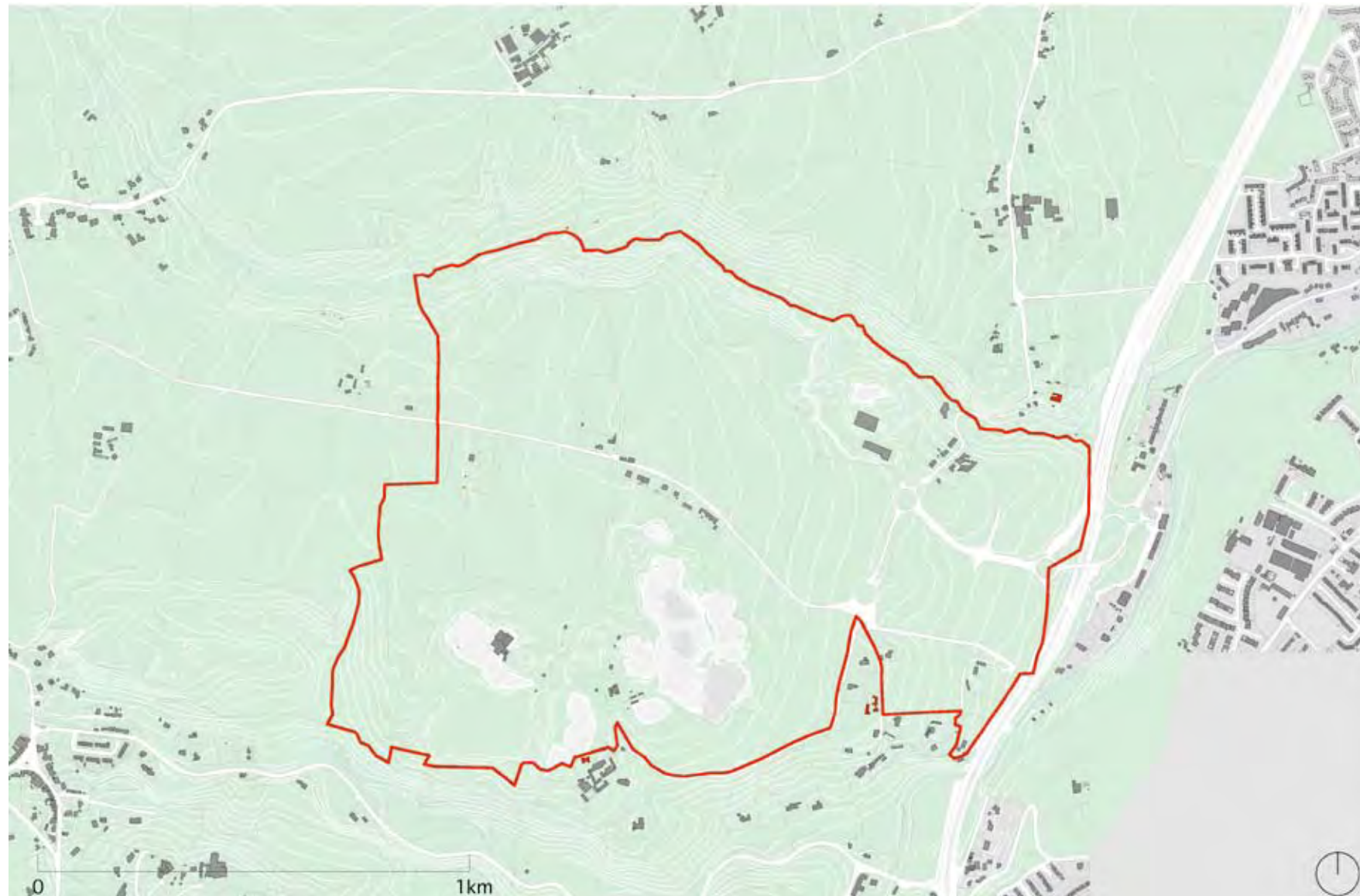
### 1.8.1 Relevant planning history

*An Bord Pleanála Ref.: PL27.201368 (WCC: 02/6564)*

An Bord Pleanála in 2003 upheld the decision of Wicklow County Council to grant permission for the construction of twenty warehousing units in 5 single-storey blocks, office accommodation on two floors and associated works on land adjacent to the Fassaroe Interchange. This permission was subsequently extended under Wicklow County Council Ref.: 08/801.

*Wicklow County Council Ref.: 07/2236*

Wicklow County Council granted permission in April, 2008 for development at Berryfield Lane for new playing pitches and ancillary facilities comprising: 3 no. playing pitches (1 no. main pitch, 1 no. all weather pitch and 1 no. practice pitch), a clubhouse, floodlights serving the all weather pitch, 29 no. car parking spaces plus 1 no. bus space and associated works.



Fassaroe Master plan site area and existing settlement



View north towards Carrickgollogan



# 1 Strategic Planning and Development Context

## 1.8.2 Landscape character

The character of the area is predominantly rural, with varied and some steeply sloping topography, generally rising from east to west.

The site occurs within a panoramic landscape with extensive and distinctive views in all directions including:

- North West** to the valley of Glencullen River and the uplands of south Dublin Prince William's Seat and Knocknagun
- West** to Glenree and the valley of Glenree River
- South West** to Wicklow Mountains Tonduff, Maulin, War Hill and Djouce
- South** to Great Sugar Loaf
- South East** to Little Sugar Loaf extending eastwards to Bray Head and the Irish Sea
- North** to Carrickgollogan and forested lands in the vicinity of the Scalp
- North East** to the coast with intervening urban development

The prominences and notably the Wicklow Mountains and the Great Sugar Loaf function as 'borrowed' landscape for the lands.

The lands ascend steeply from Fassaroe Lane to form an approximate plateau at c. 100m OD and then descend along the northwestern and southwestern boundary of the site to heights ranging from approximately 60-80m OD.

The fields are medium sized and bounded by thorn hedges with very occasional low tree growth, primarily Ash. Agriculture comprises a mixture of pasture and arable.

Lands on the south side of Berryfield Lane have been extensively quarried and are significantly below grade with widespread mounding around quarry voids. Some natural regeneration of trees and hedgerow species has occurred on mounded areas. One of the quarried voids has a small lake.

The northern boundary of the lands is formed by the valley of the Ballyman River. Both the north and south slopes of the valley descend steeply to the valley floor. The area is extensively covered with a rich flora of Sycamore, Ash, Thorn and shrubs species including gorse. The river bank is accessible and the valley itself has the potential to form an attractive amenity for the proposed developments.

The following designations in the Wicklow County Development Plan 2004-2010 relate to the lands:

### Area of Outstanding Natural Beauty

- :: The central mountain area including the Wicklow Mountain National Park;
- :: The Great and Little Sugar Loaf and Bray Head;
- :: The Glenree and Glencullen River valleys; and
- :: The entire coastal area of the County.

It is the policy of the Council (Policy HL1) to ensure that the development of Wicklow takes full account of the Designated landscape categories and the protection of their amenities and assets, including:

- :: Views of Special Amenity or Special Interest: Schedule 10.6;
- :: View of Bray Head and the Sugar Loaf from Curtlestown/Glenree;
- :: View of the Great and Little Sugar Loaf from Ballydonagh/Coolnaskeagh;
- :: View from R117 at The Scalp of the Sugarloaf Mountains and Enniskerry;
- :: Prospects of Special Amenity Value or Special Interest: Schedule 10.7; and
- :: Prospect of Bray, Powerscourt and Enniskerry from Rocky Valley Drive.

The site is not visible from Powerscourt Gardens. The latter is at a considerably lower elevation and is largely enclosed by mature trees.

Amenity views identified in the Dun Laoghaire-Rathdown County Development Plan 2010-2016 that overlook the lands at Fassaroe are shown below left. Development at later stages will need to ensure that the potential impact on these and other relevant views is considered and addressed.

*There are strong visual connections between Fassaroe and Bray, and between Fassaroe and the surrounding hills.*



Prominent views to and from Fassaroe



Extract from Dun Laoghaire-Rathdown County Development Plan 2010-2016 indicating amenity views south from Ballyman Road towards the Fassaroe lands



View towards Bray town and the sea overlooking northern portion of site from Maulin

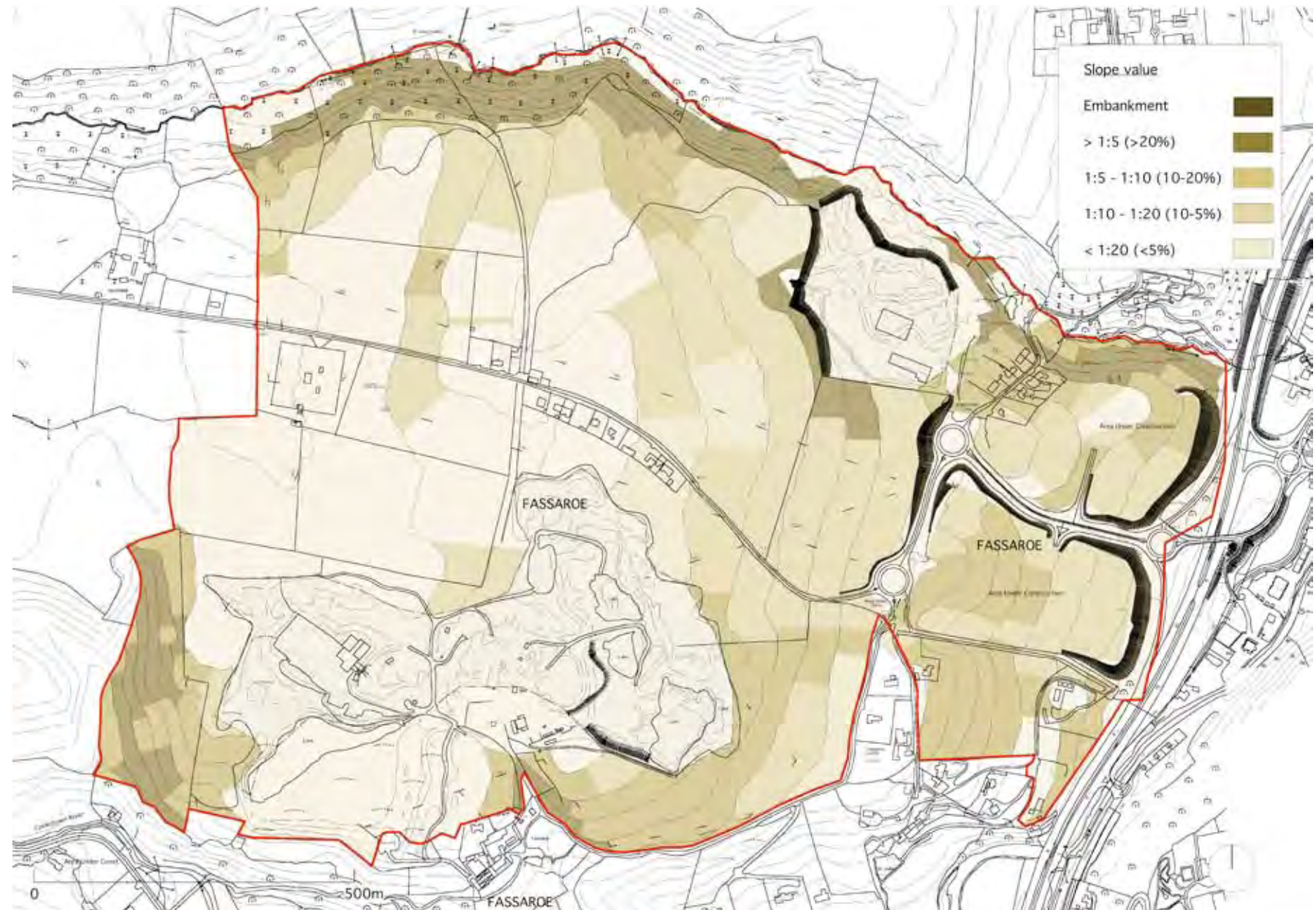


A double row of 220kV power lines transect the western end of the lands on a north east/southwest alignment and are connected to an ESB station on Berryfield Lane. They are aligned towards the Wicklow Mountains and as such have a very significant visual impact. There are numerous power lines ranging from 10kV to 110kV transecting the southern sector of the lands.

The lands, given their prominence in an open landscape are visually vulnerable. They are also in the 'catchment' of listed views and prospects as listed here. The landscape treatment of the lands in the masterplan will be crucial to fitting new development sympathetically into the surrounding landscape and affording adequate protection to the views and prospects.



St. Valery's Cross



Analysis of existing slopes based on 5m topographical contours



# 1 Strategic Planning and Development Context

## 1.8.3 Environment and heritage

### Archaeology

There are two previously recorded sites of archaeological interest listed in the Record of Monuments and Places (RMP) summarised as follows:

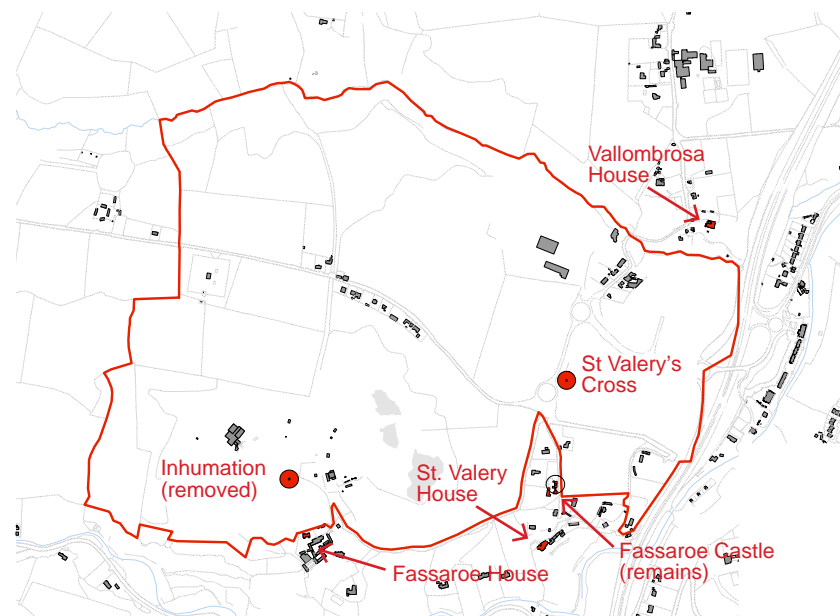
**SMR No. WI007:026 - Ecclesiastical remains (Including St. Valery's Cross).**

Record of limestone font (missing), cross fragment (missing). It is thought the Cross, dating to the 12th century, was relocated to its present location above the spine access road from a nearby ecclesiastical site at Ballyman, north of the LAP area.

St. Valery's Cross is a National Monument in State Guardianship. In 2001 the cross was relocated to its current position from a short distance away.

**SMR No. WI007:024 - Unprotected inhumation with flint scraper and flint blade (removed).**

The partial remains of Fassaroe Castle (SMR no. WI007:027), built by William Brabazon in 1535, are located immediately outside the southern/south-eastern boundary. This once comprised a tower house of granite construction.



Archaeology (red dots) and protected structures

### Architectural heritage

There are two Protected Structures adjacent to the lands but outside of the LAP/ Masterplan area:

- :: Fassaroe House, and
- :: St. Valery House.

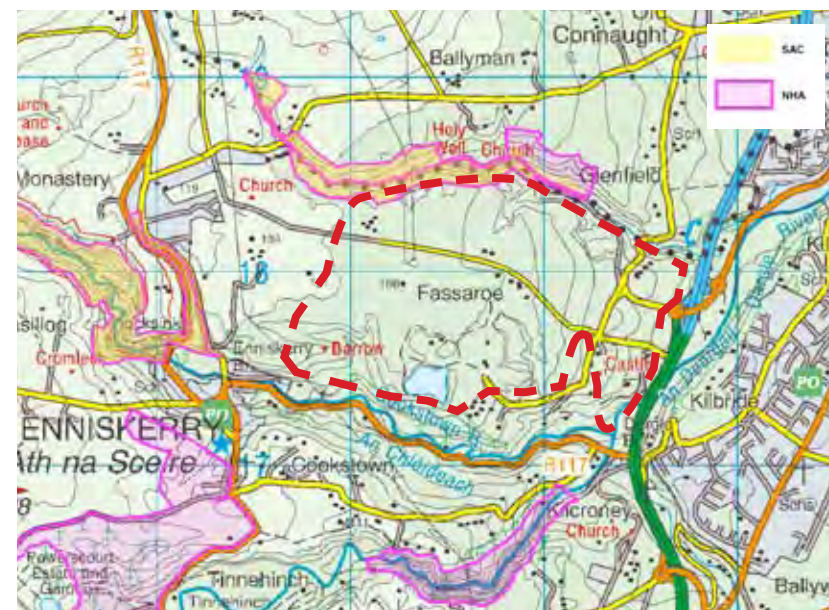
A further protected structure adjacent to the lands, Valombrosa House, is located in the functional area of Dun Laoghaire-Rathdown County Council.

### Environmental designations

Part of the Ballyman Glen is designated as a candidate Special Area of Conservation (cSAC) containing habitats of international importance ('alkaline fens' and 'petrifying springs with tufa formation') protected under Annex I of the EU Habitats Directive and a proposed Natural Heritage Area (pNHA) under the Wildlife Acts.

The Ballyman River is a salmonoid spawning habitat and there is evidence of bat fauna and raptor activity in the vicinity of the Glen. Deer are also present in the area, and there may be badgers present. There is potential for rare species of plants to be present, but none were recorded by consultants engaged to carry out an environmental scoping report in connection with the proposed Ballyman bridge crossing.

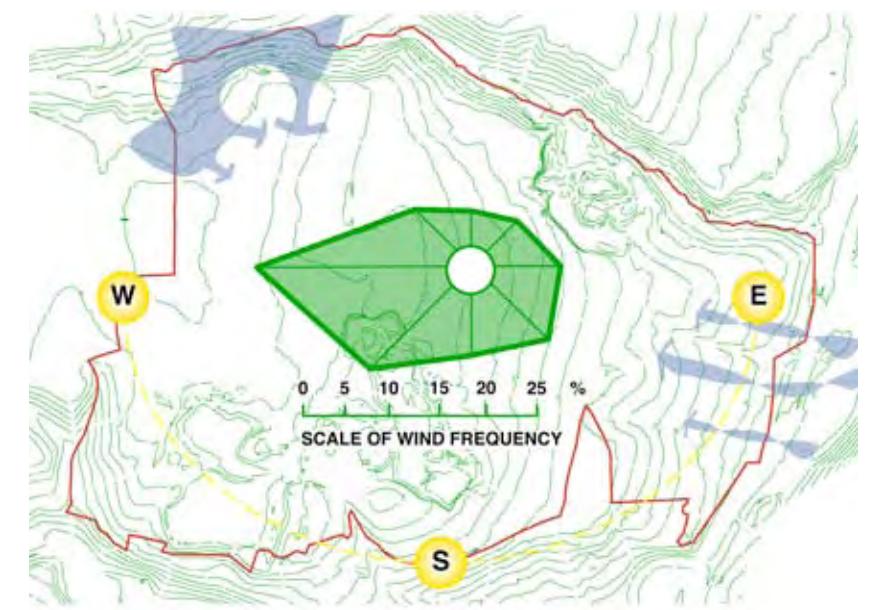
The Dargle River valley, 1.5km south of the lands is designated as a proposed Natural Heritage Area (pNHA) of national importance. Designation requires that the hydrological system concerned must be protected.



Environmental Designations (courtesy RPS). Indicative plan boundary shown in dashed red

### Microclimate

The elevated situation of the lands (up to c. 100m OD) between the Wicklow mountains and sea exposes them to windy conditions. This is particularly relevant to colder northerly and westerly winds, which are accelerated by the mountainous terrain. During the summer, low pressure created by warm air rising from the land will tend to draw in colder air from the sea in the form of sea breezes.



Microclimate (indicative)



## 1.8.4 Transport and Access

### Plans and Proposals

Current transport proposals affecting the lands broadly reflect the recommendations of the LUTS plan.

The LUTS plan examined a number of land use scenarios and recommended the provision of a possible Bus Rapid Transit (BRT) link from Fassaroe to Old Connaught and into Bray via Old Connaught Avenue to support the DART, Luas Corridors and the M11/N11 Quality Bus Corridor.

The BRT link is not now being pursued by Dun Laoghaire-Rathdown County Council (DLRCC) and the Draft DLRCC Development Plan makes no reference to a BRT link between Fassaroe and Bray. Bus services between Fassaroe, Old Connaught and Bray will be accommodated on the proposed western link road and Old Connaught Avenue prior to the arrival of Luas, with a review of these services when Luas is operational.

The Railway Procurement Agency (RPA) are currently in the process of designing planned Luas alignment B2 as an extension from Cherrywood southwards through Crinken and North Bray to serve both Fassaroe and Bray Town Centre, integrating with the DART and other train services at Bray DART and mainline rail station.

An Bord Pleanála has recently approved the proposal of Dun Laoghaire-Rathdown County Council to significantly enhance the Old Dublin Road, between Bray Town Centre and the Wilford interchange, to cater for a new Quality Bus Corridor (QBC), Luas, private vehicles, pedestrians and cyclists.

*The masterplan builds on the objective of the Bray Environs Local Area Plan to strengthen spatial linkages between Bray and its environs.*

### Access

The lands are currently accessed via a 'dumbbell' type interchange off the N11. This extends westwards through the Eastern sector of the lands to a roundabout giving access to the Greenstar environmental waste facility, before turning south to a second roundabout giving access to Roadstone lands and to Berryfield Lane.

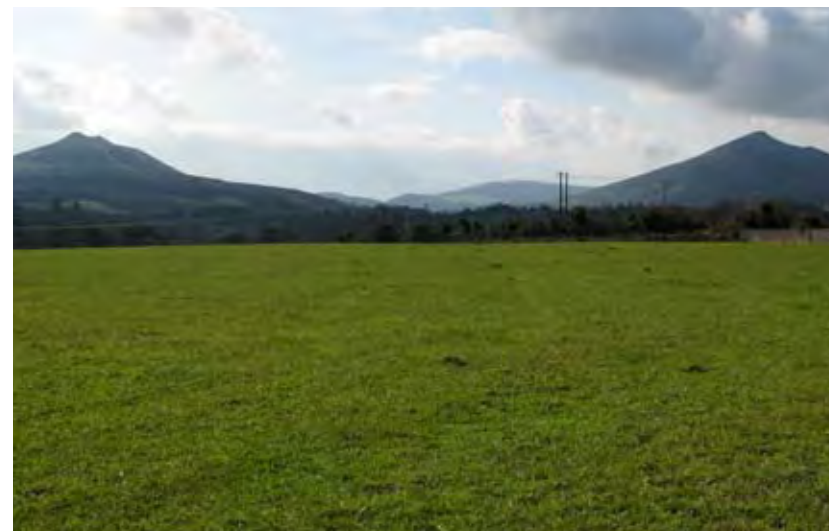
The lands are affected by the following current draft roads proposals:

- :: Fassaroe Western Link Road to Old Connaught / proposed Wilford interchange;
- :: Fassaroe Northern Distributor Road;
- :: Monastery Link Road;
- :: Upgraded Berryfield Lane;
- :: Fassaroe Southern Distributor Road; and
- :: Upgraded Fassaroe interchange with N11.

## 1.8.5 Services and infrastructure

### Gas

There is existing capacity to cater for immediate needs. Consultation with Bord Gais Eireann (BGE) indicates that the existing gas distribution network would not be able to cater for new load expectations. It is anticipated that a new Above Ground Installation (AGI) will be required on the existing transmission main to adapt the existing high pressure feed into a usable domestic service. An area of 50m x 50m would be required for this installation.



### Electricity

There is an existing 110kV ESB station at the western site boundary of the lands, accessed from Berryfield Lane. The station occupies a rectangular site of 2.32 hectares (5.74 acres). There are existing 10 kV, 38 kV and 110 kV overhead lines emanating from the site. These traverse the lands generally in a north-easterly direction before crossing Ballyman Glen, and along the line of the lane. It is anticipated that some overhead lines may have to be undergrounded or diverted.

Consultations with ESB indicate that there may not be sufficient capacity to cater for new load expectations. This may involve an addition to the existing station. There is a likelihood a new station will be required on the northern side of the Glen. Ducting requirements are subject to ongoing discussion with the ESB.

### Telecoms

A new shared exchange will be required. The land take and ducting requirements will be subject of agreement between the parties. It may be possible to co-locate a shared exchange with separate infrastructure or within a building complex.

### Water supply

#### Existing

The existing water supply infrastructures comprises a 24" trunk main which traverses the eastern lands whilst a 33" main traverses the western lands, both of which transfer treated water from the Dublin City Council's Vartry Waterworks to the Stillorgan reservoir. An 800mm trunk main has recently been constructed to interconnect both pipes along a route parallel to Berryfield lane. Wicklow County Council have a connection from this main and pump water from it to Killegar Reservoir to supply the Enniskerry area.

There are connections from the trunk mains to supply water locally, with recent improvement works being carried out to improve the supply at Berryfield lane. Whilst there is sufficient water pressure to feed some development within Fassaroe, direct supply from the existing trunk mains would not provide adequate supply to the entire LAP and would not be consistent with the current overall plan for the region, which is to supply water via storage reservoirs proposed for Ballyman. Direct supply from the trunk mains would limit the opportunities to provide additional storage facilities for the wider Bray area and the ability to provide secondary chlorinate of the water supply. A workable solution would need to be agreed with Dublin City Council & Wicklow County Council.

Any interim water supply solution should tie in with the longer term strategy set down in the regional water strategy.



# 1 Strategic Planning and Development Context

## Proposed

The current Dun Laoghaire-Rathdown proposal is to progress high and low level reservoirs at Ballyman. This would provide a basis for future water supply to the Fassaroe and Old Connaught lands.

## Possible shorter term solution

Due to the length of time it may take for reservoirs in Ballyman to be developed, in the short term a larger connection to the existing Dublin City Council trunk mains in Fassaroe may temporarily facilitate full development of the lower LAP (Eastern Sector) areas to an elevation of approximately c. 85m OD. This would represent approximately 79% of the masterplan area. Supply arrangements from the existing Dublin City Council water main supply would be subject of agreement with Wicklow County Council and necessary approvals from Dublin City Council. The construction of either a water storage facility at Fassaroe or the proposed Ballyman reservoirs would obviate the need for this arrangement.

## Possible longer term solution

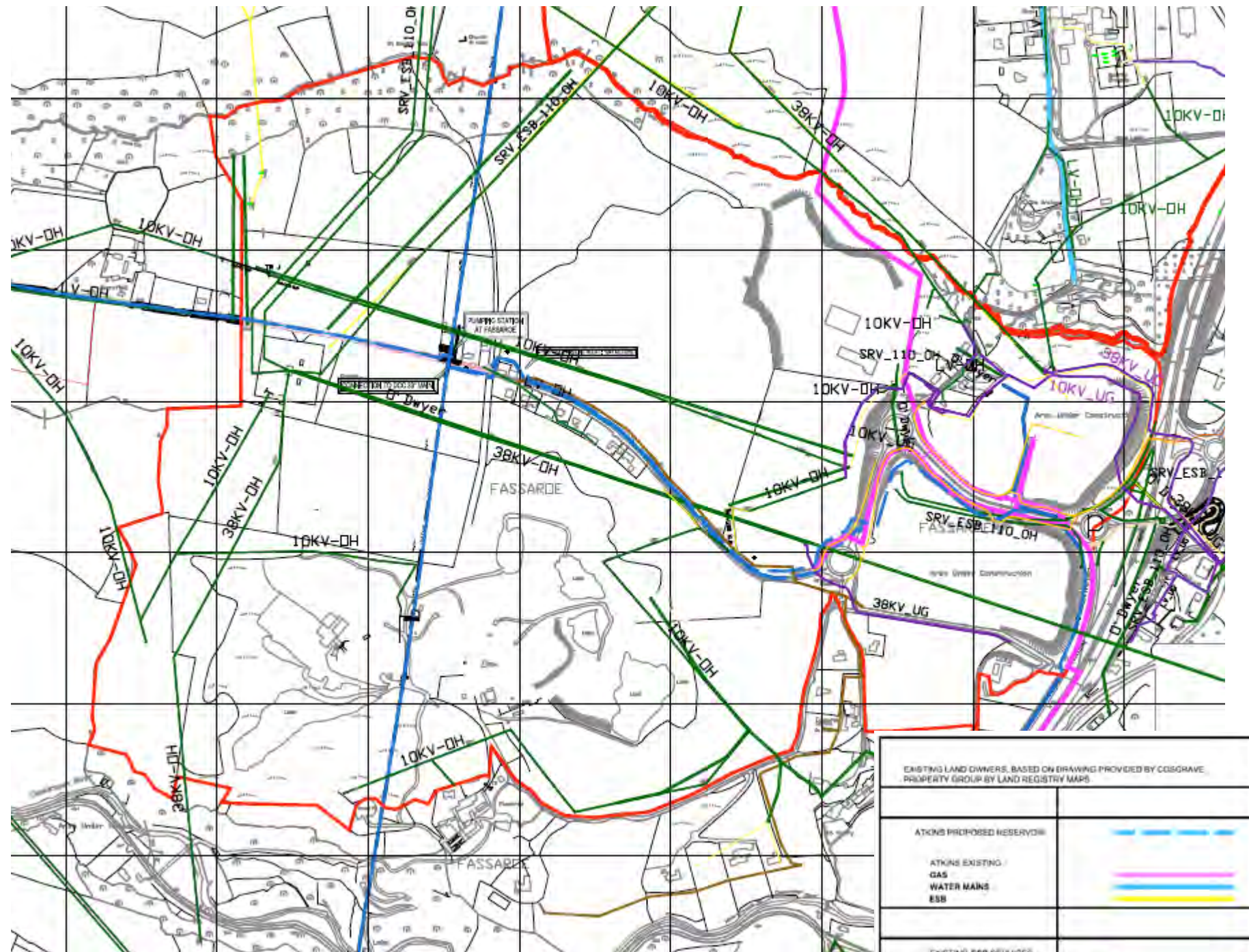
It is possible to site a water storage facility at the highest level within the LAP lands in order to provide 24 hours of water storage for the area. This would ensure that daily demand for the entire Fassaroe area could be met and at the required pressures. The construction of the Ballyman reservoirs (as currently proposed) would make this facility obsolete, however, Fassaroe would retain an independent water storage facility that would reduce the amount of storage that would otherwise be required at Ballyman. Storage will still be required at Ballyman to service development of the Old Connaught area.

The distribution mains network will be provided within the alignment of the proposed roads network.

## Foul drainage

The proposed LAP development lands located to the north of the existing area of serviced land do not have any public foul drainage facilities at present. A new foul sewer network will be provided within the alignment of the proposed roads network.

The nearest connection is a manhole on the new 300mm diameter sewer which is located close to the Berryfield Lane Roundabout at the western end of the newly realigned Fassaroe Lane. This sewer line was constructed as part of the previously proposed Fassaroe Business Park development and discharges through a 450mm diameter sewer, which is laid under the N11 Road, into the Upper Dargle Road sewer. This is a 525mm diameter sewer laid along the Upper Dargle Road and drains the western Bray catchment into the existing Bray Pumping Station.



Existing services and infrastructure (courtesy STW Architects)

| EXISTING LAND OWNERS, BASED ON DRAWING PROVIDED BY COBGRIVE, PROPERTY GROUP BY LAND REGISTRY MAPS |  |
|---|--|
| ATKINS PROPOSED RESERVOIR   |  |
| ATKINS EXISTING GAS WATER MAINS ESB   |  |
| EXISTING ESB SERVICES OVERHEAD UNDERGROUND  |  |
| EXISTING GAS SERVICES   |  |
| EXISTING TELECOM  |  |
| PROPOSED AND EXISTING WATER MAINS EXISTING FOUL WATER NETWORK                                     |  |
| EXISTING ESB SERVICES OVERHEAD UNDERGROUND  |  |



A review of the design was carried out to assess the available spare capacity within these sewers. It was found that the sewers have sufficient capacity to serve the lands except a short of length of the sewer on the Berryfield Lane roundabout which would require upgrading.

The existing Fassaroe sewer system discharges into the upper Dargle Road sewer which ultimately leads to the existing Bray pumping station. The capacity of this sewer and the pumping station's outfall capacity is required to be examined. The hydraulic modelling of the Bray sewer network was carried out under the Greater Dublin Strategic Drainage Study. It is understood from discussions with Consulting Engineers that the Hydraulic Model included a spur to lands in Fassaroe but that no details of the extent of the new development area was included. It is recommended that this Hydraulic Model is reviewed in the context of the current proposals and revised if needed to assess the available spare capacity in the Upper Dargle Road Sewer.

The Greater Dublin Strategic Drainage Study (GSDSDS) has included the Fassaroe LAP area in its consideration of waste treatment strategy for the Dublin region. The implementation of the Shanganagh Wastewater Treatment Works as identified in the GSDSDS includes allowances for the LAP area and is the proposed future treatment point for flow generated in Fassaroe. The Shanganagh Wastewater Treatment Works in Dun Laoghaire-Rathdown has been designed to be capable of treating foul flows from the catchment for the foreseeable future. The treatment works are currently proceeding and construction procurement is in hand.

The Bray-Shanganagh scheme will link the Bray waste water collection system to the new Shanganagh Wastewater Treatment Works via a series of pumped rising mains. Some allowance has been made for storm flows at Bray pumping station for the catchment.

It is expected that construction work will be completed in 2011.

## Surface water drainage

Most of the LAP lands drain naturally at present to the Brook, Cookstown and Dargle River systems. There are no piped storm drainage facilities except in the lower eastern section of the lands, where water and drainage services have been installed as part of the previously proposed Business Park development. The storm drainage system extends from the Berryfield

Lane roundabout eastwards to the N11 Road. A manhole is available at this roundabout at the head of the system which traverses the Fassaroe Business Park development to discharge through a 750mm diameter culvert, laid under the N11 Road, into the River Dargle.

There is an existing 750mm diameter storm pipe constructed under the N11. A review of the design indicates that the pipe has sufficient capacity to serve the LAP lands.

New foul sewer network will be provided within the alignment of the proposed roads network. The ultimate discharge of storm flows will be to the River Dargle. The design philosophy adopted for the surface water drainage system is in accordance with the GSDSDS and is as follows:

- :: The Greenfield runoff from the site is to be maintained (Qbar) and becomes the maximum continuation flow discharging to the Dargle River.
- :: Flood storage retention volumes are to be designed for the critical 1 in 30 year storm event. Furthermore the development sites must be capable of retaining the 100-year floodwater event.
- :: A Sustainable Drainage System (SuDS) will be incorporated with measures such as bio-retention and permeable paving providing for flow attenuation thus reducing run-off.

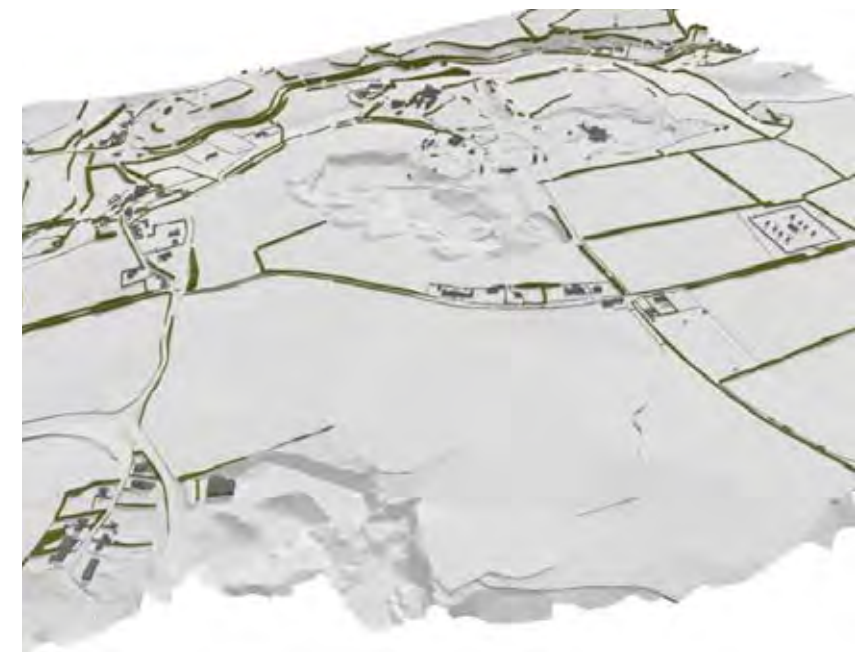
A substantial portion of the required treatment will be achieved by providing green roofs, permeable pavement, swales, infiltration ponds etc. There is an opportunity to provide these as part of the new and enhanced landscape structure.

## Flood risk

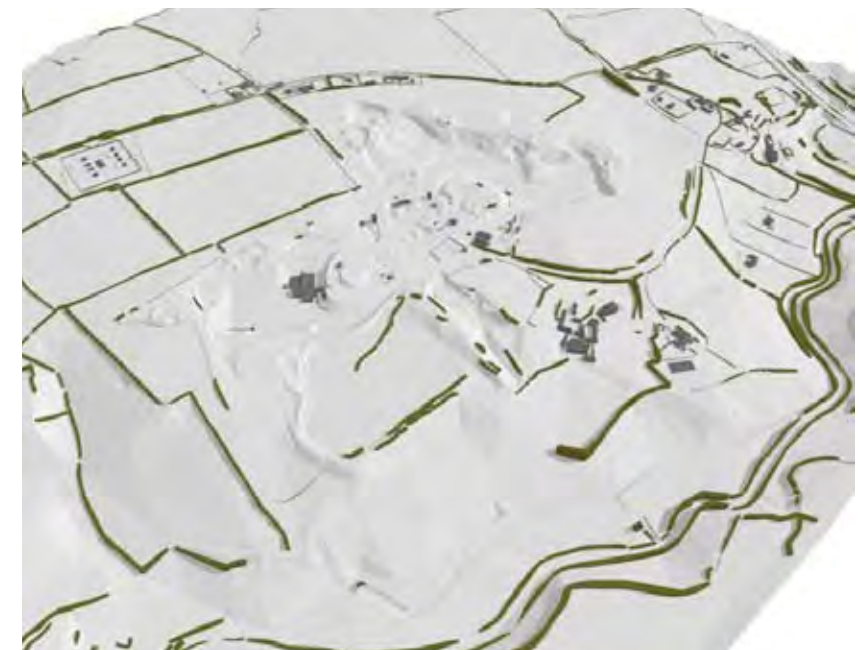
The area has not been assessed for flood risk. A relevant Flood Risk Assessment (FRA) is required to establish the nature and extent of flood risk zones and flood risk and to identify measures to manage any such risks.

Any flood risk is likely to be associated with the water courses following the southern and northern extents of the lands: the Brook, Cookstown & Dargle respectively, together with 'pluvial' or urban runoff.

Flood risk management will be dealt with in accordance with "The Planning System and Flood Risk Management: Guidelines for Planning Authorities", Department of Environment, Heritage and Local Government, 2009.



3D model perspective view from Northeast



3D model perspective view from Southwest



# 2 Masterplan Strategic Development Concepts

## 2.1 Introduction

The Bray Environs LAP, 2009 requires the preparation of a masterplan to provide a framework for the future development of Fassaroe in accordance with its governing objectives. This section of the masterplan outlines the vision, goals and key structuring principles for the development of Fassaroe as a sustainable urban extension of the Bray area. It describes the development strategies necessary to deliver a sustainable urban area integrated with Bray Town Centre and environs (incorporating both County Wicklow and Dun Laoghaire-Rathdown administrative areas). The sections demonstrate how Fassaroe will function as a place to live, work and visit and fulfil its role within the wider strategic context of Bray as identified in the governing LAP.

## 2.2 Vision

The vision statement encapsulates the essential qualities of place that the masterplan is striving to achieve. The vision for Fassaroe is:

*“ to create a new urban and landscape extension to Bray of unique and distinctive quality and sense of place; a self-sustaining and diverse, multi-generational community in harmony with its environment; and a highly accessible destination with strong connections to Bray and other parts of its Environs, that will offer lifelong choices for living, working and recreation.”*

## 2.3 Goals

### Creating a sense of place and attachment

Good places strike a balance between the natural and man-made environment and utilise intrinsic resources such as climate, landform, landscape and ecology to conserve energy and maximise amenity.

Meeting a variety of demands from the widest possible range of users, amenities and social groups will help to promote vibrant, stimulating, and distinctive places.

At the same time different building forms, uses, tenures and densities can help foster cultural variety that can be harnessed through the creative spirit of the community. To achieve this a critical mass of new residential and employment populations at an appropriate density will be fundamental to support the widest possible range of services at the local level that will offer people choice, convenience and above all, quality of life.





## Promoting healthy communities

The quality of the environment will be the principal determinant of the health of the new community. The environment can facilitate choices that promote the health and well-being of the community by providing a range of local leisure and recreational facilities; functional walking and cycling routes; and focal places for community activities. An environment that encourages its population to interact with its surroundings will foster a sense of place and identity that is fundamental to the promotion of a healthy community.

Achieving a healthy place will result from an approach that prioritises:

- :: Place-making and quality of life;
- :: Fostering community development, sense of attachment and belonging;
- :: Promoting active lifestyles and life patterns; and
- :: Maintaining harmony with the natural environment.

Achieving these aims will require the provision of:

- :: A range of local leisure and recreation facilities;
- :: Functional walking and cycling connections;
- :: Healthcare facilities and services;
- :: Focal places for communities;
- :: Mitigation of the negative impacts of human activity on the natural environment (eg water, soil and air pollution);
- :: Natural heritage protection; and
- :: A broad range and diverse mix of household types and tenures.



## Living in harmony with the environment

The management of the impact of development on the natural environment will be critical to the delivery of a sustainable urban environment. The natural environment is an essential source of amenity for the urban area by variously providing open space, hosting recreational activities and softening the visual impact of the built up area. The value derived by future populations from the aforementioned amenities underlines the need to protect the natural environment. It is however essential to minimise the impact of development on the landscape and views as well as on natural habitats through the use of buffers, the careful consideration of the interface between the natural and built environments and the sensitive response to topography. The moderation of the effects of wind and rain through the use of existing landscape features, topography and shelter belts is important in order to provide pleasant living environments.

Protection of the natural environment and minimising the larger environmental impacts will be critical aspects of sustainability for Fassaroe. The realisation of Fassaroe will be informed by wider landscape structures such as shelter belts and links connecting and separating existing and future urban areas and areas of significant natural heritage. As such:

- :: The wider existing and potential green structure will provide the basic logic for integrating the natural landscape into the new urban structure;
- :: The strategic open space for Fassaroe will play an important role in the structuring of the urban area, providing distinct edges, green routes and corridors;



- :: The strategic and local open space will be based on a hierarchy that will inform the urban structure;
- :: Potential to create amenity linkages between Fassaroe and the wider Bray and Environs area;
- :: The hierarchy of spaces will provide for a range of activities and users;
- :: Strategic and local open space will need to be provided on a phased basis in tandem with development and other infrastructure and services; and
- :: The energy and infrastructure concepts will aim to minimise demand, prioritise green supply and influence user behaviour.

To achieve this goal new development should aim to:

- :: Respect the natural beauty of the surrounding landscape and views;
- :: Respect the positive aspects of topography and landscape character and cultural heritage and to incorporate these into the new town centre;
- :: Moderate the effects of wind and rain through existing landscape features;
- :: Protect natural habitats from harm and to foster increased bio-diversity and connectivity in, around and through the plan area;
- :: Carefully consider the interface between the natural and built environment at the edge of the built up area; and
- :: Integrate SuDS and landscape structures.





# 2 Masterplan Strategic Development Concepts

## 2.4 Development strategy

The development of Fassaroe will facilitate the growth of Bray westwards into its environs in County Wicklow in a planned and orderly fashion. The masterplan is based on the development of a number of broad urban design and landscape strategies, which apply to the whole of the masterplan lands. The strategies outlined here have been driven by a wide range of considerations, in particular, the Bray Environs LAP. They are predicated on the following key assumptions:

- :: Fassaroe will remain a priority of the local authority;
- :: Key supporting infrastructural projects will be realised;
- :: Development will occur on a phased basis over the short, medium and long term;
- :: Bray Town Centre will remain the core commercial and community centre of the overall Bray Environs area; and
- :: Constraints to development can be resolved.

The following strategies establish the broad vision for the future development of the area and provide the basic overall structure and the planning and design rationale for the masterplan:

- :: Place and hierarchy;
- :: Landscape and heritage;
- :: Urban structure;
- :: Land use and functions;
- :: Movement and access, including strong linkages to Bray Town Centre;
- :: Community development; and
- :: Energy, waste and infrastructure.



### 2.4.1 Place and hierarchy

The place strategy identifies the long-term envelope of the settlement and its strategic connections to Bray and parts of the wider Environs area.

#### Fassaroe as a place

The new urban area of Fassaroe will need to achieve a critical mass of development in conjunction with the overall planned growth of Bray and its Environs to provide for the needs identified in its strategic planning policy. As such, new development at Fassaroe will be required to support the provision of:

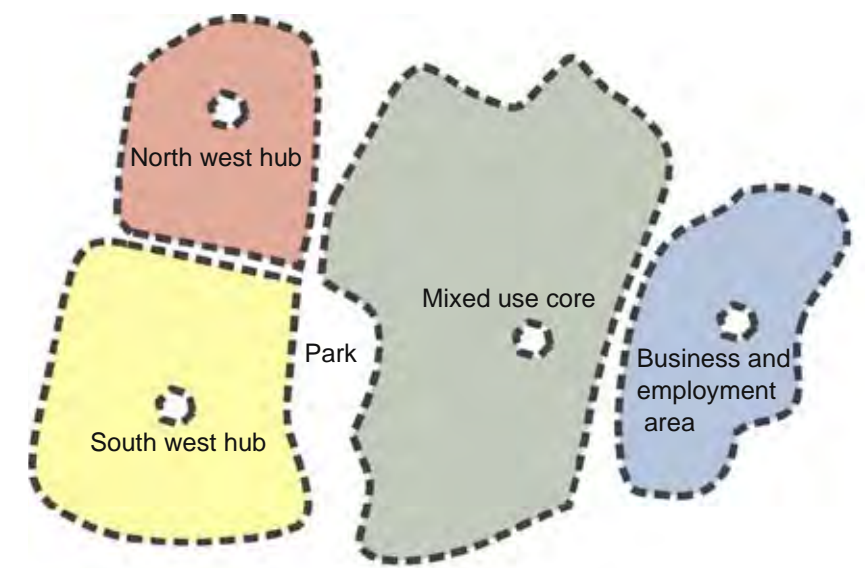
- :: A range of land uses and functions appropriate to a self-sustaining community that are complementary to Bray;
- :: Sufficient enterprise and employment activities to support the critical mass proposed for the area;
- :: Diversity of housing types and tenures appropriate to the needs of people of all ages and social backgrounds;
- :: Local community, civic and education facilities and services;
- :: Local business, retail and services;
- :: A new urban structure and network and hierarchy of routes;
- :: An integrated landscape structure;
- :: Integrated and sustainable infrastructure; and
- :: Transport connections that are integrated within Fassaroe and between Fassaroe, Bray and its wider Environs.

#### Fassaroe settlement hierarchy

Four distinctive but overlapping areas are identified within the settlement hierarchy. These are:

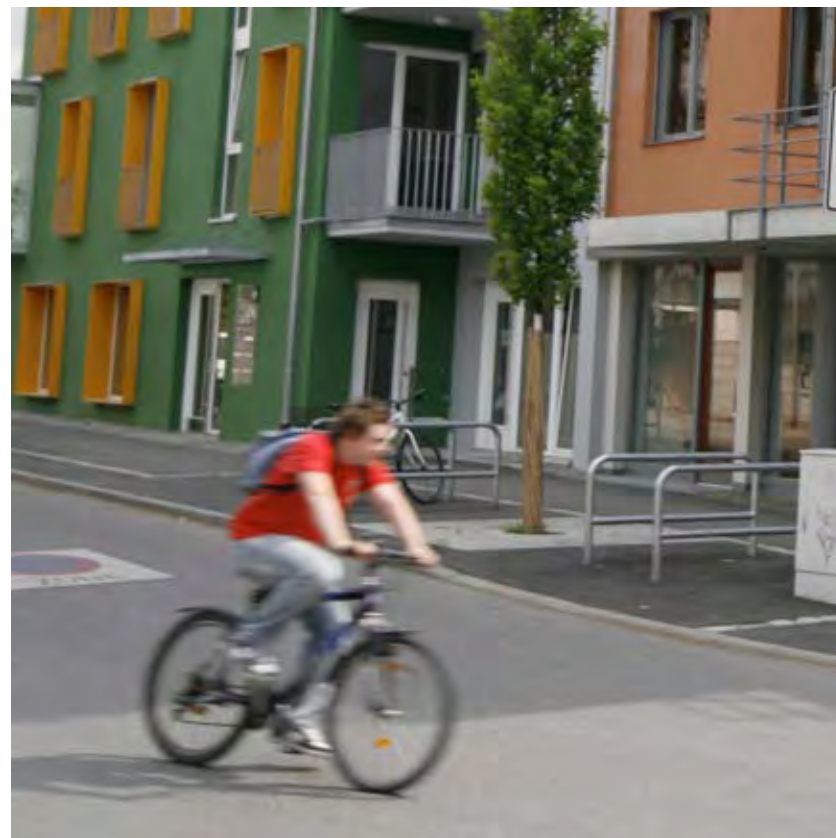
- :: The mixed-use core;
- :: A business and employment area on the lower, eastern lands between the mixed-use core and Bray;
- :: A community hub in the north-west; and
- :: A business and employment area in the south west.

*A critical mass of development is necessary for Fassaroe to contribute to the sustainable growth of the residential and employment population of Bray in accordance with its designation as a Metropolitan Consolidation Town.*



Place strategy





## 2.4.2 Urban structure

The urban structure strategy sets out a coherent network of appropriately scaled and connected streets and spaces. It provides an overall framework for the development of a series of high quality, attractive places and spaces, which contribute to the creation of a legible environment and a clear sense of place. The urban structure is derived from the identification of the key character areas and has been devised so that it can be provided coherently and in parallel with the phased realisation of Fassaroe.

### Routes

A primary avenue route structure (Fassaroe Avenue) will provide the main structure of the place elements of Fassaroe, and the main linkages between these places. A secondary route structure will be provided to reinforce permeability and connectivity more locally. Tertiary and lower level connections will prioritise pedestrians and cyclists and local access and provide, for example, intimate and safe 'home-zone' typologies. The route structure will integrate the public transport strategy.

### Spaces

Urban spaces are based on a hierarchy of character, function and scale, which is interconnected throughout the plan area. Each space will have its own purpose and identity to reinforce local distinctiveness and sense of place.

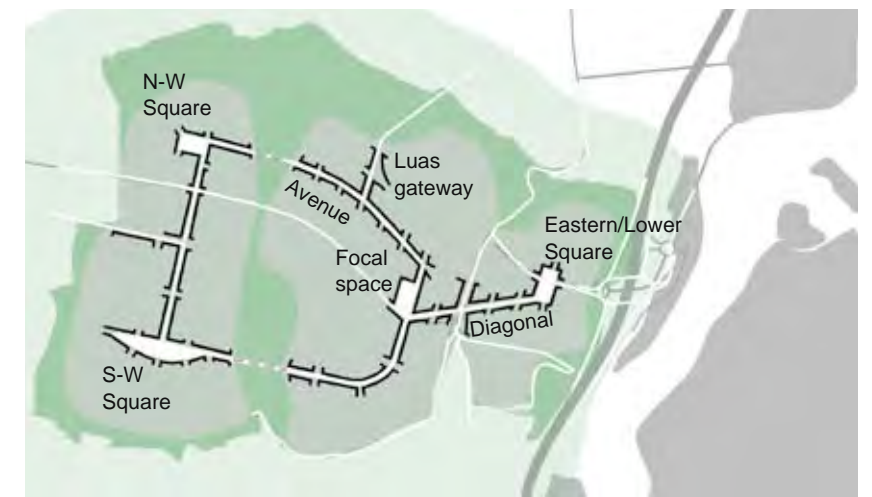
A new "diagonal" link will provide a visual and physical connection between Fassaroe and Bray, including a new place of arrival (lower eastern square) at the heart of the eastern lands, and a new focal space (main square) at the heart of the mixed-use core area. The lower eastern square will act as 'gateway' between Bray and Fassaroe and will provide an intermediate place of arrival.

The principal space in Fassaroe will be the main square in the mixed-use core. This is positioned and designed as the dominant space in the local urban hierarchy and will represent the confluence of movement, land uses and activities, community and social life and diversity of built form. The focal space for north-west community hub and the south west business centre and other smaller spaces will be connected to the main square by the new Fassaroe Avenue. Topography demands that vehicular traffic between these points will closely follow existing road alignment.

The planned bridge connection from Old Connaught to the north of Fassaroe will define an important point of arrival. This will be marked by 'gateway' elements to provide a sense of arrival, with onward connections in the form of streets or avenues to the core area, which, in turn, will also be linked to the other hubs.



Primary urban design structure and active frontages



Urban space structure



Integrated urban structure



# 2 Masterplan Strategic Development Concepts

## 2.4.3 Land use and functions

The Bray Environs LAP provides indicative land use zoning and this forms the basis of the land use and function strategy for this masterplan. Within the parameters of the LAP, the strategy promotes a rich and wide mix of uses, where this is possible and appropriate.

The following proposed indicative land uses are outlined in the LAP:

- :: High density residential;
- :: Medium density residential;
- :: Predominantly commercial mixed-use;
- :: Predominantly residential mixed-use;
- :: High density employment;
- :: Industry/business park; and
- :: Warehousing.

The urban and landscape structure of the masterplan is derived from the indicative zoning of the LAP. It also promotes the “blurring” of the edges of the indicative zoning – allowing for overlap and flexibility in terms of land issues where different zones meet. This will allow better relationships between land use zoning, increased diversity of use and, in particular, will allow the widest variety and mix of land uses in the town centre.

### Civic and amenity centres

Fassaroe will, over time, contribute to a network of local civic/amenity centres within the Environs of Bray, providing for local needs. Bray Town Centre will remain the primary shopping destination within Bray and its Environs for higher order goods and services as well as the primary civic, commercial and community focal point for the area.

### Residential

Fassaroe, in conjunction with the other designated development areas within the Environs, will provide the additional capacity necessary for Bray to meet future housing demand and fulfil its regional role as a Metropolitan Consolidation Town.

### Employment

New employment areas will be centred on urban focal spaces in the eastern, central and south-western sectors of the masterplan area. The eastern sector of the masterplan area is proposed to be developed predominantly for high density employment uses whereas the central sector will be developed as a mixed-use, urban environment. This sector will need to be integrated with surrounding employment and residential land uses. It will be linked to the eastern sector via a high quality pedestrian connection. This will create an axis of activity and will maximise amenities for workers and residents of surrounding areas, including eventual immediate proximity to the Luas line.

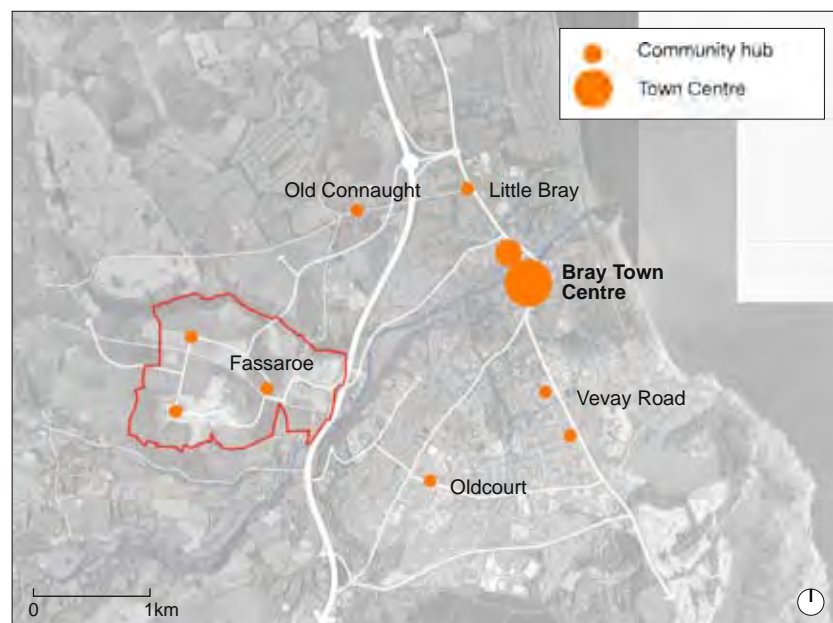
The south-western sector is intended to be a lower density, campus style business park characterised by medium to large scale enterprises.

Employment areas will require:

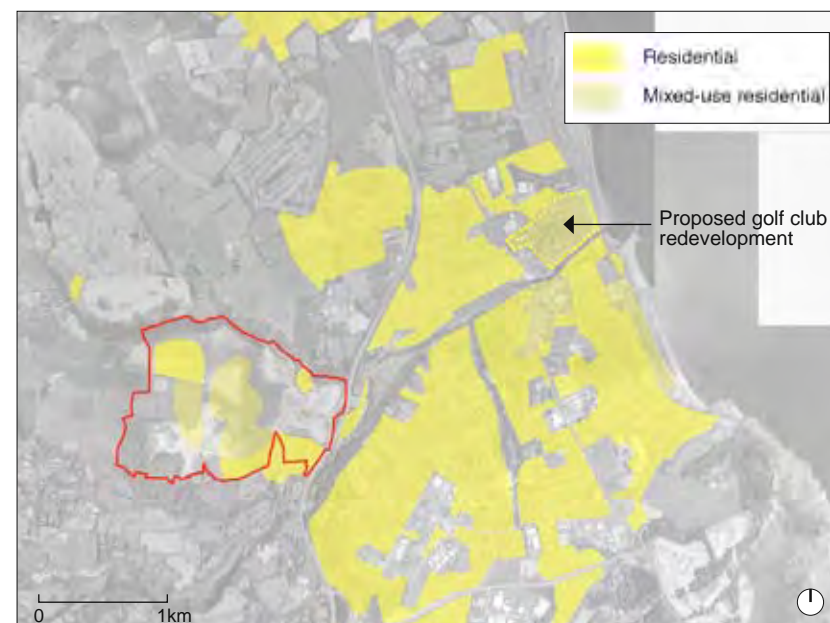
- :: High quality landscape and connected open spaces.
- :: Environmentally sustainable features including energy efficient buildings, SuDS, bike storage and shower facilities.
- :: Cafes/restaurants, child-care and recreational facilities.
- :: Business support services including telecommunications and data connections, marketing and business development and building security.

Active ground floor uses such as local retail, cafes and restaurants are promoted along the avenue and around the focal spaces to enliven these areas and create an attractive pedestrian environment.

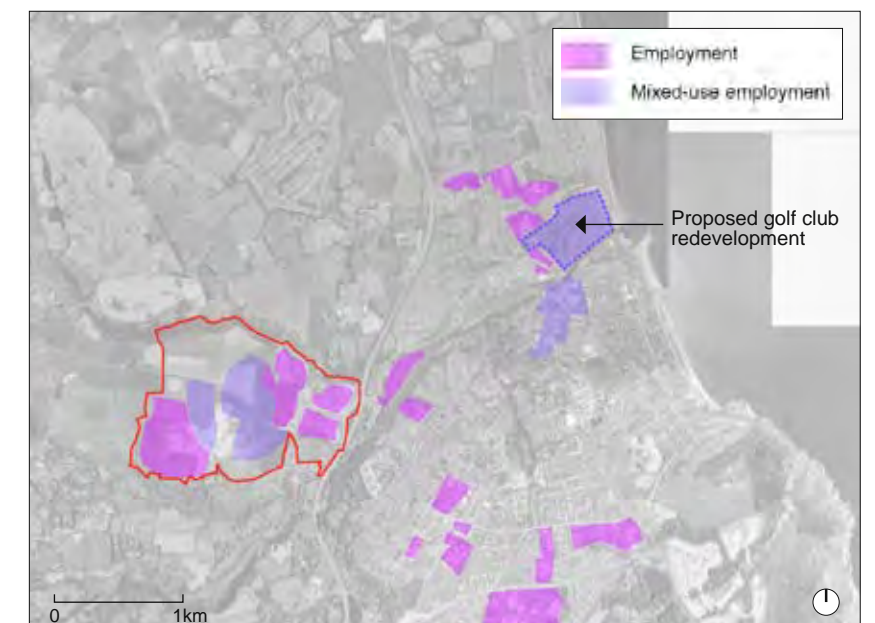
The significant employment lands provided at Fassaroe under the Bray Environs LAP will help realise Bray as the self-sustaining settlement envisaged in the Regional Planning Guidelines and allow the town to fulfil its regional role as an attractor of investment. The integration of the employment lands with the public transport services provided for under the Bray Environs LAP will ensure links with the existing and future population of Bray as well as to a wider catchment within the Environs area and elsewhere.



Strategic overview of civic and amenity centres as existing and proposed



Strategic overview of residential areas as existing and proposed



Strategic overview of employment areas as existing and proposed



## 2.4.4 Landscape, heritage, recreation and amenity

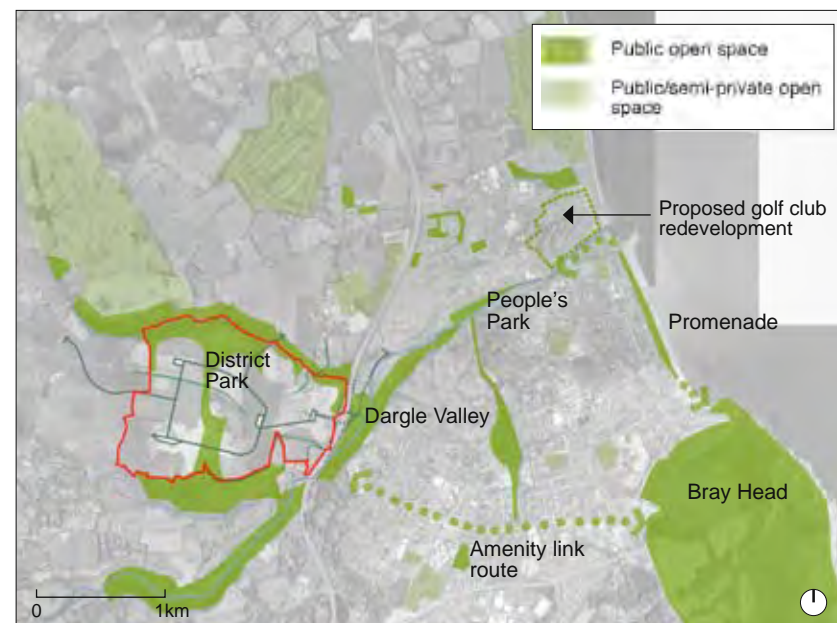
The overarching aim of the strategy is to positively integrate the new Fassaroe with the landscape and heritage of the area.

### Landscape

The strategy recognises that an agricultural landscape is enclosed to the north and south by more natural vegetation that has colonised the steeper slopes of the Ballyman and Cookstown/Dargle Glens.

The strategy for landscape and heritage seeks to:

- :: Contribute to the creation of a high quality environment in the plan lands and a strong sense of place;
- :: Integrate the overall development of the lands with the surrounding landscape;
- :: Integrate and enhance landscape and biodiversity considerations in a comprehensive “green infrastructure” for Fassaroe;
- :: Achieve linkages/connectivity between areas and uses for pedestrians and cyclists;
- :: Function as a substrate for the operation of SuDS;
- :: Provide mitigation for the negative effects of microclimate and, in particular, wind; and
- :: Enhance existing views.



Wider landscape and amenity strategy

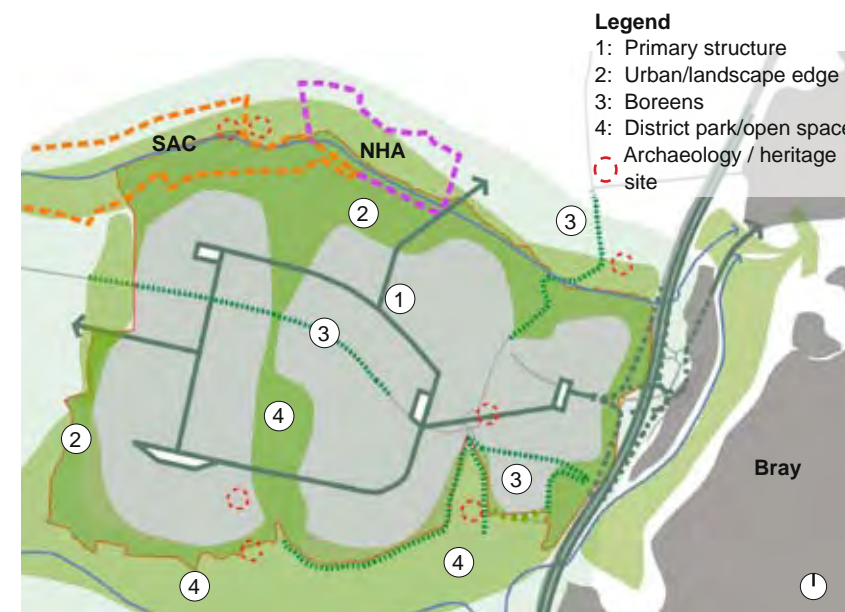
Aspects of the existing landscape will play an important role in the new landscape structure and include:

- :: Linking landscape elements at the western edge of Fassaroe to provide shelter-belt planting;
- :: Reinstatement of a remnant ‘green’ north-south route between the Dargle Valley and Ballyman Glen in the form of a new District Park which is an objective of the LAP;
- :: Buffer landscape elements between new development and the motorway with onward links to Bray; and
- :: The hedgerow habitats of Berryfield Lane and Fassaroe Lanes acting as ‘green’ routes.

The above strategies will protect the existing amenity afforded by the glens and provide for active and passive recreation opportunities, natural windbreaks and corridors for movement of indigenous flora and fauna.

### Heritage

The built and natural heritage, including the SAC and NHA, should be protected and incorporated sensitively into the development of the area. The landscape, including the semi natural area of Ballyman Glen, is an important component of the natural heritage of the development lands. Development works shall aim to secure the integrity and the quality of the landscape. It is therefore extremely important that any remaining issues concerning landscape restoration of landfill areas are resolved in the course of those works.



Landscape, heritage, recreation and amenity strategy within site

Aspects of existing built heritage and archaeology are described earlier in this masterplan. While known archaeology in the area is limited, it will be important to respond to any archaeology that may be discovered in the course of development. Development Plan and best practice will be followed in this regard. The St. Valery's Cross currently stands in the margin of the roundabout at the bottom of Berryfield Lane. As the cross was likely relocated to its current position, there may be an opportunity to have it relocated from its immediate position to a purpose-designed space. The urban form and reconfiguration of roads here may also benefit from relocation of the cross. Any relocation will be agreed, planned and carried out in consultation with the relevant authorities.

An active approach to conserving the ecological benefits of hedgerows and elements of boreens would include retention, where possible, of significant stretches. Hedgerows could be provided as part of a median strip/swale for the streets designed to provide green links to the surrounding countryside, or as boundaries between sites. A policy of planting new hedgerows as part of the overall landscape should be encouraged not only for ecological benefit but as a legacy of the historic agricultural nature of the landscape.

### Recreation and amenity

The significant formal and informal open spaces (through the District Park and the Ballyman and Dargle Glens respectively) that Fassaroe provides will ensure the future population of Bray will be well served by the full range of recreational opportunities in the existing town via appropriate green connections. In particular, Fassaroe will afford the northern and western parts of Bray a much improved access to natural open space and will greatly expand the capacity of the public open space to provide for formal recreational activities.

The open space resources for recreation will provide for a range of facilities including sports facilities for both informal and for more formally organised outdoor play.

Amenity green space will be primarily associated with residential areas and will include informal green spaces within housing to enhance the visual quality of the settings; informal spaces for recreation and communal activities; and domestic gardens.

There is clear potential for the creation of amenity links between the planned amenity resources of Fassaroe and the existing and future areas within Bray and the rest of its Environs. The connectivity of amenity resources within Bray and its Environs will ensure overall enhancement of amenity provision in the area.



# 2 Masterplan Strategic Development Concepts

## 2.4.5 Movement and access

The development of Fassaroe with supporting transport infrastructure, including a local avenue and street network with light rail line linking the constituent parts of the Environs together and integrating the whole with Bray Town Centre, will allow Bray to rebalance itself as a radial settlement focused on a vibrant town centre. Fassaroe and the rest of the Environs area in Wicklow and Dun-Laoghaire Rathdown will allow Bray to accommodate an additional residential and employment population within the catchment of Bray Town Centre, in the process connecting the formal open spaces within the urban area with the future amenities in the Environs area. The future Luas service will link with Bray via Old Connaught Avenue and in the process will connect the two main north-south public transport corridors (the QBC focused on the old Dublin Road and the DART line). It will also serve the existing residential areas between the Environs and Bray Town Centre.

Providing for effective and balanced transport that prioritises cycling, walking and public transport will be essential to the success of Fassaroe as a place. The movement of cars will need to be carefully managed in conjunction with slower modes and public transport. The movement and access strategy seeks to achieve the transport objectives of the Bray LUTS in the form of streets and avenues that are favourable to pedestrian and slower modes and to avoid 'inter-urban' and/or distributor road geometries that prioritise car traffic. Streets should be conceived as places within the movement framework.



The overall principles of the movement strategy are thus:

- :: To maximise use of sustainable modes of transport through the integration of accessibility, movement, land use, urban form and landscape in the overall urban structure;
- :: To prioritise walking, cycling and public transport;
- :: To secure a good balance between modes where movement is managed rather than segregated;
- :: To provide a high level of connectivity to the surrounding landscape and Bray with pedestrian and cycle priority; and
- :: To provide for important strategic road connections in balance with the urban and route structure of Fassaroe.

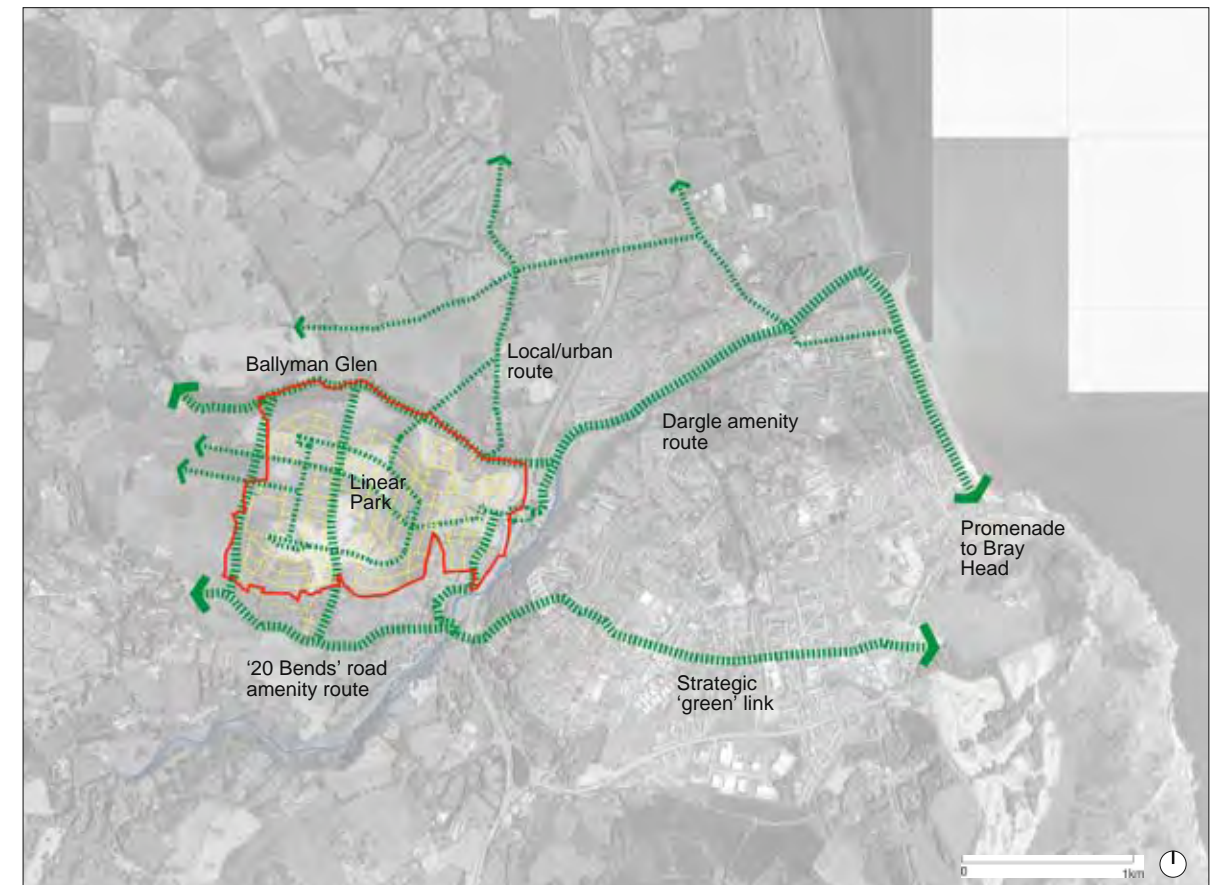
The strategy for movement will be consistent existing policy and best practice, including 'Smarter Travel: A Sustainable Transport Future, 2009-2020', Government of Ireland, 2009, Traffic Management Guidelines, DoEHLG, DTO, 2004 and Manual for Streets, DoT, UK, 2007.



## Walking and cycling

Sustainable places prioritise walking and cycling. A key indicator is the quality of the walking environment for children and older people. Smarter Travel (Actions 14 and 15) and the National Cycling Strategy, 2009 set out high-level policy for walking and cycling, respectively. The following masterplanning elements will respond locally to these policies:

- :: Compactness of the urban area and shorter walking and cycling distances;
- :: Provision of adequate local services and facilities and opportunities for employment;
- :: Immediate access to open space and recreation areas;
- :: The highest degree of permeability and options for movement through the area and to surrounding areas;
- :: A high quality, attractive and safe pedestrian environment; and
- :: Careful control of vehicular traffic through passive and active measures.



Strategic overview of principal pedestrian and cycle routes (green) and local pedestrian routes (yellow) as existing and proposed.

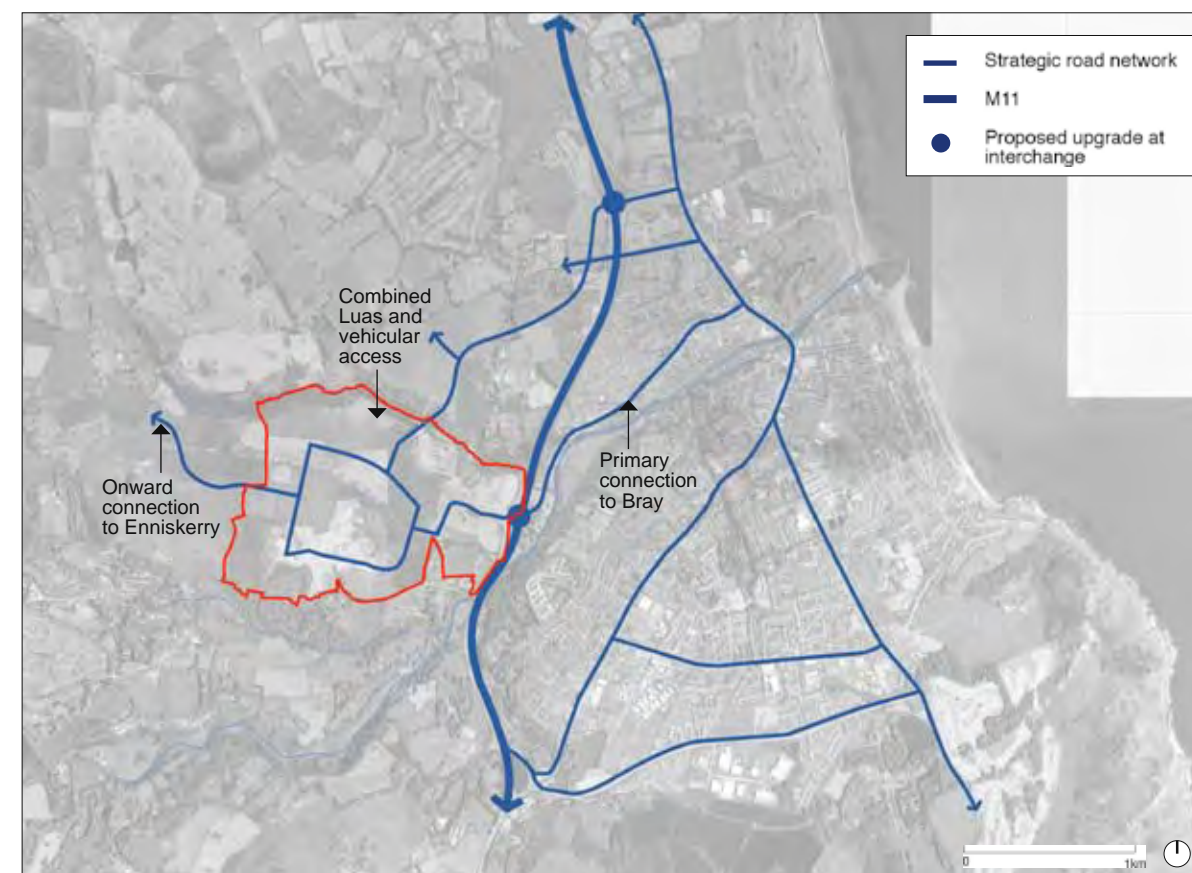


## Vehicular movement

Primary vehicular movement into the lands from the east will ultimately utilise an upgraded interchange with the N11 and the existing carriageway. The Greenstar/Thornhill roundabout will be retained. This will provide direct access to future Park and Ride facilities and intercept extraneous traffic associated with the Park and Ride from the network at an early stage, thereby reducing road capacity requirements further into Fassaroe. It will also be a more accessible and attractive location for Luas users.

The existing roundabout at the junction with Berryfield Lane will be removed. The main junction will be moved west to proposed town centre. It will be a signalled junction connecting to the main orbital route (the Avenue). Access arrangements and junctions will be phased to reflect the stages of the development.

The Avenue will follow an orbital route, both north and south of the junction, before turning west to meet the main access from Old Connaught to the north, with an onward connections to neighbourhood hubs in the north-western and south-western sectors. The hubs will be joined by a north-south element of the avenue. This element will connect with the Monastery Link Road proposed under the Wicklow County Development Plan. The framework plan provides for a permeable route network where traffic management measures can be changed over time to reflect changing patterns and pressures.



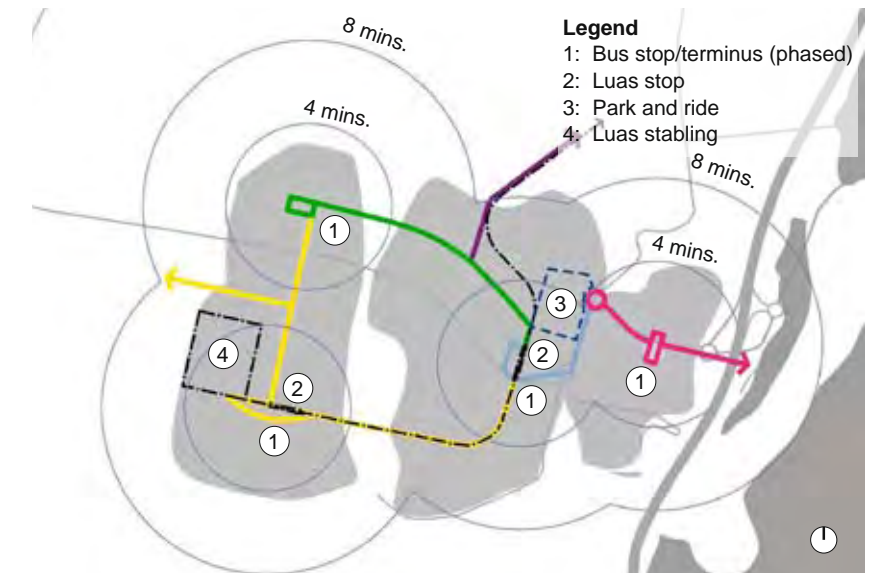
Strategic overview of primary vehicular movement and access as existing and proposed

## Public transport

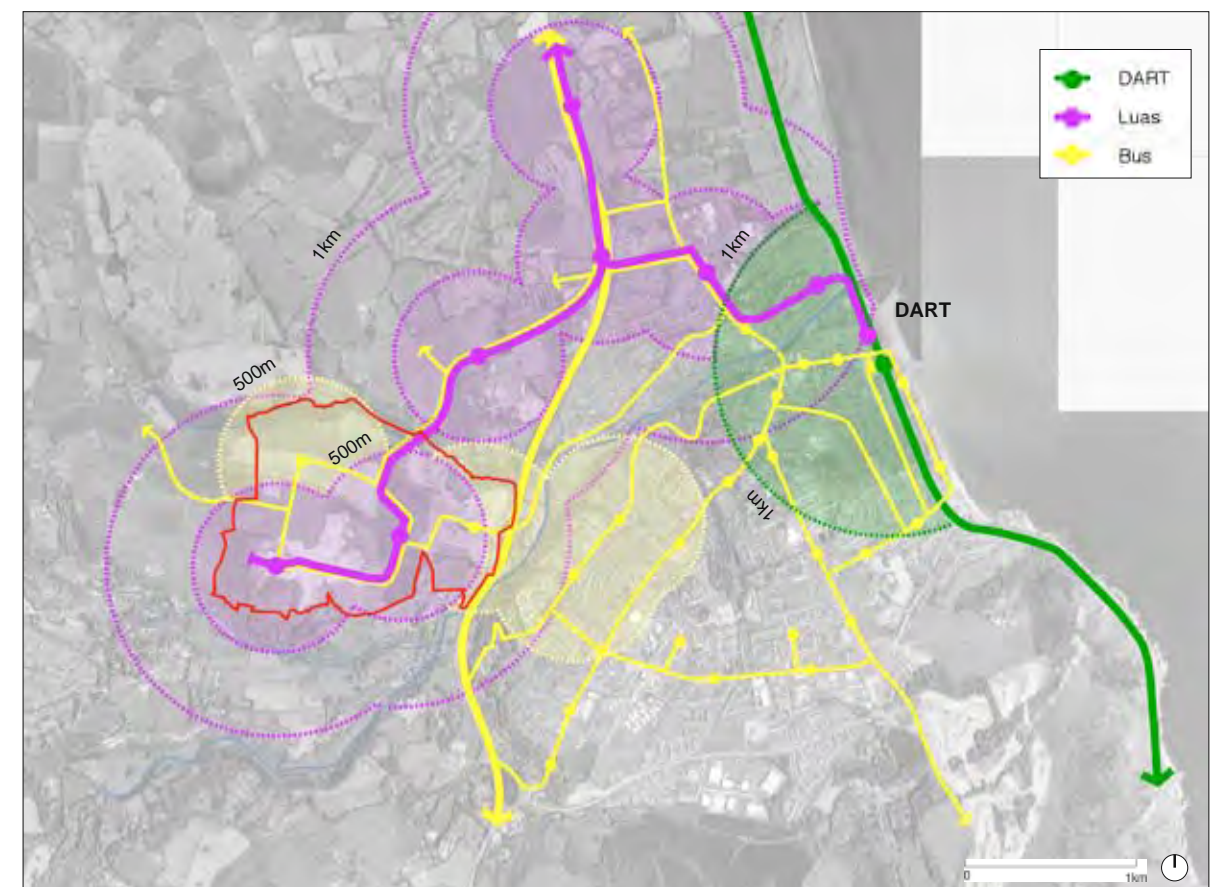
Luas will be incorporated into the design of the main urban structure with provision for a stop at the town centre, which will maximise accessibility to the park and ride facilities, and a second stop serving the south west hub. Pending the arrival of Luas, an interim, bus-based, public transport strategy will be necessary, and the Luas route may be used initially for bus services to Bray, its environs and beyond.

The eastern sector will be served initially by bus to the new lower square. The new lower square should provide the terminus and drop-off/pick up. Buses will return via the existing Greenstar/Thornhill Road roundabout. Pending the arrival of Luas, a local bus service may also serve the proposed main square and the neighbourhood hubs. Again, these spaces should provide termini for bus services. These services will be modified on arrival of Luas to focus on alternative routes not served by Luas and Luas/Bus interchange.

Luas will arrive in Fassaroe via the proposed Ballyman Bridge and will terminate in a stabling yard adjacent to the western boundary.



Movement and accessibility concept - 4 and 8 minutes walkbands (250m and 500m)



Strategic overview of public transport as existing and proposed with 500m (8 minutes) and 1km (16-17 minutes) walkbands shown



# 2 Masterplan Strategic Development Concepts

## 2.4.6 Community development

There are many strands to community development. Many of these will not be a direct product of masterplanning, and will be driven by community initiatives. The principles outlined in broad policy will be considered as a starting point.

Community issues as they relate to masterplanning commonly relate to housing, education, health and recreation. Therefore the strategy is:

- :: To promote a diversity of housing types and tenures to encourage social mix and variety for all ages and social groups;
- :: To promote robust and life-long housing;
- :: To ensure adequate provision of childcare, education and learning facilities;
- :: To ensure adequate provision of community health and care facilities;
- :: To provide for cultural and civic uses;
- :: To foster close relationships between living and recreation/play;
- :: To provide access for all in public spaces and facilities; and
- :: To provide adequate local retail and support services.



Core community and civic services concept

## Education

Bray Environs LAP outlines a requirement for primary and post-primary school infrastructure. A total of three schools are required: two primary schools comprising 16 classrooms and a post-primary school. Provision of schools will need to reflect the phased development of Fassaroe.

### Pre-school

Availability of good childcare will be important to the establishment of the community and the general attractiveness of Fassaroe as a location for families. The provision of childcare will be closely coordinated with the provision of housing. There will also be demand for childcare facilities in support of the employment and enterprise uses. The masterplan acknowledges the requirements of the Planning Guidelines for Childcare, however, it may be more appropriate to consolidate individual facilities into larger facilities to provide for better and more comprehensive facilities. This will be subject to meeting quantum and facilities being within a comfortable walking distance of all housing.

### Primary Education

A primary school may be required at an early stage. It is essential to achieve a critical mass for a primary school. A threshold for the first primary school should have regard to current guidelines of the Department of Education and Science. A 16 classroom primary school will have a capacity of approximately 384 children; therefore the first primary school will have the capacity to provide for some 1,280 units. In order to ensure continuity in the self-sustainability of the area with regard to primary school provision, it is proposed that the threshold for the second primary school is in the range of 1,200-1,400 units.



School banner



Post-primary school fronting district park



Recreation space - local



Children's play - on street

A site for the first primary school will be reserved as part of the first phase of development in the north-western neighbourhood hub (see Section 3.55).

### Post-primary Education

It is proposed that the threshold for the provision of a post-primary school be the same as that for the second primary school, i.e. approximately 1,200-1,500 units. It is noted that the Department of Education considers a post-primary school should have a minimum first year cohort of 72 places, at least 216 places filled by the third year of operation and approx. 400 places filled by the sixth year of operation in order to sustain a full curriculum.

On this basis, a site should be identified in later phases of development. It is suggested this should ideally be located in the central portion of the settlement, accessible to both the town centre / public transport links and the proposed district park.



## Health

### Primary healthcare

Primary health care in the community is the main thrust of current health policy in Ireland (HSE). This care is largely delivered in the community by local health professionals, such as general practitioners. Fassaroe will require at least one multi-purpose (poly health) facility. Given the critical mass of the community and potential services to the employment and enterprise sector, it is considered that a single, multi-purpose facility should be provided in a central location, preferably at or near the core area. This facility would also include other healthcare facilities such as alternative health, homeopathy, dentistry, counselling etc.

### Care for older people

Care for older people should be principally provided in the community as independent or assisted living in the home, purpose-designed small units and in extra care housing. Generally, assisted living should be provided in residential areas in close proximity to local services. Access to services, recreation and open space in an attractive environment will be an important locational factor.



High quality healthcare waiting area

## 2.4.7 Energy, waste and infrastructure

### Energy

Strategies and technologies will be combined over time to ensure Fassaroe leaves a light footprint on the environment. The three principal aspects of energy for masterplanning are:

- :: Heat;
- :: Power; and
- :: Transport.

For each aspect the core strategy will be to minimise demand, source “green” supply and to influence user behaviour. Further to this, options may be explored with relevant agencies, such as Sustainable Energy Ireland.

### Heat and power

The base heat and power load of the development should be met through renewable and sustainable technologies, with supplementary heat and power (if required) being met by conventional sources.

A number of potential energy initiatives and technologies will be pursued in Fassaroe, including:

- :: Sustainable Transport;
- :: Combined Heat and Power (CHP), or co-generation;
- :: District Heating;
- :: Solar Panels (Thermal & Photovoltaic); and
- :: Biomass Heating.

### Waste

The waste strategy will be based on:

- :: Reducing waste;
- :: Dealing with waste in an environmentally responsible way.

A number of waste initiatives will be pursued in Fassaroe, including:

- :: Waste management in development and transport; and
- :: Use of Natural and Recycled Material.



Swale in residential scheme



Recreation space - local



District heating facility and car park in town centre



Waste to energy plant in residential area



## 2 Masterplan Strategic Development Concepts

### *Wastewater management and water conservation*

The wastewater management and water conservation strategy will be based on:

- :: Reducing wastewater;
- :: Managing wastewater in a more sustainable way;
- :: Conserving water through lower consumption and greater efficiencies.

A number of wastewater and water conservation initiatives will be pursued in Fassaroe, including:

- :: Sustainable Urban Drainage Systems (SuDS)
- :: Rainwater re-use
- :: Green roofs
- :: Specification of low-water use devices

The sector frameworks that will be produced as a follow up to this masterplan will consider the above technologies and initiatives in greater detail.









# 3 Masterplan Urban Design Framework and Guidelines

## 3.1 Introduction

The urban design and landscape framework brings the different aspects of the strategic planning and development context (Part One), and the strategic development concepts (Part Two) together in the form of an indicative, integrated urban and landscape plan. It illustrates in diagrammatic form the preferred new urban and block structure, the main routes and main elements of the landscape structure.

The urban structure reflects the LAP zoning but has been carefully considered to allow existing residential properties remain as part of a vibrant development mix, if required.

### Indicative framework

The urban framework elaborates the core concepts of primary, secondary and tertiary urban structure described in Part Two of this masterplan. Elements of secondary and tertiary structure are intended to be indicative of the preferred form of development, comprising a permeable network of streets and spaces. The precise alignment of these elements will depend on further detailed topographical and visual analysis at more detailed design stages and will be influenced by the particular land uses to be accommodated.

## 3.2 Urban Structure

The urban structure adopts a loose grid approach, which is strongly influenced by:

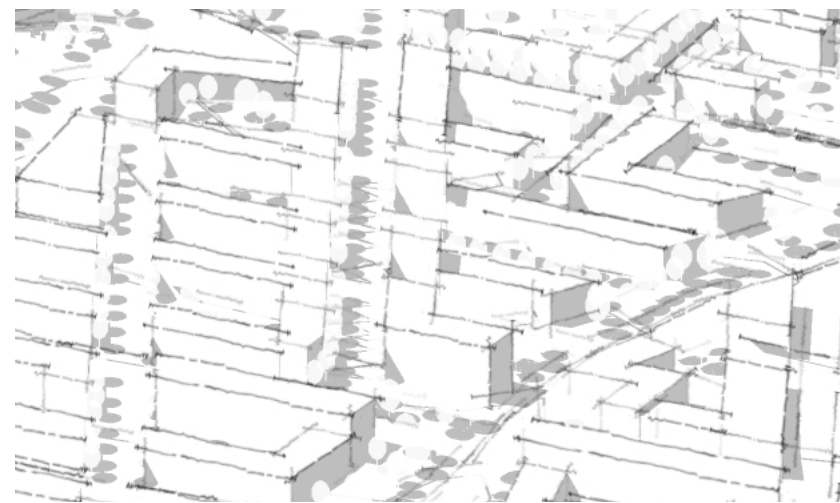
- :: The place hierarchy;
- :: The landscape, slopes and existing features;
- :: Aspect and micro-climatic issues;
- :: A compact and permeable structure, which responds to context and provides accessible and developable lands; and
- :: The need for a distinctive, attractive and legible pattern of streets and spaces which is unique to Fassaroe.

The urban structure that emerges is one which is multi-faceted. It represents the distortion and collision of different grids and axes which are rooted to their local context.



Indicative urban framework showing block structure and principal massing

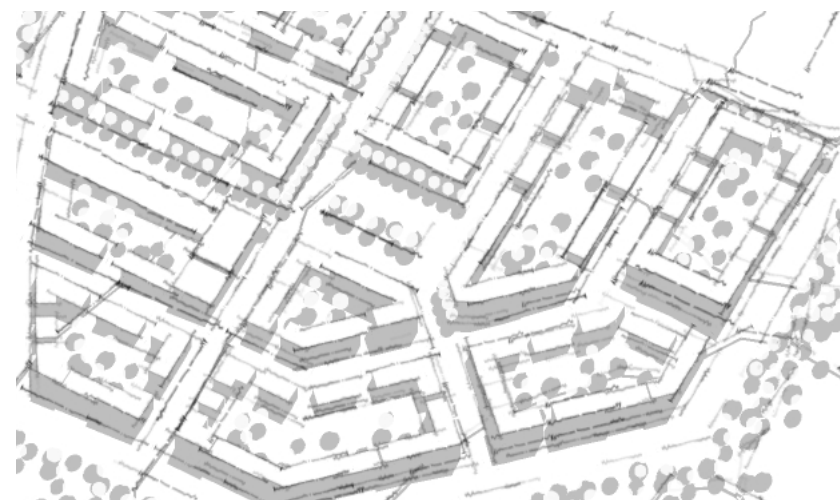




Indicative 3D Form - Diagonal Lower Square to Main Square



Indicative 3D Form - South West neighbourhood hub



Indicative 3D Form - North West neighbourhood hub

### Key axes

The visual connections in Fassaroe play a primary role in defining the main urban structure. The main spaces of Fassaroe are connected either by direct visual connections, or a by a sequence of legible visual links. Important also is the need to take advantage of views to the surrounding landscape. For example, the principal views from the Main Square are aligned with Bray and Bray Head, the Irish Sea and the Great Sugar Loaf.

### Urban space sequences

The primary urban structure comprises a sequence of spaces linked by a new urban avenue. An arrival space with visual and physical links to adjoining areas of Bray is situated in the core of the lower, east sector to service high density enterprise and employment uses in that area. This is linked to the main square in the core area by a new visual and pedestrian link. An intermediate space is located between these two spaces focused on the existing St. Valery's Cross. The main square will function as the primary focal space for Fassaroe and will also provide a stop for Luas. The square will be oriented to maximise its southerly aspect, views to the Great Sugar Loaf, the iconic feature of the surrounding 'borrowed' landscape, and views to Bray and its wider Environs.

The main square will be linked by the new avenue to two new hubs, located in the northwest and southeast sectors. These will also be marked by focal spaces/squares. The new avenue will link between these spaces and act as a spine for new secondary and tertiary urban structure. The proposed southwest space will accommodate a second stop for Luas before it reaches its depot/stabling, and will serve the surrounding enterprise, employment and residential uses.

The focal spaces will provide a sense of place and identity to anchor new development and communities. These spaces should be activated by appropriate, support services and facilities, particularly at ground floor level. There would also be potential for mixed uses overhead.



The urban and landscape edge



Well-defined urban square

Key axes  
Top: Illustrative view of proposed pedestrian link between Lower Square and Main Square  
Bottom: Illustrative view of new square looking towards the Great Sugar Loaf



# 3 Masterplan Urban Design Framework and Guidelines

## Continuity and enclosure

The masterplan emphasises continuity and enclosure of streets and spaces. This is achieved largely by use of the perimeter block typology. Building massing is preferred at the perimeter of each block, although this should not be considered as a rigid requirement. The streets and spaces are, consequently, well defined in spatial terms, and a clear distinction between public and private elements and functions is achieved. The degree of continuity and enclosure may change to reflect the role of streets and spaces. For example, a high degree of continuity and enclosure will be required in the core area, at and near the main square, along main routes and at other important focal spaces. A lesser degree of continuity and enclosure may be more appropriate, for example, along streets in lower density residential areas.

## Urban block structure

The block structure:

- :: Reinforces the main, permeable urban structure.
- :: Provides for a range and mix of uses, which may change over time.
- :: Provides blocks which are capable of development independently and on a phased basis.
- :: Allows the subdivision or amalgamation of blocks.

This flexibility in the block structure will allow the mix of building types and uses necessary to sustain Fassaroe and provide long-term robustness to change.



Indicative 3D Form - Visual connection from diagonal to Bray Town Centre

## Urban scale and intensity

Bray Environs LAP sets out the main drivers of building scale and intensity through its zoning and density provisions. However, massing of development, within these controls, will play an important role in determining scale and continuity of built form.

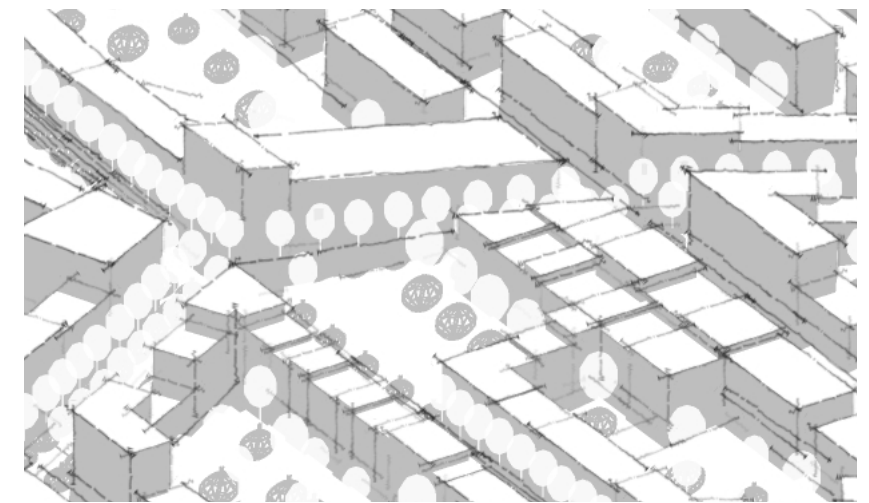
Considerations informing scale are:

- :: The need to provide for different degrees of continuity and enclosure of streets and spaces to reinforce sense of place and legibility. The greatest degree of continuity and enclosure should be in the core area, at and near the main square, along the main routes and at the main urban spaces.
- :: The local topography. In essence, building height should closely reflect slope and topography. This is important from a legibility perspective. Further, the likely micro-climatic and visual impacts indicate that building height will need to be modest in elevated locations, ranging between 2 and 4 storeys. Building height can be increased in the core area near the main square and the lower lying areas at the eastern sector Fassaroe, ranging between 3 and 6 storeys.
- :: Landmark Buildings on the elevated lands, should enhance and not dominate the landscape structure and visual character. Elsewhere, the emphasis on landmarks will be on function, positioning and quality of design and architecture. Landmark buildings should exemplify quality design, materials and execution.
- :: Locally, height and scale should reflect important community or educational facilities and site location such as corners. Any increases in height will be modest as they will be provided to improve local legibility.

Variety of built form should be achieved principally through greater diversity of buildings and plots.



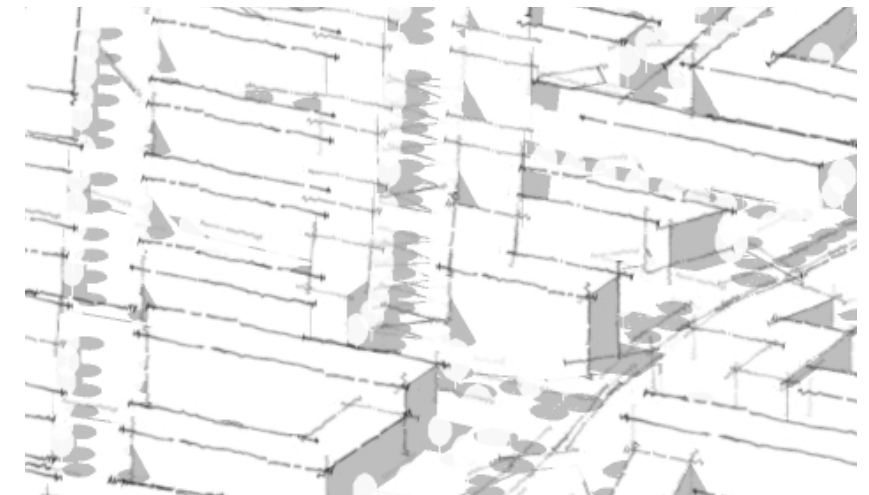
Indicative 3D Form - Visual connection from vicinity of Park and Ride overlooking Eastern Sector towards Bray and Bray Head



Indicative 3D Form - New main square with 'fine grain' buildings



Indicative 3D Form - District park



Indicative 3D Form - 'Gateway' diagonal from lower square



## 3.3 Landscape framework

The landscape framework is based on, and elaborates, the landscape strategy. The framework identifies the core functions of the landscape, sets out a typology of open space and further describes the landscape structure.

### 3.3.1 Landscape functions

The landscape will serve a range of overlapping functions. The open spaces in the landscape can be subdivided on the basis of the specific functions which they will perform.

The lands are elevated and prominent, notably from the higher grounds of the Dublin/Wicklow Mountains to the south and west. The landscape will assimilate the development into the local landscape in harmony with the overall character of the area, thereby, minimising adverse landscape and visual impacts, when viewed from these sensitive amenity areas.

The landscape will play an important role in the overall urban structure and layout. The extent, location and configuration of the open spaces will provide a strong structure to the development and, as such, will inform its overall morphology. It will also provide a “unifying”, visual and spatial quality to different development components, uses and buildings in Fassaroe. Sense of place will be enhanced by conserving, as far as possible, the form of the landscape and its component landform, topography and vegetation, coupled with a high level of landscape design.

Views and prospects to the surrounding landscape will provide a distinctive experience in Fassaroe. Sense of place will be reinforced by ensuring that the views and connections to the surrounding valued landscapes will be protected. The landscape structure considers views and vistas of different type and character, including listed views and prospects.

The site is elevated and as such open and exposed. Landform coupled with tree and hedgerow planting will function as shelter belts in addition to contributing to the overall character of the developed lands.

A high quality residential environment will be achieved by means of planting, boundary and surface treatment, and through the provision of high quality communal and private spaces. Guiding principles require that open spaces will be accessible to all, useable and that they will promote activity, health and wellbeing and promote community interaction.

*The landscape framework will address the current deficiency in open space provision within the town.*

The open spaces will provide the framework for managing drainage (SuDS) and pluvial flood risk. The landscape will accommodate appropriate design elements. These landscape elements can function as attractive amenities in their own right as well as enhancing biodiversity.

The landscape framework will ensure that existing ecological networks – hedges, streams and embankments - will be conserved where possible or appropriate and that new landscape elements will link into this network both structurally and in terms of plant composition.

### 3.3.2 Typology of open spaces

The framework is based on a functional hierarchy and typology of spaces, which are consistent with the typology of open spaces identified in the Bray Environs LAP. These are:

- :: Green corridors/linear spaces.
- :: Parks.
- :: Semi-natural green spaces.
- :: Outdoor sports facilities.
- :: Amenity green spaces/ pocket parks.
- :: Outdoor spaces for children and teenagers.
- :: Civic spaces.
- :: Spaces that provide links to the surrounding countryside.

### 3.3.3 Landscape structure

The landscape structure will function as the overarching framework within which the entire development will be contained.

The landscape plan will be based on:

- :: A series of open space types (as above).
- :: A range of open space functions.
- :: Specific design agendas relating to functions.
- :: A palette of plant types and compositions based on functions to be served.

Multi-purpose open space functions will be realised through the provision of a series of integrated/ interlinked open space types. Integration will be achieved through tree and shrub planting. The landscape will be structured by means of a series of interlinked open space types as set out in the typology above.



Illustrative example of drainage retention pond



Illustrative example of green corridor



Illustrative example of outdoor children's play space, passively supervised



# 3 Masterplan Urban Design Framework and Guidelines

## Primary open space structure and district park

The primary open space structure will originate from the semi-natural Ballyman Glen at the northern boundary of the masterplan area. It will consist of two elements. The first will be its extension to continue on a north-south axis roughly two thirds of the way through the western portion of the lands to connect with the designated greenbelt and Dargle valley at the southern boundary of the masterplan area. It will consist of a strong, semi-wild, peripheral open space to the north and a major district park, which will incorporate active recreation. The central open space will confer a distinct morphology, function as a recreational open space and support the proposed SuDS structure.

The second element of primary open space structure will consist of a peripheral band of open spaces roughly defining the boundary of the entire masterplan area. In addition to serving recreational, ecological and SuDS functions, this will define the extent of the development and, through shelter belt and other tree planting, will integrate the development visually with the surrounding countryside and provide shelter from wind.

A boardwalk/pedestrian amenity path connecting the proposed district park to Bray via the Ballyman Glen (crossing the M11 via a new pedestrian and cycle bridge) will be investigated as part of the later sector framework stages.

## Secondary open space structure and neighbourhood parks

The secondary open space structure will consist of private and communal open spaces (neighbourhood and ecology parks), internal planting within the residential, educational and commercial blocks and amenity/civic spaces and pocket parks within the public domain. These will fulfil the requirement to provide community meeting places, play spaces for children and informal youth areas.

These elements will be mainly associated with residential development, providing children's play and youth spaces, buffer spaces for privacy and screening, and general amenity space for passive recreation as well as serving aesthetic purposes. They will also function as linkages to other open spaces and to the primary open space.

Secondary open space will be associated with other developments to provide small amenity spaces as squares, plazas and courtyards for use by occupants or residents and to provide an attractive outdoor setting for new development.



Top: Urban allotment, Finland  
Middle: High quality neighbourhood park with children's play area, Freiburg  
Bottom: Reed bed walkway, Finland

## Linear open spaces

Linear open spaces act as conduits for pedestrians and cyclists. These will link other open spaces to form a coherent and integrated web, and will contribute to visual coherence and unity of the area. Linear spaces contribute to the protection and enhancement of bio-diversity. They will also function as devices for separating components of the development into distinct 'zones'. These spaces will include existing hedgerows and lines of trees which will be renewed and reinforced as necessary. They will also be developed through planting along the new pedestrian and cycle routes and will also provide further definition to the urban structure and to the Luas alignment. These spaces correspond to the linear spaces referred to in the Bray Environs LAP.

## Buffer spaces

Buffer spaces will consist of:

- :: Tree planting along internal access streets and along the line of the Luas,
- :: Tree planting within car parks and fronting built development,
- :: Tree planting as screening at the interface between residences and other developments,
- :: Screen planting for wind protection on the periphery of the plan lands, and
- :: Mitigation measures for noise and environmental impact of N11 traffic.

The buffer spaces will also augment the LAP requirement of protecting a greenbelt to the south of Fassaroe.



## 3.4 Guidelines for development

The guidelines elaborate important aspects and principles of the framework plan. They focus on important elements of the public and private domain which will be unique to Fassaroe. These elements are described in more detail to highlight aspects of quality, relationship and scale. It is important to recognise that certain design issues should be addressed at later stages, as part of more detailed sector frameworks and later design work.

### 3.4.1 Streets and open spaces

#### Streets

The following street types are important elements in the urban structure:

- :: Fassaroe Avenue,
- :: The Diagonal to Main Square,
- :: Typical core area street,
- :: Typical secondary street,
- :: Typical residential street,
- :: Typical 'boreen'.

These streets should be planned and designed in accordance with the following design principles:

- :: Prioritising the pedestrian and cyclist.
- :: Routing vehicular traffic along the main urban structure and not necessarily on the shortest or most convenient vehicular route.
- :: Designing for lower and safer traffic speeds.
- :: Using passive design to reduce the impact of vehicular traffic, such as reducing carriageway width and dimensions, continuity and enclosure of routes and activities at ground floor.
- :: Avoiding long, curving geometry and introducing cranked sections of alignment.
- :: Providing for more junctions, shorter and more convenient routes for pedestrians, safer crossings and car parking along carriageways.
- :: Including active traffic management measures, as appropriate, such as build-outs, tables, humps and chicanes.
- :: Ensuring safe and convenient access for all, including older people, children and the mobility impaired.

#### Open spaces

It is important to set out some broad parameters for later design stages for the following elements:

- :: Focal urban spaces.
- :: Important open spaces.

Focal urban spaces include the main square, the lower square (east sector), the northwest sector square and the southwest sector square. Important open spaces include the district park, linear open spaces and residential open spaces.

The detailed design of key open spaces should occur as part of a specialist, landscape design proposal (or competition) to develop appropriate character and quality. This will be guided by the more detailed sector framework and will require a detailed brief.

Tables 3.1 to 3.13 set out broad objectives and design elements for important street and open space types included in the masterplan.



Table 3.1 Fassaroe Avenue

| Objectives  | Design elements   |
|---|---|
| To provide the main physical and movement connections between places. | Relatively continuous and enclosed frontage.  |
| To provide the key element of the primary route structure.            | Boulevard/ avenue qualities with secondary enclosure by landscape tree line, coherent street furniture and lighting.  |
| To provide the focus for movement within and through the area.        | Designed for bus and Luas, where appropriate.   |
| To provide the focus for urban form and structure.                    | Dedicated cycle track.  |
| To provide a focus for non-residential activity in mixed use zones.   | Generous footpath and frequent pedestrian crossing points.<br>Permeable elements in floorplane maximised.<br>Active ground floors, where appropriate.<br>Passively supervised by residents. |

+/- 29m

car parking    luas/bus    cycles    footpath

+/- 25m

bio-retention    footpath    car parking    cycles    privacy strip

Typical sections through Fassaroe Avenue with and without Luas



# 3 Masterplan Urban Design Framework and Guidelines

**Table 3.2 Diagonal from lower square**

| Objectives  | Design elements                                |
|---|--|
| To provide the main visual and pedestrian connections between the main square, lower square, eastern sector and Bray. | Relatively continuous and enclosed frontage.   |
| To provide a key element of primary urban structure.  | Terraced urban spine with cascading landscape. |
| To provide the focus for enterprise and employment area.  | Integrated SuDS.                               |
| To provide a SuDS function.   | Coherent street furniture and lighting.        |
| To prioritise local access, pedestrians and cyclists.   | Generous public space/footpath.                |
|   | Permeable floorplane elements maximised.       |
|   | No on-street car parking.                      |
|   | Active ground floors where possible.           |

Indicative section and perspectives views at diagonal street to main square

**Table 3.3 Typical street**

| Objectives  | Design elements  |
|---|--|
| To provide the focus for a wide range and mix of uses.                  | Urban qualities, human scale and continuity and enclosure of frontage. |
| To allow for active ground floors, with potential for other uses above. | Landscape as secondary street character element.                       |
| To allow managed access for all users.                                  | Coherent street furniture and lighting.                                |
| To provide a SuDS function.   | Generous footpath and frequent pedestrian crossing points.             |
| To provide the main access to residential uses.                         | Dedicated cycle track where main network requires.                     |
|   | Integrating SuDS with permeable elements maximised.                    |
|   | On-street car and bicycle parking.                                     |
|   | Access to courtyard or other basement parking.                         |
|   | Passively supervised by residents and business.                        |

Indicative section through typical street

**Table 3.4 Typical secondary/ residential street**

| Objectives  | Design elements   |
|---|---|
| To provide a peaceful and safe focus for residential use. | Intimate human scale.   |
| To provide for safe play and social interaction.          | Continuity and enclosure of frontage.   |
| To prioritise local access, pedestrians and cyclists.     | Strong landscape character with coherent street furniture and lighting.         |
|   | Integrating SuDS with permeable elements maximised.                             |
|   | Generous footpath and public space with safe pedestrian crossing at all points. |
|   | Access to courtyard or other basement parking.                                  |
|   | On-street car parking and access to courtyard parking.                          |
|   | Coherent building line with some variation.                                     |
|   | Potential for shared surfaces.  |
|   | Passively supervised by residents.  |

Indicative section through typical residential side street



**Table 3.5 Typical residential street/ 'homezone'**

| Objectives  | Design elements   |
|---|---|
| Provide a peaceful and safe focus for residential use.                          | Intimate human scale.   |
| Provide for safe play and social interaction.                                   | Continuity and enclosure of frontage. Coherent building line with some variation. |
| Prioritise local access, pedestrians and cyclists.                              | Strong landscape character with coherent street furniture and lighting.           |
| Minimise amount, extent, speed and other impacts of access and through traffic. | Integrating SuDS with permeable elements maximised.                               |
| Passively supervised by residents.  | Generous footpath and public space with pedestrian priority at all points.        |
|   | On-street car parking.  |
|   | Access to courtyard or other basement parking.                                    |
|   | Potential for shared surface/ homezone.   |

Indicative sections through typical lesser residential streets

**Table 3.6 Typical boreen**

| Objectives  | Design elements  |
|---|--|
| Protect and enhance local landscape and biodiversity.                   | Individual design responses to intimate, rural landscape character.        |
| Prioritise local access, pedestrians and cyclists.                      | Augmented hedgerow and tree line.  |
| Provide green links between open spaces.                                | Main enclosure by trees/landscape.   |
| Provide a greater awareness of nature and the semi-natural environment. | Low level, non-intrusive lighting.   |
|   | Integrating SuDS, permeable elements maximised.                            |
|   | No parking.  |
|   | Building frontage, where appropriate, at suitable setback behind hedgerow. |

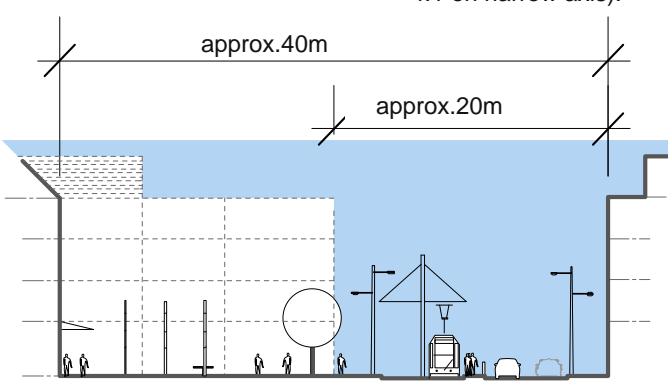
  


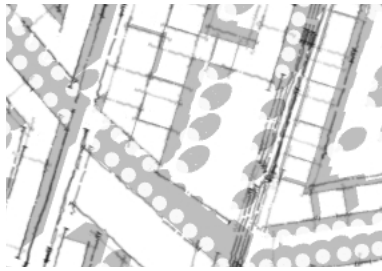


Shared surface 'homezone', Freiburg





# 3 Masterplan Urban Design Framework and Guidelines

**Table 3.7 Main square - Core area**

| Objectives   | Design elements   |
|--|---|
| To provide the main focal, social and civic place for Fassaroe.  | <p>Enclosed urban scale with important framed views out to Bray, Bray Head and surrounding landscape, such as set-piece vista to Great Sugar Loaf.</p> <p>A mixed grain of plots and buildings, providing for an adaptable mix of uses, including district retail/services</p> <p>Active ground floors, with residential or other uses above, where appropriate.</p> <p>High quality pedestrian environment and pedestrian priority space.</p> <p>Continuity of building line and enclosure of space (generally not exceeding width to height ratio of 4:1 on narrow axis).</p> |
| To provide a focus for the urban and route structure.  |   |
| To provide for a robust public space capable of many uses and activities.  |   |
| To provide a focal space for a robust mix of surrounding uses and activities.  |   |
| To provide for high quality access to public transport and interchange between transport types.  |   |
| To provide a focus for retail and service activities in Fassaroe.  |   |
|  <p>approx. 40m</p> <p>approx. 20m</p> <p>Luas</p> <p>carriageway</p> <p>footpath</p> <p>Indicative section through main square</p> |   |

|   | Design elements (continued)   |
|---|---|
|    | Main public access and frontage to a new civic/community facility.  |
|    | High quality design with a coherent palette of paving, street furniture, lighting and structured tree planting. |
|   | SuDS measures incorporated with permeable elements maximised.   |
|   | Integrated design for Luas and bus access.  |
|   | Managed access, emergency and loading to all sides.   |
|   | Cycle parking facilities.   |
|   | Passively supervised by element of residential development.   |
|  <p>Illustrative visualisation of main square looking south towards Great Sugar Loaf</p> |   |

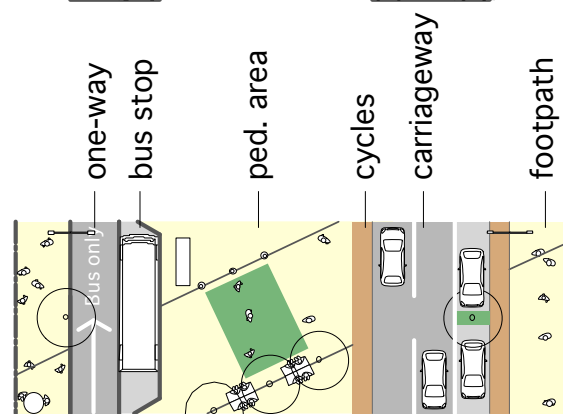
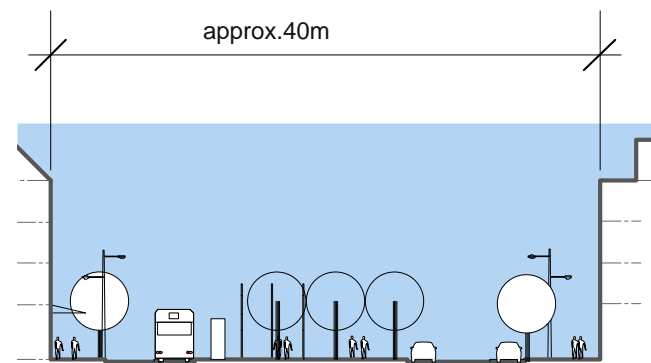
**Table 3.8 Lower square - East sector**

| Objectives  | Design elements  |
|---|--|
| To provide the meeting and business space for enterprise and employment area.   | <p>Enclosed urban scale with important framed views to Bray, Bray Head and main square via the new diagonal.</p> <p>A vibrant business space with a degree of activity at edges at ground floor level, including local retail/ services.</p> <p>High quality environment with shared access and pedestrian and pedestrian priority space.</p> <p>Continuity of building line and enclosure of space (generally not exceeding width to height ratio of 4:1 on narrow axis).</p> <p>Main public access and frontage of surrounding buildings to square.</p> <p>High quality design with a coherent palette of paving, street furniture, lighting and structured tree planting.</p> <p>SuDS measures incorporated with permeable elements maximised.</p> <p>Integrated design for bus access and stop/terminus.</p> <p>Managed access, emergency and loading to all sides.</p> <p>Cycle parking facilities.</p> |
| To provide for a "point of arrival" and visual and physical connection to Bray.   |  |
| To provide an important element in the urban and route structure.   |  |
| To provide a degree of mixed use and services to support the enterprise and employment activities and adjacent residential development. |  |
| To provide for public transport node.   |  |
|   |  |
|  <p>Lower square - indicative sketch view</p>       |  |
|  <p>Lower square - potential character</p>         |  |





Illustrative visualisation of Lower square looking along the Diagonal to main square



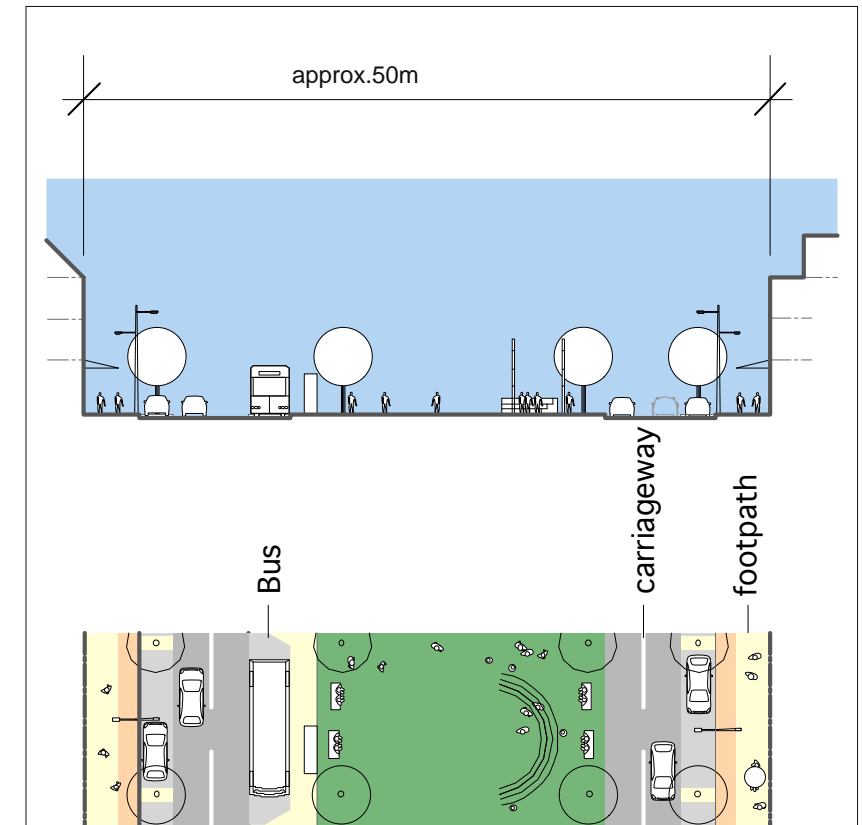
Indicative section through lower square

Table 3.9 Northwest square

| Objectives   | Design elements   |
|--|---|
| To provide the focal space for the local community.  | Enclosed urban scale with important framed views to surrounding landscape.  |
| To provide an important element in the urban and route structure.                          | High quality landscape dominant space with open space, structured tree planting, elements of high quality paving.         |
| To provide for mixed uses, services and community uses necessary to support the community. | Shared access with areas of pedestrian only and pedestrian priority.  |
| To provide for public transport.   | Continuity of building line and enclosure of space (generally not exceeding width to height ratio of 4:1 on narrow axis). |
| To provide an intimate place for meeting and social interaction and gatherings.            | Main access and frontage of surrounding buildings directly to square.   |
| To provide a safe and attractive environment for playing and walking.                      | SuDS measures incorporated with permeable elements maximised.   |
|  | Integrated design for bus access and stop/ terminus.  |
|  | Managed vehicular access, emergency and loading to all sides.   |
|  | Cycle parking facilities.   |
|  | Design for avenue connections into and through the square.  |
|  | Active uses at ground floor maximised, including local retail/ services.  |
|  | Main entrance to school and community uses at square.   |



Northwest square



Indicative section through Northwest square





Northwest square - potential character



# 3 Masterplan Urban Design Framework and Guidelines

**Table 3.10 Southwest square**



| Objectives   | Design elements   |
|--|---|
| To provide the focal meeting and business place for enterprise and employment area.                | Enclosed urban scale with important framed views to surrounding landscape.  |
| To provide an important element in the urban and route structure.                                  | High quality landscape-dominant space with open space, structured tree planting, elements of high quality paving.         |
| To provide for a degree of mixed use and services to support enterprise and employment activities. | Shared access with areas of pedestrian-only and pedestrian priority.  |
| To provide for public transport.   | Continuity of building line and enclosure of space (generally not exceeding width to height ratio of 4:1 on narrow axis). |
|  | Main access and frontage of surrounding buildings directly to square.   |
|  | SuDS measures incorporated with permeable elements maximised.   |
|  | Integrated design for Luas stop and bus access and stop/ terminus.  |
|  | Managed vehicular access, emergency and loading to all sides.   |
|  | Cycle parking facilities.   |
|  | Design for avenue connections into and through the square.  |
|  | Active uses at ground floor maximised, including local retail/ services.  |

Southwest square

**Table 3.11 District park**



| Objectives  | Design elements  |
|---|--|
| To provide the principal open space for Fassaroe.                         | Tree and shrub planting.   |
| To address open space deficiency in Bray.                                 | Through-circulation between different areas of the development   |
| To incorporate and link the Ballyman and Cookstown/ Dargle Glens.         | Circulation space for pedestrians and cyclists.  |
| To provide a north-south corridor for enhanced biodiversity.              | High quality furniture.  |
| To provide nature conservation and educational opportunities for schools. | Children's play equipment.   |
| To provide a key element in structuring and framing new urban areas.      | Standard and heavy standard trees in clusters to provide shelter and definition including Ash, Birch, Norway Maple, Mountain Ash, Scot's Pine. |
| To exploit views out to Wicklow Hills and to coast.                       | Shrubs including tall shrubs- Sumach, Amelanchier, Viburnum sp.  |
| To provide active youth recreation.                                       | Whips in clumps including Salix, Alnus and Sambucus sp.  |
| To promote community outdoor passive activities.                          | Integrated SuDS components subject of later landscape design stages.   |
| To provides buffers for microclimate comfort.                             | Playing fields (possibly shared with educational facilities).  |

District park (northern section)

**Table 3.12 Linear and buffer spaces**

| Objectives  | Design elements  |
|---|--|
| To provide parks and other spaces that are interlinked.                           | Tree and shrub planting.   |
| To contribute to overall landscape structure.                                     | Combination of hard and soft surfaces including grass areas with seating, lighting, planting and small play elements for younger children. |
| To provide amenity and communal gathering spaces for adjoining residential areas. | Detention ponds and vegetated swales where appropriate.  |
| To provide shared spaces for adjoining employment and residential development.    | Passive surveillance from adjoining homes.   |
| To ensure each 'park' is located within walking distance of homes.                | Safe pedestrian and cycle routes to and through the spaces.  |
| To contribute to objectives for SuDS.   | Integrate with overall character of residential areas.   |
| To protect existing biodiversity, such as existing hedgerows, where possible.     | Robust planting and street furniture.  |
|   | Heavy standard trees such as Birch, Native Cherry, Beech, Red Oak, Aspen, Rowan.   |
|   | Shrubs as whips, tall shrubs Salix, Alnus, Viburnum sp, Syringa sp.  |
|   | Sambucus sp.   |






Linear and buffer space



**Table 3.13 Residential open spaces**

| Objectives  | Design elements  |
|---|--|
| To provide for community outdoor and passive activities.                                  | Community-led design process where feasible.   |
| To contribute to structure of residential areas – definition/ boundaries/ visual quality. | Tree and shrub planting.<br>Detention ponds and other SuDS components.   |
| To provide buffers for microclimate comfort.  | High quality seating and paving.<br>Children’s play equipment.   |
| To provide circulation space for pedestrians and cyclists.                                | Standard and heavy standard trees in clusters to provide shelter and definition including Ash, Birch, Norway Maple, Mountain Ash, Scot’s Pine. |
| To provide views out to Wicklow Hills, Bray and coast.                                    | Shrubs including tall shrubs- Sumach, Amelanchier, Viburnum sp, and ground cover species including Rosa and Vinca sp.                          |

Residential open space

### 3.4.2 Private domain

The elements of the private domain are considered under the headings of blocks, plots, housing and green buildings.

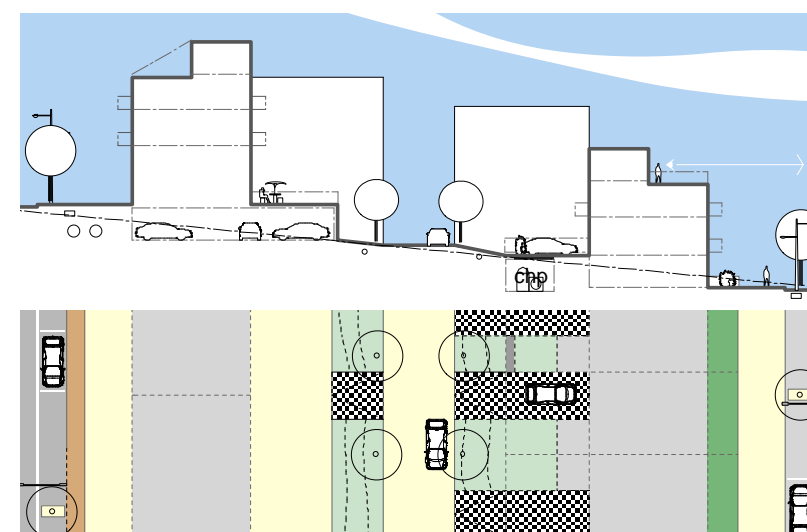
#### Blocks

Perimeter blocks will define the urban structure of Fassaroe. The urban blocks shown in the framework are indicative and have been derived having regard to the need to create workable development parcels, the particular challenges of the local topography, the need to allow for a robust mix of uses and building types and the appropriateness of the perimeter block typology. The block size and shape may change within the overall framework, in response to any site issues that arise and subject to meeting the main aspects of the strategy.

#### A typical sloping block

The local topography is undulating giving rise to areas of steeper gradient. The block structure has been devised to align with existing contours where possible. However, challenges will remain in parts of the area, in providing accessible streets and spaces with frontages and relationships between buildings and space. In most instances, buildings will step with the slope to ensure active frontages and street interaction. In areas with steeper slopes, more steps/ individual buildings will be required on the frontage. In instances where this cannot be achieved then limited terracing may be appropriate.

Sloping blocks can also provide opportunities to integrate undercroft parking.



Potential approach to dealing with changes in level with blocks

#### Mixed use and plots

Mixed use is an established principle of the Bray Environs LAP. In order to achieve mixed use there needs to be a degree of variety in the nature and scale of blocks, plots and buildings. The degree of use mixing should be greatest at and near the main square in the core area and there should be a lesser degree of use mixing at the neighbourhood and focal spaces to support local residents and activities. It is established that mixed use can be provided in three ways:

- :: Vertical mixing of uses within a building, e.g. residential use over office use, over retail use etc;
- :: Horizontal mixing of uses within the block, based on smaller plots, e.g. retail use beside residential use, beside office use etc; and
- :: Mixing of uses over time when market, use and style requirements may change, e.g. leaving one or more plots undeveloped for future development, or carrying out development which is intended to be replaced or upgraded in the medium term.

In response to this, the framework plan provides for robust sized and shaped blocks, which are capable of accommodating different uses and building types. At the focal spaces the block should be further subdivided into a number of plots capable of accommodating independent buildings and uses. This will allow for different space types and quality, and different development stages. In addition, splitting blocks into plots will encourage a greater diversity of design and type, which will reinforce the sense of place and identity.

When designing for mixed use blocks it will be important to consider the amenity issues that emerge. However, suburban standards of housing will not be appropriate in the core areas and at focal spaces where density and intensity of buildings and uses is greatest.



Example of major level change within residential development



# 3 Masterplan Urban Design Framework and Guidelines

## Housing

Guidelines at national level including, Delivering Homes, Sustaining Communities, DoEHLG, 2007, and the Sustainable Residential Development Planning Guidelines, DoEHLG, 2009, and the accompanying Urban Design Manual, emphasise the importance of sustainable critical mass, movement and urban and landscape quality in the development of new residential areas.

The Manual identifies 12 criteria to be addressed in the design and development of sustainable residential development in urban areas. The criteria apply at the level of the neighbourhood, the site and the home. Their requirements have been considered in the structuring of the residential areas and the following general development guidance relating to housing.

Choice and diversity will be achieved through the development of a variety of housing typologies. Housing should be designed to connect the development to its landscape and setting. It should also provide residents with good standards of amenity, privacy, security and energy efficiency to encourage the creation of attractive and safe living environments.

Building design should adopt a distinctive and durable palette of high quality materials that will make a positive contribution to the locality. Given the prominent nature of the lands, particular care should be taken with the materials and external design and appearance of housing. A diversity of designers, and design approaches will promote a distinctive place and broaden the appeal of the area. This will be particularly important at the focal spaces and along the avenue.

Building fronts for all residential buildings should be orientated towards the primary street frontage, and/ or parklands where appropriate. Primary pedestrian entrances and active living spaces within the buildings should be located along this frontage. Additional secondary pedestrian access to buildings may be provided from private parking areas associated with apartment buildings, where proposed.

### *Apartments*

Given density and population targets set out in the Bray Environs LAP, apartments will comprise an important element of housing in Fassaroe. The apartments will provide a higher density and scale of development than other housing types. Apartments can combine well with non-residential uses and can be more flexible than conventional housing in dealing with design challenges such as corners and edges. Therefore, they should be located along or near the main urban or route structure. In particular, it will be appropriate to focus apartment development onto the main focal spaces, along Fassaroe Avenue and in selected locations fronting the district park.

Apartments should be designed as long-term and sustainable living accommodation rather than as more transient 'starter' homes. They have the potential to provide quality accommodation for families as well as young and old singles, or childless couples.

Building aspect should be managed to maximise the privacy between the apartments and adjacent development. Each apartment should have access to a generously proportioned balcony, orientated to maximise solar access

and privacy for residents. The masterplan block structure provides for the development of a communal open space at ground floor level, located at the rear of the building. A setback will provide a privacy strip and buffer zone between ground floor residential units and the street.

Apartment design should be cognisant of the standards set out in "Sustainable Urban Housing: Design Standards for New Apartments", 2007, DoEHLG. Facilities such as communal or independent storage of bicycles and prams, clothes-drying and adequate space for sorting and storage of recyclables and refuse should be provided.

### *Townhouses and terraced houses*

Townhouses and terraced housing will provide variety in housing typologies in the higher density blocks and a transition between these housing areas and areas of lower density detached housing.

Houses should be designed in a diverse and adaptable way, with the perimeter block providing the most robust and adaptable urban structure for different housing typologies.

On quieter, local residential streets emphasis should be on creating a zone of well defined and attractive, semi-private space at the front of each house. The design of this space should strike an appropriate balance between the need to protect the privacy of ground floor uses, while also ensuring appropriate street definition and sense of enclosure. Each house will be provided with private open space located to the rear of the property.



Different buildings and basement parking in one urban block - rear view



Corner apartment building



Townhouses



## *Semi-detached and detached houses*

Semi-detached and detached houses are suitable for home zone and residential streets. They should largely avoid the main avenue and urban spaces. The structure and design of residential buildings should be robust enough to facilitate their alteration and/or extension to meet the changing requirements of households at different life stages. The layout and access arrangements should facilitate the flexible addition of accessory dwelling units such as home offices, guest quarters or accommodation for teenage children or elderly family members. Any home office element must be compatible with residential use.

Future extensions should be capable of being accommodated in a way that minimises negative impacts on the quality and amenity of the streetscape. Garages and roof spaces should also be readily convertible.

Proposed building lines should strike an appropriate balance between the need to protect the privacy of each home on the ground floor, while also ensuring appropriate street definition and sense of enclosure.

## *'Self-build' plots*

Self-build plots are an increasingly popular method of housing development where single plots are sold to individuals who can build their own house within defined building lines. Individually-designed units can be provided on small to medium-sized plots. Plot width should range from 6-10 metres, the depth should be approximately 25 metres and the setback should not exceed 3-4 metres. A garden depth of approximately 10-11 metres should be achieved. This housing type is more appropriate to lower density housing areas.



Example of individually designed detached house as 'self-build' plot

## *Live work*

A 'live-work' unit refers to property that is used as both a dwelling and as a workspace, where the workspace occupies a certain proportion of the unit's total floor area. The work element must be compatible with residential use. There is a wide range of compatible uses such as fashion, art, design, computing and I.T., consultancy, medical and therapeutic practices.

Live-work accommodation should be designed with its function in mind. It should make reasonable provision for business visitors. Communal areas, such as entrances, corridors and staircases need to be of a suitable standard. A reliable and fast internet connection in the area is required.

## *Other housing types*

Providing for longer-term adaptability and diversity will require consideration of less common building types. Such typologies might include mews houses, maisonettes and duplex apartments. These typologies will broaden the range of households that can be accommodated in the area and can help to provide solutions to more challenging sites or locations. They are likely to be useful in dealing with corners and transition between different housing or use types.



Example of fine grain self-build residential development

## **Green buildings**

All buildings in the plan area should incorporate environmentally sustainable design principles in their design and construction. Best practice considers reduced energy demand as a key principle. New buildings should strive to reduce their energy and water demand through consideration of the following elements:

- :: Sustainable urban form should ensure that an appropriate microclimate is established between buildings;
- :: Careful consideration of building orientation, form, massing and fenestration to make the most of passive solar gain for space heating;
- :: Use of insulation to reduce heat loss from draughts and uncontrolled ventilation;
- :: Reduce water use by promoting rainwater harvesting and recycling of rainwater and in-building grey water treatment systems;
- :: Use materials with low embodied energy and consider incorporating environmentally 'smart' materials that can minimise energy use by responding to changing external conditions; and
- :: Provide for building evolution through adaptable design.



Example of level changes subsumed in parking and driveways



# 3 Masterplan Urban Design Framework and Guidelines

New development should maximise opportunities to capture energy and water including:

- :: The use of natural daylight;
- :: Opportunities for passive solar gain for solar thermal water heating and electricity production;
- :: The potential for incorporating wind energy;
- :: The use of building roofs as solar collectors and rainwater harvesters. Green roofs can be used as amenity spaces that also support biodiversity and rainwater attenuation; and
- :: Integrate heating, cooling and ventilation systems. Building occupants should have control of these features where possible.

## 3.4.3 Parking

### Car parking

A range of parking solutions will be required to reflect location, topography, street type and building typologies. It is expected that car parking will be provided in a range of ways and most likely in combination. These include:

- :: On-street parking (provided in most areas);
- :: Basement parking;
- :: Undercroft/ semi-basement parking;
- :: Grouped surface parking, on-street or in courtyard areas; and
- :: Shared or community car parking facilities (potentially in the centre and in conjunction with the Park and Ride facility).

Car parking provision should be such that it does not dominate the visual character of the street and it should always be provided with pedestrians and particularly child safety as a priority. It should be carefully designed and adequately softened by tree planting and build-outs.

In some instances on-street parking, can play a positive role in allowing access to ground floor activities and reducing traffic speed.

### Employment and enterprise areas

In the higher density employment and enterprise areas, a significant amount of car parking is likely to be provided in basements.

In the lower density employment and enterprise areas, car parking can be accommodated in a mix of undercroft parking, taking advantage of the sloping topography of the site, and surface car parking arrangements. Where possible, surface car parking should be located behind the building line. It should be designed as a legible element of the landscape design of the interior courtyards proposed as part of the overall landscape strategy for the sector.

Vehicle access to grouped parking areas should generally be provided from local access streets rather than directly from the avenue. Clear and safe pedestrian routes should be provided between parking areas and building entrances.

On street parking is provided for along the avenue and on local access streets. It will be important to ensure that on-street car parking does not dominate the building frontage or street character. It should be carefully designed and adequately softened by tree planting and build-outs.

### Residential areas

An appropriate balance between on-street and off-street parking should be struck in residential areas. In areas of lower density, on-street parallel and perpendicular parking may be adequate to serve the requirements of residents and visitors. In areas of higher density, some off-street car parking may be required.



Example of photovoltaic cells incorporated into facade of residential building



Example of street parking



Example of shared residential parking areas



### On street parking

In general, as much parking as possible should be provided in the street as this helps to generate street activity. It also reduces the need for large front gardens and set-backs, improving street proportions and character.

Where on-street parking is provided, it should be located where it can be overlooked by residents and pedestrians. It should be designed as an integral part of street planting and design to ensure that it does not dominate the visual environment and detract from the safety and amenity of residential areas.

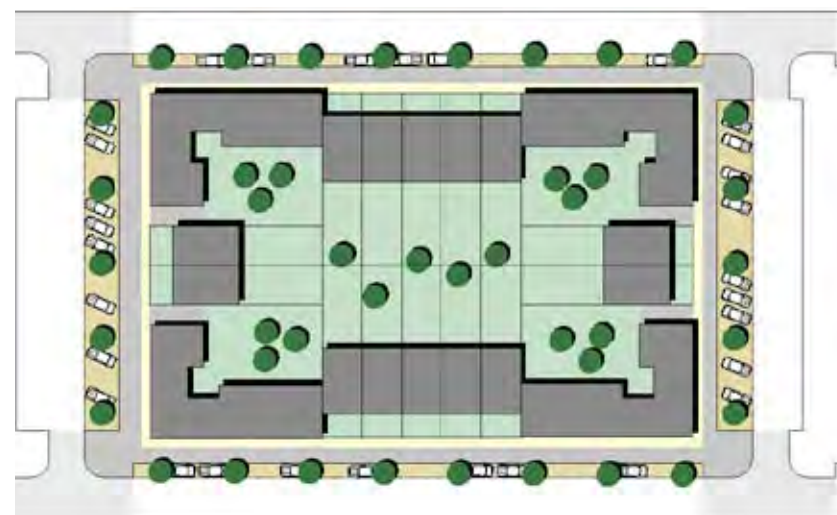
### Off street parking

This can be provided as surface car parking located behind the building line in carefully designed and planted courtyards. It can also be accommodated in purpose-built undercroft or basement car parking structures. Access points to undercrofts/ basements must be carefully managed to minimise their visual impact on streetscape and to ensure that they do not detract from the amenity of any communal open spaces. Care should be taken to ensure appropriate and as direct as possible pedestrian access between parking areas and individual homes.

### Cycle parking

Generous provision should also be made for cycle parking, particularly in medium to high-density areas. The main urban spaces will also need to provide adequate and safe cycle parking facilities.

Proposed commercial development should also make provision for secure bicycle parking and storage.



Illustrative example of residential perimeter block with on-street parking

### 3.4.4 Key infrastructure

Key infrastructure will require to be provided to serve Fassaroe. Most of these elements are covered elsewhere in this masterplan. Issues such as transport and access, gas, telecommunications, electricity, water supply and foul and surface drainage are dealt with in Part One of this masterplan. However, certain unique elements are further outlined below.

#### Ballyman bridge

The bridge spanning the Ballyman Glen will be a key element in the urban structure of Fassaroe and the wider development of the western environs of Bray, including Old Connaught. It will provide for Luas, bus, general vehicular, pedestrian and cycle access and movement. The bridge will be provided as part of the extension of Luas services to Fassaroe from Cherrywood. It will also comprise part of an orbital road link connecting the entire western environs with Bray Town Centre.

The design should be of the highest quality and should be respectful of the natural character and amenity of the area. It should not dominate the surrounding landscape or impact negatively on important views and prospects. The impact of the bridge on local ecology will need to be carefully assessed and any mitigation measures for potential impacts considered at the project planning stages.

The bridge will be delivered as a joint project between the landowners, local authorities and the RPA. The construction, funding and feasibility arrangements will be determined prior to delivery.



Proposed location for Ballyman Glen bridge viewed from northwest of masterplan area

#### Monastery link road

This road will form an important part of the urban structure and a key road connection to the surrounding areas to the west of the masterplan area. The portion of the road will be delivered at an early stage to reflect the phasing of development, in particular the development of the northwest and southwest sectors, and will need to provide for a range of users. Shared pedestrian and cycle facilities should be separated from the main carriageway. Given its location in a sensitive visual environment, its design and character will need to be carefully considered. The road margin will need to be properly planted, with hedgerow and tree lines, to minimise its visual impact and enhance biodiversity. The delivery of the overall link road will be progressed jointly by the landowners and the roads authority.

#### Luas line

Luas services are planned to be extended from the existing Dublin City Centre-Sandyford-Cherrywood line to Fassaroe and Bray as part of the strategic public transport policies and projects for the metropolitan area. The masterplan makes provision for two stops in Fassaroe, one serving the core area and the park and ride facility, and the other serving the southwest sector. In addition, the masterplan makes provision in the southwest sector for a Luas stabling depot.

The timetable for delivery of Luas is yet to be confirmed by the RPA. While early provision of Luas is desirable to establish public transport patterns with users, it is also important to have in place a critical mass of population and workers, to provide patronage for Luas. The early phases are therefore not likely to be served by Luas. As an interim measure a shuttle bus service to Bray Dart station and Main Street may require to be put in place to provide a good level of service.

#### Park and Ride facility

The masterplan makes provision for a park and ride facility of 750 spaces primarily associated with the operation of Luas. This will be provided in the core area, with direct access off the "Greenstar" roundabout, which will ensure good accessibility for traffic from the N11 and Bray, while reducing the potential impact of traffic volumes on the new road network within the core area of the settlement. This facility will thereby remove potential commuter traffic off the N11/M11 corridor. The structure is likely to be multi-storey, with the local topography meaning that the upper levels will provide almost direct access to the proposed core area Luas stop and the new main square. The structure may also accommodate additional, multi-storey car parking for local businesses, offices and residents. The upper/surface level of the structure within the core area would be suitable for a range of development types.



# 3 Masterplan Urban Design Framework and Guidelines

## 3.5 Phasing

### 3.5.1 Introduction

The precise longer term phasing of development cannot be determined at this stage in the planning and development process. However, it will be influenced by:

- :: Land ownerships,
- :: Evolution or cessation of certain, existing operations,
- :: Market conditions, and
- :: Infrastructural constraints.

At the outset of the masterplan it is assumed that planning and development will be carried out in three, roughly equal and sequential indicative phases, being:

- :: Phase 1 - Initiation and early development - Years 0-7 (2010-2017 inc.);
- :: Phase 2 - Core development - Years 8-12 (2018-2022 inc.); and
- :: Phase 3 - Development and completion - Years 13-17+ (2023-2027+).

It is possible that these indicative phases may overlap. For clarity, the indicative phasing programme is set out graphically to show potential progression of development at Fassaroe. The table below shows an indicative programme for delivery of the initial key supporting infrastructure within Phase 1. Given that the delivery of key infrastructure is predicated upon and triggered by certain development capacities, there is no restriction, in principle, on these capacities being reached by overlapping development in a combination of the different indicative phase locations indicated in the diagrams herein. As such, phases of development can commence, but do not necessarily require to be completed, prior to commencement of a subsequent phase; however the progression of development must ensure an appropriate coherence of the evolving form of Fassaroe as a new settlement area.

| Res. Pop.     | Empl. Pop.   | Infrastructure required   |
|---------------|--------------|---|
| pre-requisite |              | Neighbourhood Centre (including crèche, shop, play areas)                 |
| -             |              | Interim water reservoir (required for development above 75m contour line) |
| 750 -1,300    |              | Primary school  |
| 2,200 (100%)  | 1,600 (33%)  | Interim upgrade of Fassaroe Interchange                                   |
| 2,200 (100%)  | 2,700 (56%)  | Further interim upgrade of Fassaroe Interchange                           |
| 2,200 (100%)  | 3,200 (100%) | Full upgrade of Fassaroe Interchange                                      |

Triggers for key infrastructure within phase 1

Notes to table:

Foul drainage capacity reliant upon assessment of Dargle foul sewer capacity, which is subject to a separate study.

Water supply will ultimately rely upon future reservoir in Ballyman.

Schools requirement based upon CSO average school percentages and Dept of Education attendance thresholds for viable schools.

Traffic capacity based upon WSP Report dated September 2009.

With regard to the capacity of the Fassaroe Interchange, the sum of the residential and employment thresholds will not always be the same due to the differing characteristics of residential and employment trips – any major changes to the balance of residential and employment may require an adjustment of the table.



### Phase 1

The first phase of development will include the masterplanning, feasibility and planning and design stages. It will be divided into an earlier (1A) phase and later (1B and 1C) phases, which will reflect the sequential development of the area from the Eastern (Bray) sector and the Fassaroe core area along the northern spine (Fassaroe Avenue). It will include significant elements of different current land ownerships. It will be structured around the provision of the following key infrastructure:

- :: Staged upgrading of Fassaroe interchange;
- :: Lower and upper east sector and lower square;
- :: The Diagonal link;
- :: The northern spine (Fassaroe Avenue) facilitating onward connection to Enniskerry;
- :: Development along the northern spine (Fassaroe Avenue) 1B and 1C areas;
- :: Northern elements of the district park and open space.

These elements together will form a skeletal structure with focal spaces facilitating initial development while allowing incremental development to extend outwards on a planned basis. Early development of residential and employment floorspace is likely to be required to be accompanied by associated development of neighbourhood retail facilities.

The roll-out of development will trigger the need for the present Fassaroe interchange to be upgraded on a staged basis. This will depend on the quantity, mix and delivery of residential and commercial land uses.

The early phase of development will require a local public transport service which is integrated with the existing public transport services and Bray Main Street and Dart services in particular. This may be provided in consultation with the relevant statutory providers.

The growing residential population is likely to trigger the need for a primary school. This school should be operational by the time the development reaches a residential population of 1,300 persons. However, consultation will occur with the Department of Education and Science to confirm that a primary school is actually required at this stage in Fassaroe, having regard to potential available capacity within existing school facilities in Bray, and the population cohort profile occurring in Fassaroe. Development proposals will have regard to the guidelines of the Department of Education and Science.

Adequate water supply exists to serve the overall Fassaroe Masterplan development below the 75 metre contour line. However, the earliest phases of development above the 75 metre contour line will require an interim reservoir.



## Phase 2

Development of the LAP lands within Phase 2 will eventually require the delivery of other transport infrastructure including the Ballyman Bridge and Luas Line, and upgrades to the N11 / M11. The delivery of this infrastructure will be planned to facilitate the subsequent phases of development and will be consistent with the overall transport policies and objectives set out in Transport 21 and Vision 2030 and the delivery programs of the relevant transport agencies including the Railway Procurement Agency and the National Roads Authority.

Phase 2 will be a relatively intense core phase of planning and development. It will include:

- :: Expansion and completion of any incomplete Phase 1A, 1B and 1C areas;
- :: Remaining areas of the Northwest Sector;
- :: New pedestrian and cycle crossing of M11 linking Ballyman Glen amenity walk with Bray (subject to feasibility);
- :: Main square with associated retail and service activities;
- :: Additional educational (a second primary school and a post-primary school) and community facilities, in accordance with requirements of the Bray Environs LAP. Consultation with the Department of Education and Science to occur within the range of 1,200 to 1,400 dwelling units in order to determine appropriate timing of delivery; and
- :: Significant elements of the district park and open space.

The timing of the indicative second phase corresponds with the current timeframe for the delivery of Luas. Also, development is likely to reach a reasonable critical mass of population and employment necessary to support the business case for Luas and associated park and ride facility. This, in turn, will also require supporting key infrastructure in the administrative area of Dun Laoghaire-Rathdown. The following minimum elements of Luas infrastructure are likely to be delivered in Phase 2:

- :: Ballyman bridge crossing;
- :: Luas track, platforms and stabling yard etc; and
- :: Park and Ride facility.

Notwithstanding this, capacity assessments indicate that development of Phase 2 can commence in the absence of the Ballyman bridge and Luas, with ongoing operation of shuttle bus services to Bray DART station and Main Street.

## Phase 3

Completion will be dependent on the release for new urban development of the major landholdings, including lands currently in Roadstone and Greenstar ownership and use. While this may and can occur earlier in the overall indicative and overlapping phasing programme, it is assumed that the bulk of this development will be delivered in Phase 3.

In order to facilitate development on the existing Roadstone quarry lands, significant restructuring of the quarry operation would have to be undertaken. This would involve the decommissioning of the existing gravel pits and associated extraction activities.

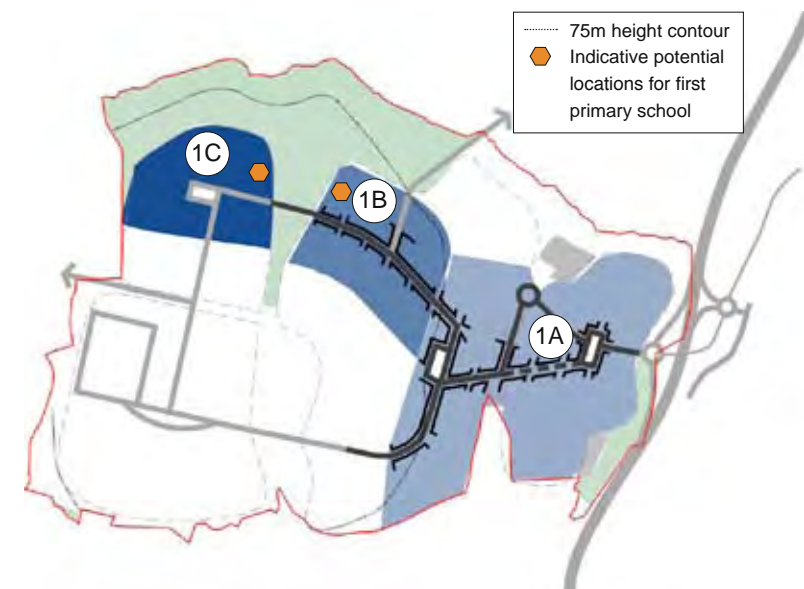
There are, however, significant portions of development lands within Roadstone that could be developed prior to any such scaling down of operations (These are identified in phase 1A).

Likewise, should Greenstar decide to redevelop their lands, the existing recycling facilities would need to be modified or part-decommissioned to allow for the development of the proposed Business Campus.

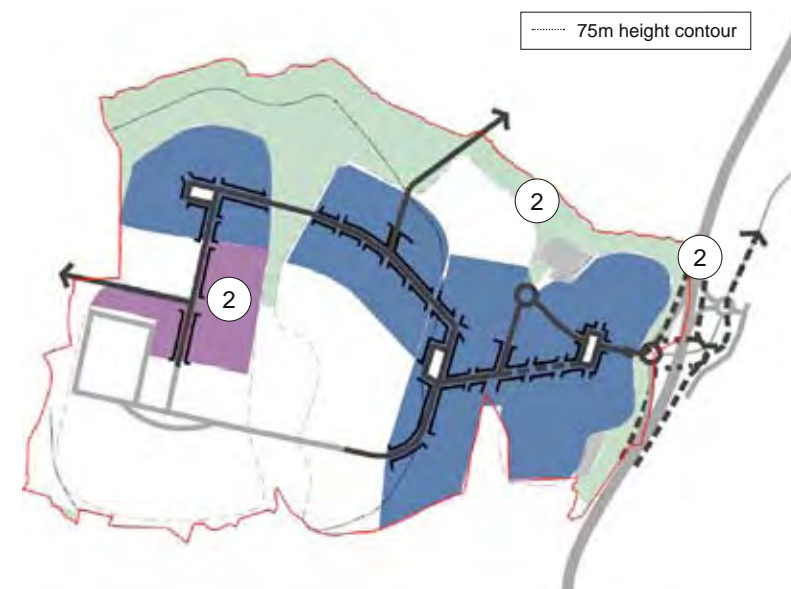
Important elements of infrastructure will be required for this stage including:

- :: Completion of Fassaroe Avenue (southern leg) and associated crossings etc;
- :: Southwest square; and
- :: Completion of district park and open space.

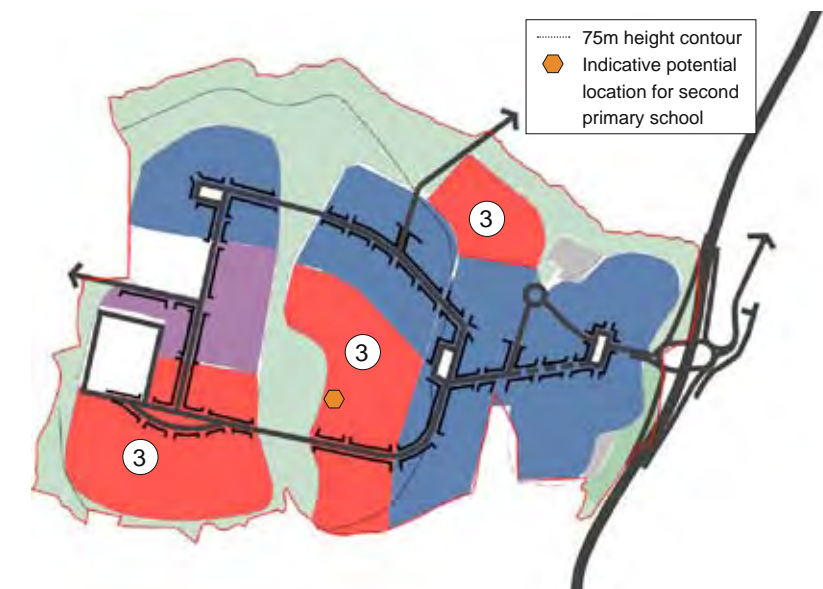
Third phase development will also trigger any remaining elements of social and community infrastructure, including any additional civic facilities. Consultation with the Department of Education and Science will take place as required.



Indicative Phase 1 (0-7 years)



Indicative Phase 2 (8-12 years)



Indicative Phase 3 (13-17 years)



# 3 Masterplan Urban Design Framework and Guidelines

## 3.5.2 Development capacity

The following table and diagram presents a summary of development parcel areas in the masterplan area and indicative development capacity based on the density requirements and use mix as set out in the Bray Environs Local Area Plan 2009. The figures presented here do not account for community facilities such as local retail and services, etc. All figures are indicative and rounded up to the nearest half hectare.

Table 1: General

|                        |      |
|------------------------|------|
| Masterplan area        | 156  |
| Strategic open space   | 40.5 |
| Existing development*  | 3.5  |
| Gross developable area | 112  |

\*(To be retained)

Table 2: Sectors

|               |            |
|---------------|------------|
| Core Area     | 46.5       |
| Northwest     | 16         |
| Southwest     | 30         |
| East          | 19.5       |
| <b>Total:</b> | <b>112</b> |

Table 3: Sectoral area breakdown and population targets

### 3a: Core Area

| Net developable area     |           | Land use breakdown |           |
|--------------------------|-----------|--------------------|-----------|
| Gross developable area   | 46.5      | Residential        | 5.5       |
| Strategic Infrastructure | 6.5       | Mixed-use (1)      | 17        |
| Education                | 3         | Employment         | 11.5      |
| <b>Total</b>             | <b>37</b> | <b>Total</b>       | <b>37</b> |

(1) Incorporates 3ha education space

| Target population |       |
|-------------------|-------|
| Residents         | 3,600 |
| Employees         | 9,500 |

### 3b: Northwest

| Net developable area     |             | Land use breakdown |             |
|--------------------------|-------------|--------------------|-------------|
| Gross developable area   | 16          | Residential (1)    | 7           |
| Strategic Infrastructure | 4.5         | Mixed-use          | 3.5         |
| Education                | 1           | Employment         | 0           |
| <b>Total</b>             | <b>10.5</b> | <b>Total</b>       | <b>10.5</b> |

(1) Incorporates 1ha education space

| Target population |       |
|-------------------|-------|
| Residents         | 1,800 |
| Employees         | 600   |

### 3c: Southwest

| Net developable area     |           | Land use breakdown |           |
|--------------------------|-----------|--------------------|-----------|
| Gross developable area   | 30        | Residential (1)    | 0         |
| Strategic Infrastructure | 7         | Mixed-use          | 4         |
|                          |           | Employment         | 19        |
| <b>Total</b>             | <b>23</b> | <b>Total</b>       | <b>23</b> |

(1) Incorporates 1ha education space

| Target population |       |
|-------------------|-------|
| Residents         | 800   |
| Employees         | 2,600 |

### 3d: East

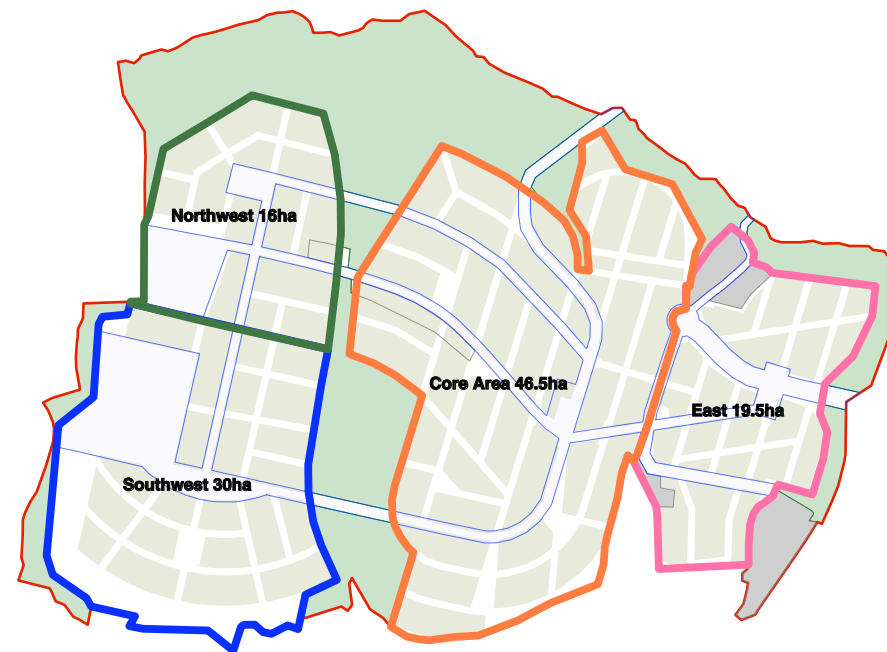
| Net developable area     |           | Land use breakdown |           |
|--------------------------|-----------|--------------------|-----------|
| Gross developable area   | 19.5      | Residential        | 3         |
| Strategic Infrastructure | 3.5       | Mixed-use          | 0         |
| Existing development     | 2         | Employment         | 11        |
| <b>Total</b>             | <b>14</b> | <b>Total</b>       | <b>14</b> |

| Target population |       |
|-------------------|-------|
| Residents         | 400   |
| Employees         | 3,300 |

Table 4: Local open space requirements

Local open space requirements for all net areas include 5ha divided proportionately plus 15% of remaining land in residential areas. This would give rise to the following approximate local open space requirements:

| Open space requirements |             |
|-------------------------|-------------|
| Core                    | 3.00        |
| Northwest               | 1.75        |
| Southwest               | 1.67        |
| East                    | 1.32        |
| <b>Total:</b>           | <b>7.74</b> |



Fassaroe sectors and development area parcels



## 3.6 Next steps and funding

### 3.6.1 Next steps

The implementation of the masterplan will require a long-term commitment from landowners, the community, important stakeholders and the Local Authority. The masterplan is part of the implementation process set out in the Bray Environs LAP. It satisfies the LAP requirements in that it:

- :: Provides a co-ordinated approach to the development of all of the lands;
- :: Is consistent with the land uses and objectives contained in the LAP;
- :: Identifies likely, early stage phasing and potential later phases; and
- :: Provides the framework for the provision of key long-term infrastructure for the larger plan area.

Key elements at the post-masterplan/development management stages will be:

- :: Continuing investigation, design and specification of important elements of infrastructure and development;
- :: Preparation and submission of development proposals/ planning applications; and
- :: Preparation of adequate environmental study/ assessments.

### 3.6.2 Environmental study/ assessments

One or more environmental studies for the development of the lands will be prepared as a separate process in parallel with the preparation of development proposals. Such studies will review and assess all environmental considerations associated with the proposed development at Fassaroe and will be important in addressing the cumulative impacts of this development. The environmental assessment will be informed by the SEA for the LAP, the Masterplan, existing environmental studies and reports for the lands, additional surveys and studies.

Potential impacts on existing residents will be assessed and dealt with as part of the Development Management process as and when development proposals are progressed to a sufficient level of detail to enable proper assessment to take place.

It is noted that screening of the LAP concluded that an Appropriate Assessment under the Habitats Directive was not required.

### 3.6.3 Funding

Arrangements for statutory planning contributions are set out in the Development Contributions Scheme contained in the Wicklow County Development Plan.

The delivery of infrastructure and services in Fassaroe will entail a significant financial and resource commitment from the landowners/developers. Certain infrastructure and services will be necessary to allow the development of specific lands and to provide for the larger needs of Fassaroe.

Developers will be largely responsible for the infrastructural costs of the development of their own lands. However, there may be cases where the burden of providing physical or community infrastructure or services, which are necessary, or of direct benefit to the development of the larger area, may be carried by a single landowner/developer. Where this is the case, appropriate agreements will have to be sought to apportion those costs between relevant landowners.

Capital funding and funding sources for major projects such as Luas and the new Fassaroe interchange will need to be subject to relevant processes. These will be considered in more detail at the relevant statutory planning and development phases.