

# Chapter 2.0

## Proposed Development

## 2.0 Introduction

This chapter of the EIAR provides a description of the proposed development in accordance with Directive 2014/52/EU which states that the EIA shall include a description of the project comprising information on the site, design, size and other relevant features of the project. It includes a description of the application site and its context. This Chapter provides a broader summary description of the proposed development that is subject of this EIAR. The environmental impacts of the proposed development are then examined for each of the prescribed environmental topics discussed in turn in the EIAR.

This chapter has been prepared by Orla O'Callaghan Cunnane Stratton Reynolds Planning Consultants, who graduated from University College Cork in 2013 with a Masters in Planning and Sustainable Development (MPlan). Orla has over 6 years' experience in planning and development having worked in the private and public sector in Ireland and the UK. Orla is currently a Senior Planner in Cunnane Stratton Reynolds.

## 2.1 Description of the Proposed Development

Longview Estates Ltd, intend to apply to An Bord Pleanála for a ten year planning permission at Lahardane and Ballincolly (townlands), Ballyvolane, Cork. The proposed development will consist of a strategic housing development including 753 residential units to be constructed in a series of phases (six neighbourhoods in total), a local centre including retail (2 no. units), a crèche, doctors surgery and community use unit and all associated and ancillary infrastructure, services and site development works.

The proposed 753 no. residential units are comprised of the following:

- 67 no. detached houses including 31 no. 4 bedroom units and 36 no. 3 bedroom units
- 278 no semi-detached houses including 41 no. 4 bedroom units and 237 no. 3 bedroom units
- 186 no. terrace houses including 18 no. 4 bedroom units, 96 no. 3 bedroom units and 72 no. 2 bedroom units
- 69 no. duplexes including 36 no. 3 bedroom units and 33 no. 2 bedroom units
- 153 no. apartments including 6 no. studio apartments, 42 no. 1 bedroom apartments, 79 no. 2 bedroom apartments and 26 no. 3 bedroom apartments. Three apartment blocks will be provided (2 no. in Neighbourhood 6 and 1 no. in Neighbourhood 2)

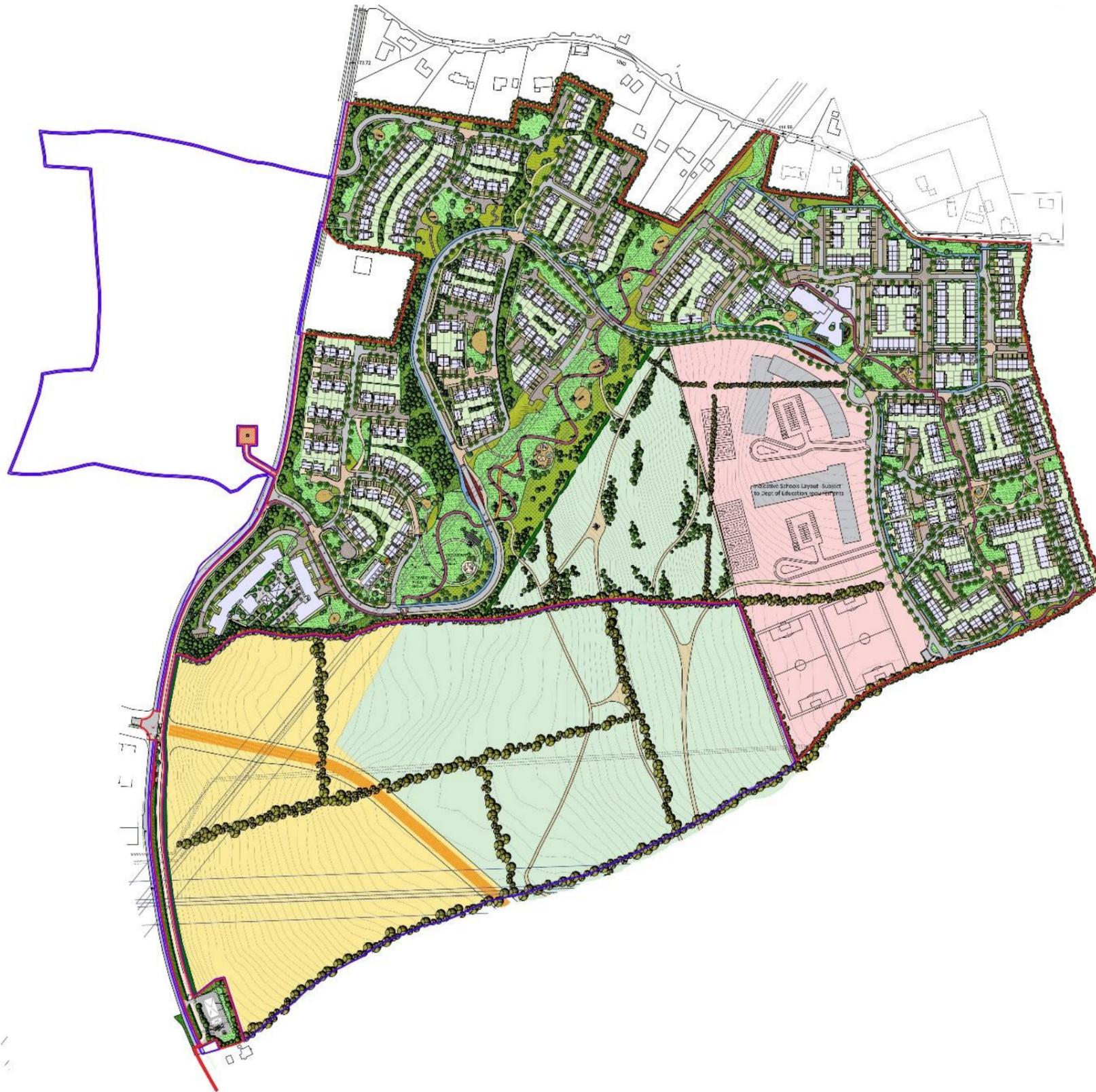
The proposed development includes a number of open spaces and play areas in addition to general landscaping, boundary treatments (including walls and landscaping to the houses to the north and lands to the east), and landscaped parkland / greenway. The proposal includes an internal distributor road providing access to neighbouring lands, associated internal roads, car parking, pedestrian and cycle paths (providing access to neighbouring lands), public lighting, internal bus stops and turning area, bin storage (in apartment locations) and cycle parking and all site services infrastructure.

The associated site and infrastructural works include water supply, foul and surface / storm water drainage infrastructure to local services and drains and 5 no. unit sub stations. The proposed development makes provision for two no. pumping stations (and connections to / from same), one in neighbourhood 5 and one adjacent to the Ballyhooly Road, with access, to serve this site and future lands as required by Irish Water.

Two no. vehicular accesses are proposed from the Ballyhooly Road and one no. access to / from the local road to the north of the site (pedestrian access points will also be allowed to the local road to the north), all including local road widening within applicant lands, resurfacing and boundary works. Signalisation of the Lower Dublin Hill / Ballyhooly Road Junction is also proposed along with the provision of a new bus stop on the eastern side of the Ballyhooly Road close to the junction of Lower Dublin Hill and the Ballyhooly Road. The application also provides for the reservation of lands to accommodate the widening of the Ballyhooly Road and the provision of new pedestrian and cyclist infrastructure along the eastern side of the Ballyhooly Road with crossing of same close to Mervue Lawn south of the proposed development. Groundworks, excavation and ground reprofiling are required and proposed to provide a Distributor Road through the site and all development areas internally within the site. The proposed development also provides for the line diversion and partial undergrounding of the Kilbarry-Flaxfort-Mayfield 38kv line that traverses the landholding east / west, the removal of existing pylons and the provision of two new pylons one in the Lahardane Townland and one in the Ballincolly Townland and landscaping works within the 110 kv power line wayleaves that also traverse the site.

The site is located in the Ballyvolane Urban Expansion Area (UEA). This is an area that has been identified in statutory policy documents as growth location for residential and other associated uses.

Figure 2.1 Proposed Site Layout



## 2.2 Planning Application Site Location and Description

The site the subject of this Strategic Housing Development application is located in the townlands of Lahardane and Ballincolly, Ballyvolane, Cork within the administrative area of Cork City Council. The application site forms part of an area which has been promoted as a growth location to accommodate a significant increase in population since the Cork Area Strategic Plan (CASP) was published in 2001.

The planning application site, of 46.9 Ha, as outlined in figure 2.2 is located to the eastern side of the Ballyhooly Road (R614). This is an important regional route linking the City Centre of Cork through Dillons Cross and St Lukes and to the northern environs including upper Glanmire, Watergrasshill and Carrignavar through Whites Cross. The lands are situated less than 3km to the north east of the City Centre and just 1.5km to the north of Ballyvolane District Centre. The lands are currently accessible from the Ballyhooly Road and the local road to the north of the site. .

The application site is generally open in character, comprising fields which are currently in agricultural use. The topographical survey included with this planning application shows the very significant level changes particularly to the west of the site. The site levels increase from approximately 65m OD on the western side of the site to 130m OD in the eastern part.

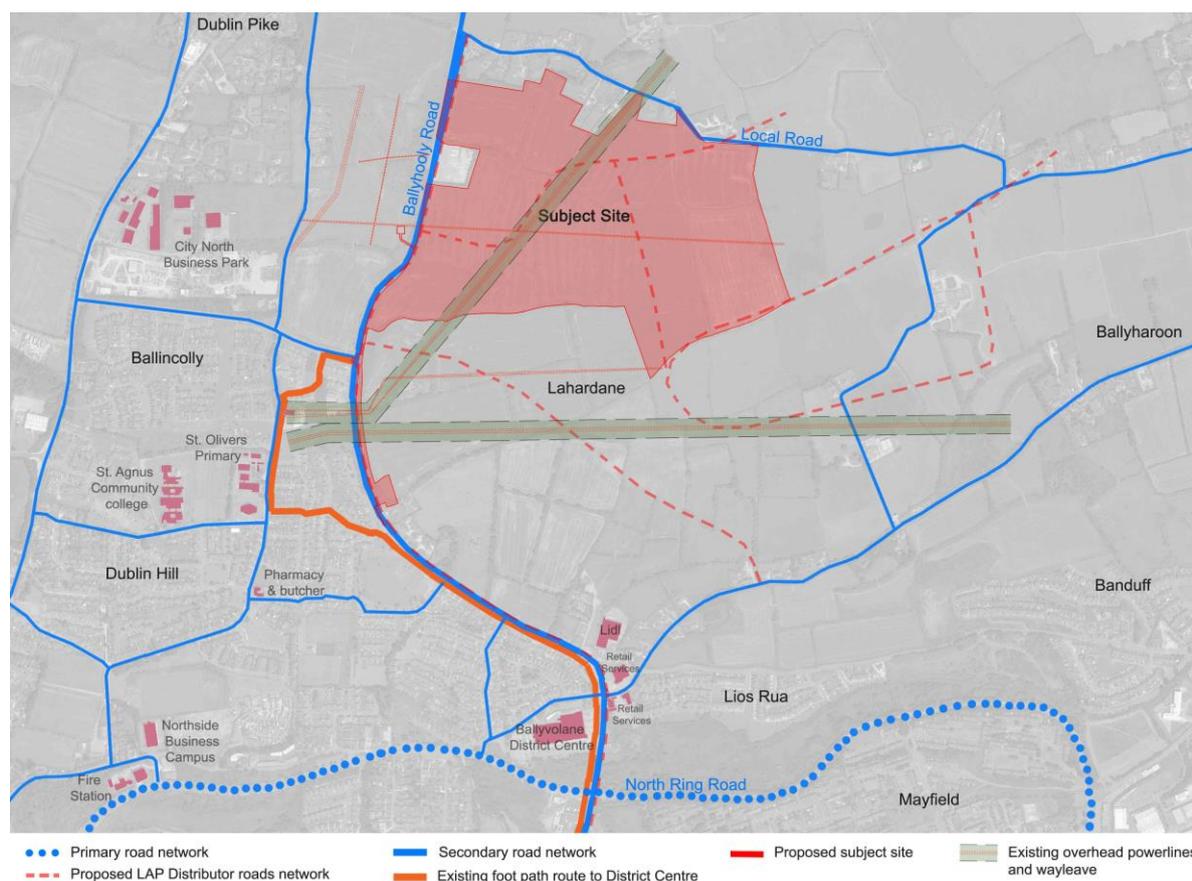
There are no recorded architectural heritage or archaeological sites located within the proposed development site. There are no buildings of any date located within the site.

As the site is within the 'Transition Area' i.e. the area was within the administrative district of Cork County Council before the boundary extension in May 2019, the planning application site is subject to the land use policies and objectives of the Cork County Development Plan 2014. The site is also subject to the policies within the Cobh Municipal District Local Area Plan 2017.

The site forms part of a designated urban expansion area and is zoned for the following uses:

- NE-R-08 and NE-R-09 for Medium B residential development;
- NE-C-01 for proposed primary and secondary school campus with playing pitches
- NE-O-04 open space for public recreation as an urban park. The amenity parkland should provide passive amenity for residents of the north eastern suburbs and the site. It should also contain the necessary walkways and cycle ways for accessibility between residential, business, retail and community uses.
- NE-U-03 and NE-U-04 for service roads within the Ballyvolane Urban Expansion Area.



**Figure 2.3** Planning Application Site and Surrounding Area

## 2.4 Wider Site Context – Land Use

In the 2011 Local Area Plans prepared by Cork County Council, a number of strategic policy areas were identified and zoned for development in the Metropolitan area of Cork. The application site was located in an area designated as X-01, a zoning that provided for “*an objective to facilitate the development of a minimum of 2,337 and up to 3,600 dwellings on this site through a phased programme of development that will secure the timely provision of the necessary physical and social and economic infrastructure*”. Development was intended to be on a Masterplan basis. This was not achieved / achievable and the County Council in 2017 reverted to a conventional zoned approach for the Urban Expansion Area as they did for the X-0 zoned lands throughout the City Environs (and satellite towns where applicable).

Nine sites were identified during the preparation of the 2017 LAPs as Urban Expansion Areas (UEA) and zoned in a “conventional” manner so as to allow delivery as landholdings came forward. The planning application site forms part of one of nine UEAs throughout County Cork. These are priority development areas which have the capacity to deliver about 22,000 housing units in Metropolitan Cork. The planning and implementation strategies to secure the delivery of these sites was noted as being a priority of the Council in the Cobh MD LAP 2017.

The applicants’ site is the first substantial land bank to be proposed for development within the Ballyvolane UEA and, if permitted, will open up opportunities for significant further future development with the infrastructural proposals (Distributor Roads and Irish Water Pumping Station) included as part of this planning application. Existing residential development in the area includes more mature and established housing schemes to the south/ south east of the

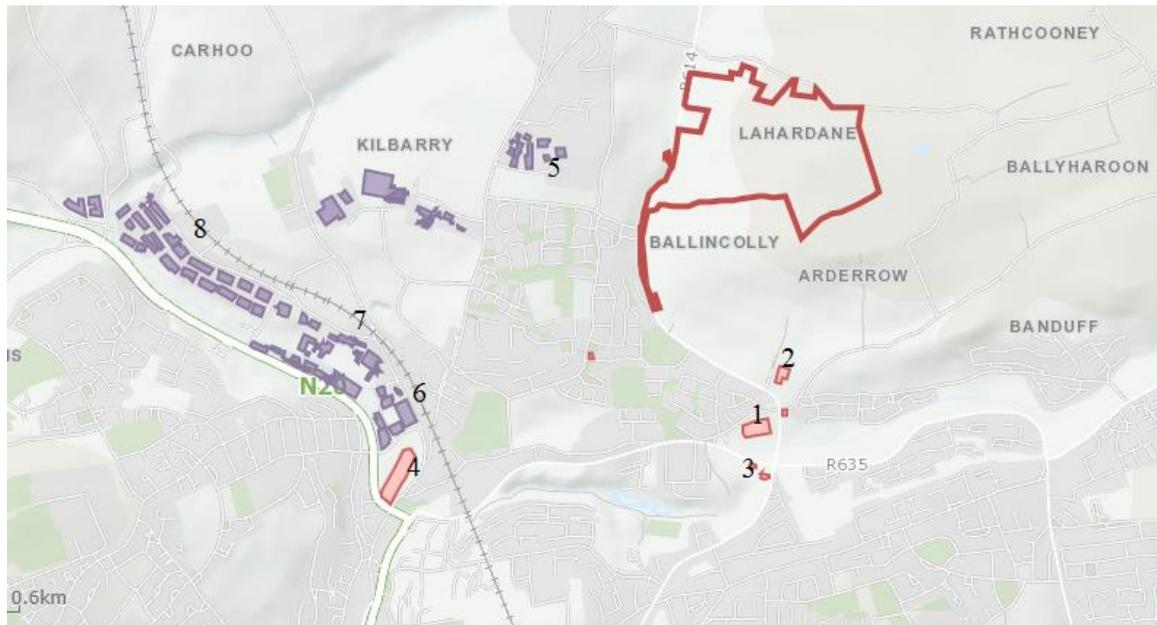
site such as Brookwood, Kinvara Close/ Avenue, Mervue Lawn, Glenthorn Mews/ Park and Meadow Park and “one-off” houses along the northern boundary of the site. As the demand for housing has sustained due to the improved economy, there has been a significant rise in residential development in other areas of Cork but, to date, development in the Northern Environs of the city including Ballyvolane has been limited. The only recent housing developments in the site area permitted by Cork County Council include planning ref. 17/6781 for the construction of 74 no. residential units, located to the north-west of the site in 2018 and planning ref 19/5326 for the construction of 20 no. residential units on the Banduff Road in 2019.

Other uses in the wider area include commercial, industrial, retail, educational and recreation. The Ballyvolane district centre is located c. 1.5km to the south of the site on the Ballyhooly Road. The district centre includes Ballyvolane Shopping Centre consisting of Dunnes Stores and smaller retail uses such as a pharmacy, butchers and café. There is a Lidl approximately 1.2km to the south of the site. As indicated in Figure 2.8, the LAP zoning map proposes a significant expansion of the Ballyvolane district centre to serve the new population in Ballyvolane. City North Business Park is located 1km to the west of the planning application site on Upper Dublin Hill and includes a number of established businesses such as Flextronics Wireless Ltd., Yves Rocher, Cavanagh Refrigeration, Southern Pumps and Auto Express

Further to the west, Blackpool is circa 2.5km from the site. Blackpool is a key suburban centre that provides significant employment and services in the Blackpool shopping centre which is a designated district centre, Northpoint Business Park, and Gateway Business Park. Blackpool has an emerging IT sector with Irish companies such as Teamwork.com, Xandu, Westbourne IT Global Services and Texuna and international companies including Blizzard Entertainment and IBM located there.

Cork City Centre which is the economic, social and cultural core of the region is located less than 3km from the site. The nearest existing bus stop to the site is 300m from the main site entrance, outside Brookwood housing estate to the south west of the site. This bus stop serves the 207 bus route that runs between Ballyvolane and Donnybrook in the southern environs via Cork City Centre. The proposed development will help to facilitate the National Transport Authority supported Ballyvolane Strategic Transport Corridor (BSTC) project which proposes significant improvements to Route 207 with the aim of decreasing journey times and enhancing public facilities.

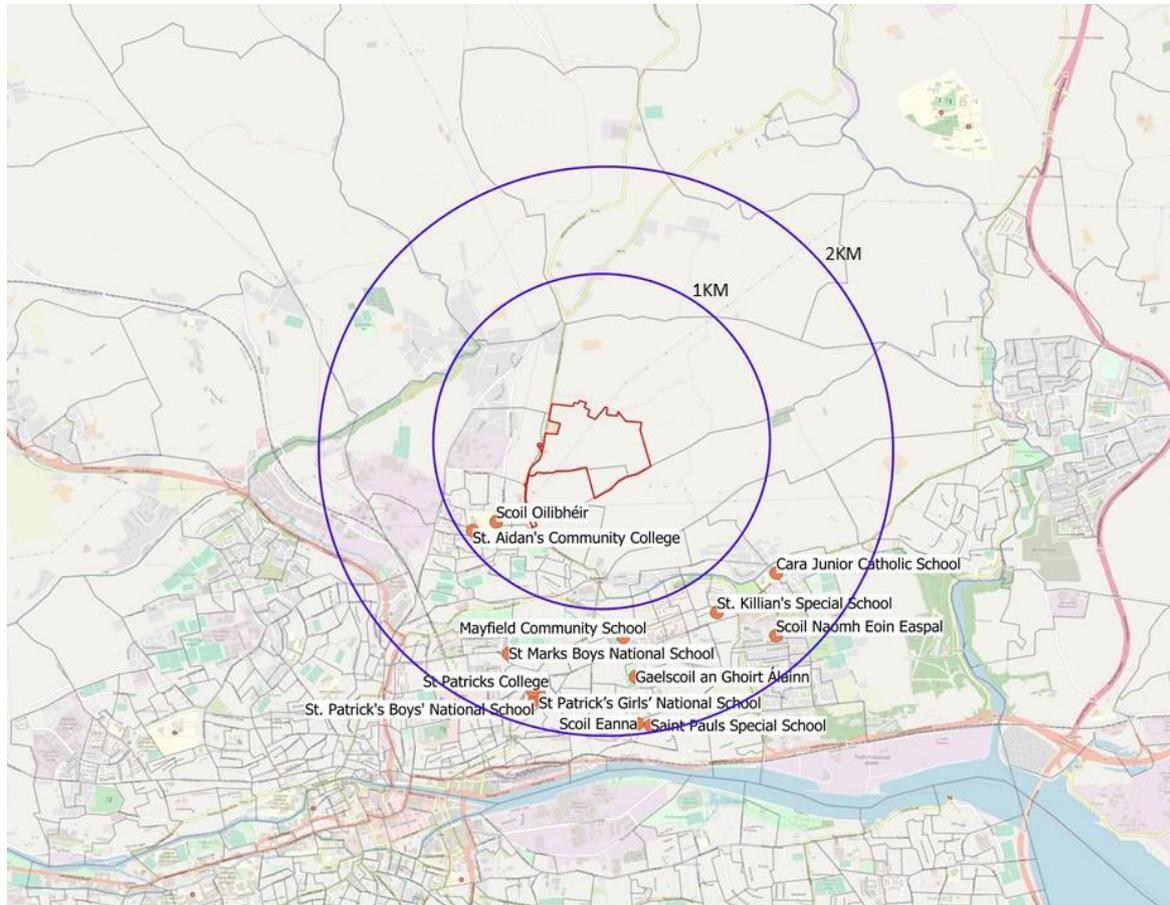
The BSTC scheme has received funding with the works proposed to be complete in the first quarter of 2023. The proposed development allows for road widening, setbacks, and the provision of cycle and pedestrian paths on the Ballyhooly Road and a bus stop on the eastern side of Ballyhooly Road. Bus stops and a turning area are also proposed within the site itself. These infrastructural improvements will encourage modal shift to occur in the area, and for the future residential communities on the subject lands.

**Figure 2.4** Existing Commercial, Industrial and Retail Uses in the Wider Site Area**Existing Commercial, Industrial and Retail Uses  
in Site Area**

- 1- Ballyvolane Shopping Centre (Dunnes Stores)
- 2- Lidl
- 3- Filling Station
- 4- Blackpool Shopping Centre
- 5- City North Business Park
- 6- Blackpool Retail Park
- 7- Sunbeam Industrial Estate
- 8- Northpoint Business Park

There are a number of schools within the site catchment, the closest being Scoil Oilibhéir primary school and St Aidan's Community College (secondary school) which are less than 1km away to the west of the site. Further detail on school provision is provided later in Chapter 4 of the EIAR.

**Figure 2.5** Schools within the Site Catchment



Sport and recreation uses in the area include Glen Rovers Hurling Club, Leeds AFC, Delaneys GAA Club, the Glen Park, Kempton Park, Mayfield Leisure Centre and the Glen Resource and Sports Centre. The Glen Resource Centre includes a number of soccer pitches, artificial surfaces suitable for all sports and outdoor adventure activities and obstacle courses suitable for all ages. Mayfield Sports Complex is also located close to the site. The complex contains a 25m pool, gym and astro turf pitches.

**Figure 2.6** Existing and Proposed Parks and Recreation Facilities in the Site Area

## 2.5 Planning Policy Context of the Site

The development of this site must be considered in the context of national, regional, and local planning policies and guidance. This section gives a brief summary of the current planning policy context. A detailed standalone Statement of Consistency with the relevant planning policies has been prepared by Cunnane Stratton Reynolds and accompanies this planning application.

### 2.5.1 National Planning Policies and Guidance

The National Planning Framework (NPF) – Project Ireland 2040 is the Government's high level strategic plan for shaping the growth and development of Ireland to 2040. Project Ireland represents an important shift from previous approaches to long-term planning and investment by Government. It is an approach that joins up ambition for improvements across the different areas of people's lives, bringing the various government departments, agencies, State owned enterprises and local authorities together behind a shared set of strategic objectives for rural, regional and urban development.

Cork is Ireland's second largest city and the NPF sets out ambitious growth targets for it to become a city of scale and a regional driver as a viable alternative to Dublin. The population of the city is expected to increase by 50-60% by 2040. The NPF encourages investment to improve Cork's offer i.e. its infrastructure, quality of life and choice in terms of housing, employment and amenities.

The NPF notes that one of the greatest challenges facing Cork is addressing the long term decline of the City's population. A key growth enabler for Cork specified in the NPF is progressing the sustainable development of new greenfield areas for housing, especially those on public transport corridors.

The NPF sets out national planning policies to encourage more compact urban growth rather than sprawling cities and towns to support more sustainable development to tackle climate change and congestion. Project Ireland restates the commitment to implement statutory planning guidelines – the Sustainable Residential Development in Urban Areas guidelines 2009. These guidelines encourage increased densities in city and town centres, on brownfield sites (within city and town centres), on public transport corridors, inner suburban/ infill sites, on institutional lands and outer suburban/ greenfield sites.

The planning application site would be considered as open land at the periphery of the city. The guidelines state that the greatest efficiency in land usage on such lands will be achieved by providing 35-50 dwellings per hectare and development at net densities less than 30 dwellings per hectare should generally be discouraged in the interest of land efficiency. The proposed development has been designed in accordance with the Sustainable Residential Development in Urban Areas Guidelines and the accompanying Urban Design Manual which includes the 12 design criteria for good urban design.

The National Development Plan 2018-2027 was published at the same time as Project Ireland 2040 and is fully integrated with the new approach to spatial planning in the NPF. Resolving the systemic factors underlying the current housing crisis is at the heart of the NPF and reflecting this, housing and sustainable urban development is a priority for the National Development Plan. The NPF outlines the national strategic objectives to be achieved with the National Development Plan illustrating the committed investment in implementing the NPF's objectives.

The proposed development is consistent with national planning policies and guidance as it will make a significant contribution to the population of Cork City at a location which has been prioritised for growth for some time. Despite the significant challenges of developing these lands, a density of 35.5 dwellings per hectare has been achieved in accordance with national density standards.

### 2.5.2 Regional Planning Policies

The vision of the South West Regional Planning Guidelines 2010-2022 is as follows:

*“By 2022, the South West Region will be realising its economic potential and providing a high quality of life for its people by meeting their employment and housing, educational and social needs in sustainable communities. At the same time, it will reduce its impact on climate change and the environment, including savings in energy and water use and by strengthening the environmental quality of the Region”.*

The guidelines state that the priority for population growth in the region will be in the Cork gateway. The primary focus in Cork City will be on brownfield sites such as Docklands and Blackpool and in the suburban areas Ballyvolane and Mahon.

The South West Regional Planning Guidelines are now effectively superseded by the Draft Regional Spatial and Economic Strategy (RSES) for the Southern Region. The RSES was issued for public consultation between 18<sup>th</sup> December 2018 and 8<sup>th</sup> March 2019 and the Material Amendments and associated Environmental Reports published for consultation between 12<sup>th</sup> September and 11<sup>th</sup> October 2019. The Regional Spatial and Economic Strategies will provide a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework. The vision for the Southern Region is to:

*“Promote the Southern Region as an attractive, competitive and sustainable place to live, work and visit, a region of considerable opportunity for growth based on the quality of its cities, towns and rural areas, well developed physical and social infrastructure, a diverse modern economy and a pristine natural environment”.*

The NPF targets significant growth and development in all five of Ireland’s cities. To achieve this, Metropolitan Area Strategic Plans (MASPs) have been designated in the NPF as the appropriate vehicle to address both the city and suburbs and adjoining area that supports the core of the city. In line with the RSES’, the MASPs will be provided with statutory underpinning to act as 12-year strategic planning and investment frameworks for the city metropolitan areas, addressing high-level and long-term strategic development issues.

Objective 1 of the Draft Cork MASP includes the following:

- a. *Strengthen the role of the Cork Metropolitan Area as an international location of scale, a complement to Dublin and the primary driver of economic and population growth in the Southern Region.*
- b. *To promote the Cork Metropolitan Area as a cohesive single functional entity where population and employment growth is integrated with: (i) the city centre as the primary location at the heart of the metropolitan area and region reinforced by (ii) the continued regeneration, consolidation and infrastructure led growth of the city centre, Cork City Docklands, Tivoli and suburban areas (iii) active land management initiatives to enable future infrastructure led expansion of the city and suburbs (to be assessed by Core Strategy initiatives) and (iv) the regeneration, consolidation and infrastructure led growth of metropolitan towns and other strategic employment locations in a sustainable manner.*
- c. *Seek co-ordinated investment and delivery of holistic infrastructure packages across State Departments and infrastructure delivery agencies as they apply to the Cork Metropolitan Area and seek further investments to deliver on the Metropolitan Area Goals*
- d. *The Cork MASP allows flexibility to respond to changes in planning policy, infrastructure requirements and prioritises that will arise in the area which will be added to Cork City as a result of the boundary extension, framed by the principles set out in RPO 8 Compact Growth in Metropolitan Areas, other objectives of the Cork MASP and MASP Goal 7 in Appendix 3 (of the RSES).*

The Draft MASP sets out the strategic housing and regeneration areas. The North Environs is one of these areas and the Ballyvolane Urban Expansion Area is identified as having a potential residential yield of 3,600 units.

The Draft RSES makes reference to the Draft Cork Metropolitan Area Transport Strategy 2040 (CMATS). The Draft CMATS was published in May 2019. CMATS recognises the major role that the North Environs will play in rebalancing the city in terms of future population and employment growth. It notes that development to provide the homes and jobs that are necessary to serve the planned population will be prioritised in the following locations in the Cork Metropolitan Area – Carrigaline (Shannon Park), Middleton (Water Rock) and Carrigtowhill (North of the railway), Ballincollig (Maglin), North Environs (Ballyvolane), Glanmire (Dunkettle), Blarney (Stoneview), Monard and Cobh.

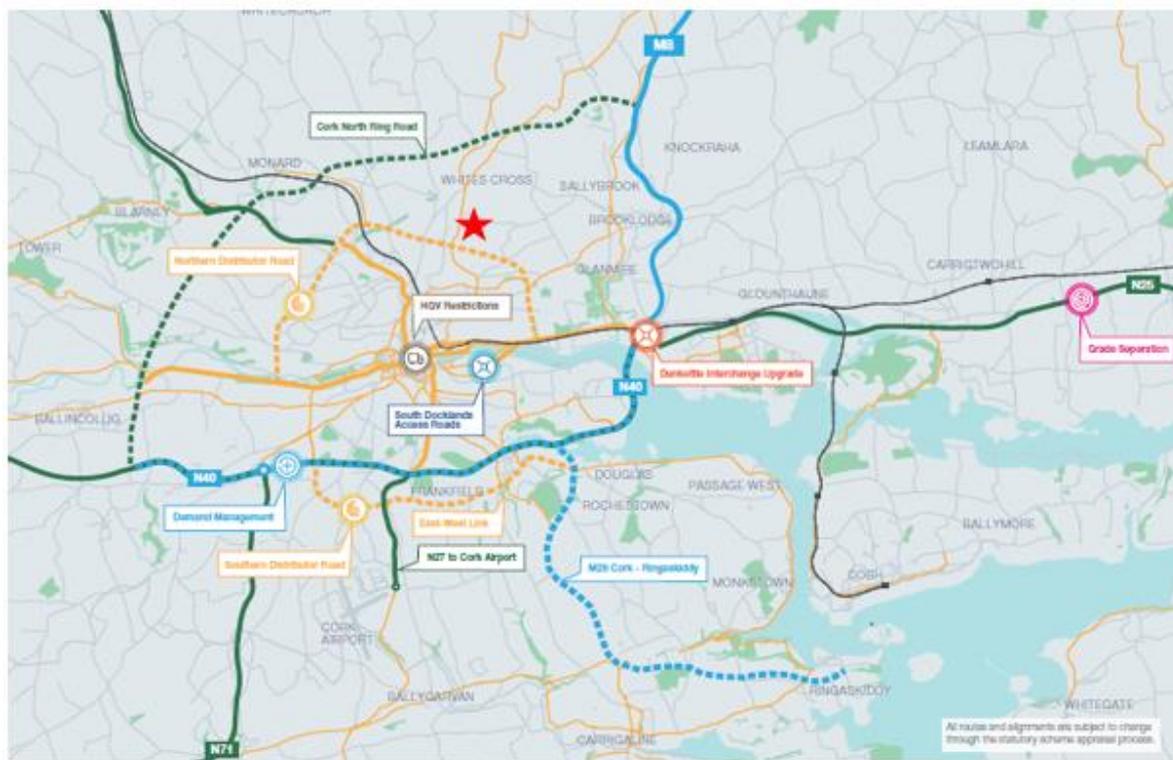
The Draft RSES does not identify CMATS as a requirement for the development of Ballyvolane in the same way as it specifically refers to necessary requirements for the other

expansion areas including Monard and Cobh. Of all the strategic growth locations identified, Ballyvolane does not require major public transport infrastructure of either a new train station or CMATS related infrastructure. It is clear from CMATS that the Cork North Ring Road is a long term plan. The National Development Plan indicates that the North Ring Road is a complementary but independent scheme to the N/M20 corridor scheme. However, its requirements, scale (based on demand levels) and justification will be considered and assessed as part of the appraisal process for the overall M20 scheme. It is envisaged that the North Ring Road would not be delivered in advance of the substantive public transport elements of the regional strategy.

CMATS requires additional road network infrastructure on the north side of Cork City to cater for access to the planned development lands (the UEA). These will provide walking and cycling linkages, access to radial public transport routes, orbital public transport provision and the removal of some strategic traffic from the City Centre. This new road will be the Cork Northern Distributor Road. The Cork Northern Distributor Road is a short-term objective and considered to be a critical enabler.

The proposed development is not reliant on either of these roads for access. In fact the proposed Northern Distributor Road known as the Mayfield Link Road in the Cobh MD LAP is shown through lands in the applicant's ownership. These lands do not form part of this planning application. They are being kept free of development until the final alignment of the Link Road has been decided so as not to interfere this this road infrastructure.

**Figure 2.7** Proposed Road Network 2040 as illustrated in the Draft CMATs with Planning Application site location indicated with red star



In the short term CMATS does propose improvements to the pedestrian and cyclist network on the Ballyhooly Road. Dublin Hill to Ballyhooly Road is identified as a key secondary cycle route. The Ballyhooly Road is also identified as part of the Bus Connects priority route. The improvements to the Ballyhooly Road are allowed for as part of the proposed development and the Ballyvolane Strategic Transport Corridor Project: North Ring Road to Ballincolly, June 2019 – now instructed and design work commenced for Cork City Council for delivery in 2021. The road setbacks incorporated into this scheme, in the applicant’s landholding, have been agreed with the City Council in advance of making the application and allow for the permanent setbacks envisaged by the Council.

### 2.5.3 Local Planning Policies

The site forms part of the area that was transferred from Cork County Council to the Cork City Council jurisdiction in May 2019. Notwithstanding the fact that the site is now in the City Council area, the policies and objectives of the Cork County Development Plan 2014 remain in force as per Section 30 (1) of the Local Government Bill 2018 which states that “*the development plan in force immediately before the transfer day in respect of the functional area of the county council shall, on and after that day, continue to apply in respect of the relevant area until the next making of a development plan by the city council in respect of the functional area of the city council in accordance with section 9 of the Act of 2000*”.

The vision for the County as set out in the Development Pan is as follows

*“Through the application of the planning principles set out in this document, to provide for the development of County Cork as an attractive, competitive and sustainable place to live, visit and do business, where the quality of its economy, natural and built environment, culture and the strength and viability of its communities are to the highest standards”.*

The key aims for the County are summarised in Chapter 2 (Core Strategy) of the Development Plan as follows:

- a) *Enhanced quality of life for all*
- b) *Sustainable patterns of growth in urban and rural areas*
- c) *Sustainable and balanced economic investment*
- d) *An effective physical and community infrastructure*
- e) *A quality built environment*
- f) *A network of enhanced natural resources*
- g) *Responsible guardianship of the County.*

The site forms part of the Northern Environs in the Cork Gateway. The strategic aim for the North Environs is set out in policy objective CS 3-1 which seeks *“growth in population and employment so that the Cork Gateway can compete effectively for investment and jobs. Develop to complement and consolidate the development of the city as a whole and providing enhanced potential to rebalance the City through new development in the north”*.

The Development Plan prioritises growth in the North Environs. Policy objective CS 4-1 (n) states *“in the Cork gateway, development to provides the homes and jobs that are necessary to serve the planned population will be prioritised in the following locations: Carrigaline (Shannon Park), Midleton (Waterrock) and Carrigtwohill (North of the railway), Ballincollig (Maglin), North Environs (Ballyvolane), Glanmitre (Dunkettle), Blarney (Stoneview), Monard and Cobh. Details of the proposed development will be set out in Master Plan studies and Local Area Plans as appropriate”*.

Under policy objective HOU 3-1 (a) the Plan states that it will *“ensure that all new developments within the County support the achievement of sustainable residential communities. The Council will have regard to the provisions of the Guidelines on Sustainable Residential Development in Urban Areas and the accompanying Urban Design Manual, in development plan preparation and in assessing applications for development through the development management process”*.

As noted the site is within the Ballyvolane Urban Expansion Area. The Cobh Municipal District Local Area Plan (MD LAP) 2017 notes that the Development Plan provides for the population of the northern suburbs to grow to 10,719 persons, representing a growth of 4,027 persons on the 2011 population. The overall design of the lands has been guided by a number of factors. These include constraints within the site, the brief produced for the masterplan process and National and local guidelines.

The constraints as outlined in the LAP include the topography, existing road infrastructure, the location of archaeological and heritage features, transmission lines and the necessary wayleaves. The Sustainable Residential Development in Urban Areas Guidelines recommendations on density and public transport are also noted in the LAP as being particularly important for this site as it is an expansion of the city suburbs.

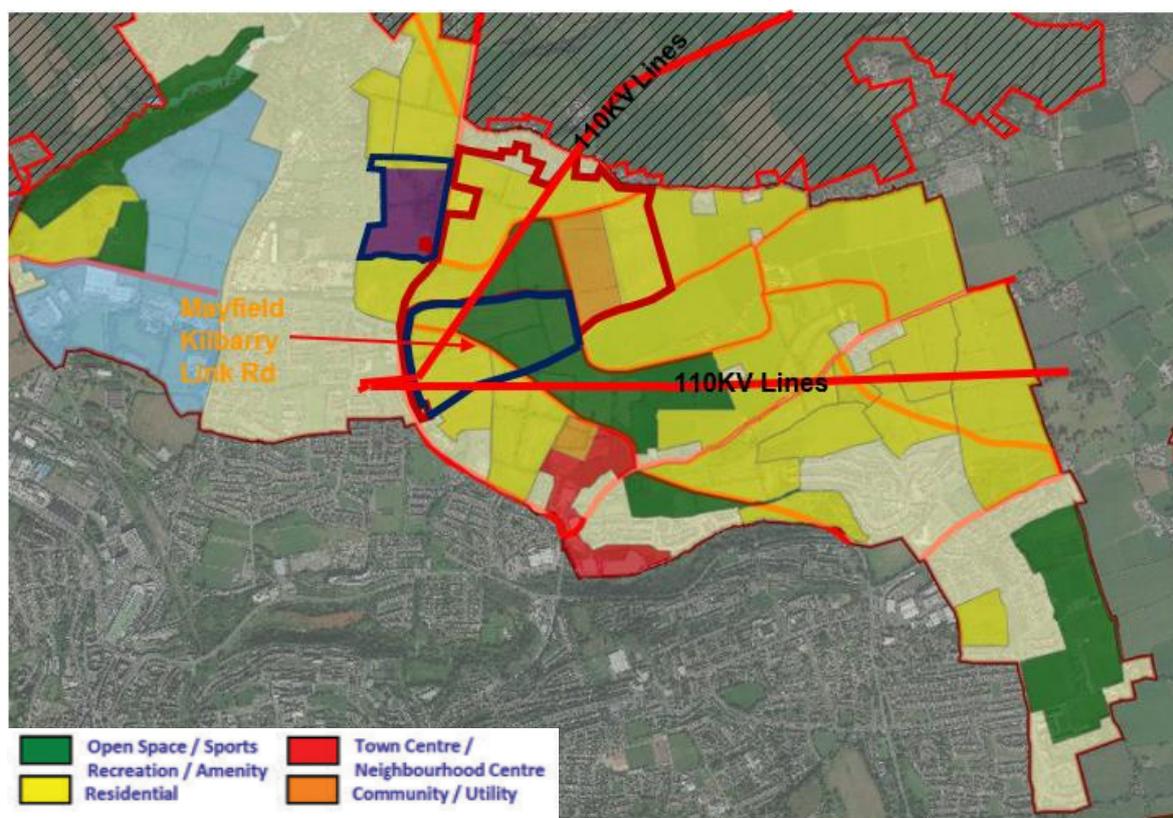
The LAP sets out the key principles for the sustainable development of the site as follows:

- *Ensure that the proposed development provides effective connectivity (walking and cycling) to the town centre, educational and employment centres for future residents;*
- *Support the achievement of high levels of modal shift by collaborating with other agencies to improve public transport services and influence patterns of employment development to support use of sustainable modes and travel by public transport;*
- *Ensure the provision of an appropriate housing mix, considering the changing demographic (needs of older people) and the housing market requirements for Metropolitan Cork and the requirement of the Social Housing as per the County Development Plan 2014;*
- *Make provision for housing density that encourages more efficient land use and infrastructure investment patterns and particularly creates conditions more favourable to the increased use of public transport; and*
- *To achieve development areas with a distinctive character that ensures a unique, innovative and distinctive design of houses with high quality finishes and materials. They should include positive characteristics such as reference to topographical and historical features and the inclusion of individual focal points and a priority for the provision of high quality.*

The approach to the zoning of the subject lands has changed since the 2011 LAP in which the site was zoned as a Special Policy Area – X-01 which set out objectives for the development of the site. In the current LAP, the X-01 special policy area has been divided into smaller parcels of specific zonings.

The planning application lands are zoned as NE-R-08 and NE-R-09 for Medium B residential development; NE-C-01 for proposed primary and secondary school campus with playing pitches; NE-O-04 for open space for public recreation as an urban park. The amenity parkland should provide passive amenity for residents of the North Eastern suburbs and the site. It should also contain the necessary walkways and cycle-ways for accessibility between residential, business, retail and community uses and NE-U-03 for a service road within the Ballyvolane.

**Figure 2.8** Planning Application Site Zonings as per the LAP (Planning Application site outlined in red and Applicant ownership in blue)



The MD LAP sets out indicative phases of development for the LAP lands. The proposed development is compliant with the indicative phasing programme and the developments consistency with same is set out in further detail in the accompanying Statement of Consistency and Planning Report.

The LAP also sets out general development objectives for Cork City North Environs. These include:

- **NE-GO-01:** It is the aim of the Urban Expansion Area to achieve a high quality housing development consisting of a wide mix of house types and design to provide a choice of housing suitable to all age groups and persons at different stages of the housing cycle. It is envisaged that up to 3000 units can be accommodated on site, however, having regard to the steep topography in parts of the site the number of units may be less. Higher densities will be promoted closer to the Ballyvolane crossroads, and the city boundary to avail of more frequent and high quality bus service in line with the Sustainable Development Guidelines on Urban Areas. A total of 10% of new housing development is reserved for the purpose of Part V social housing and/ or specialised housing needs.
- **NE-GO-02:** In order to secure the sustainable population growth and supporting development proposed in NE-GO-01, appropriate and sustainable water and waste water infrastructure that will secure the objectives of the relevant river basin management plan must be provided and be operational in advance of the commencement of any discharges from the development. Waste water infrastructure

must be capable of treating discharges to ensure that water quality in the receiving harbour does not fall below legally required levels.

- **NE-GO-03:** The design of residential development should be fine grained with houses of a particular type clustered in quite small groups avoiding continuous rows of development. House designs and layouts should be responsive to localised variations in their environment – including topography, orientation, retained features and recreational infrastructure. Avoid use of conventional house design with substantial use of retaining walls on sloping contours, house design should utilize the level difference within the site to an advantage.
- **NE-GO-04:** Construct a permeable built form with green routes to facilitate cycling and pedestrian movement within the site, with dedicated routes in locations with a shallower gradient. Routes should be created within the urban park to link phases of development and provide direct access to the educational facilities and improve permeability through the site. The route of the principal cycleway shall link up with Cork Cycle Network Plan 2017, a joint venture between City and County Councils.
- **NE-GO-05:** Retain a substantial proportion of existing landscape features including field banks, hedgerows, tree lines and masonry walls. Provide a landscape framework plan for each of the six phases of development as part of a landscape strategy. Provide for advanced mix planting of coniferous and broadleaf trees to ensure year round tree coverage to protect the visual amenity of the area.
- **NE-GO-06:** Design an integrated approach to surface water management which considers land use, water quality, amenity and habitat enhancements, thereby replicating the current greenfield rate of surface water runoff, post development, to prevent flooding of lands and settlements downstream. A Sustainable Urban Drainage Strategy should be completed for the site prior to development.
- **NE-GO-07:** Create an ecological network by linking green areas to allow for movement of wildlife. All environmental resources should be incorporated from waterways to woodlands to adopt a green infrastructure approach within the site with links to the surrounding countryside. Open spaces for public recreation including the provision of playing pitches, amenity walks, children's playground, open parkland, subject to appropriate scaling and siting.

## 2.6 Description of the Physical Characteristics of the Proposed Development

### Characteristics of the Proposed Development

The description of the proposed development has been set out previously. A ten year planning permission is sought for the proposed development of 753 no. dwellings over 6 phases of development and a local centre consisting of a crèche, doctors surgery, retail and community use. The proposed development also includes public parkland, greenway, open spaces and play areas, associated internal roads, pedestrian and cycle paths, boundary treatments, general landscaping, public lighting, internal bus stops and turning area and all site services infrastructure.

This section describes the characteristics of the proposed development in more detail.

There is no demolition of any structures proposed as part of this development. In summary, the proposed development comprises the construction of 753 no. dwellings consisting of 531

no. houses 153 no. apartments and 69 no. duplex units. A wide variety of dwelling typologies are included in the proposal, comprising 153 no. apartments in studio, 1, 2 and 3 no. bedroom units in 3 no. apartment buildings along with 69 no. duplex units, in a series of buildings located in neighbourhoods 1, 2 and 5 within the development. The duplexes and apartments comprise of 29% of the overall units within the proposed development. In addition it is proposed to provide 531 no. 2, 3, 4 and 5 bedroom dwellings in a range of typologies comprising terraces, semi-detached and detached configurations.

### 2.6.1 Design and Layout

The planning application is accompanied by a Design Statement prepared by Horgan Carroll Architects which sets out the design strategy for the proposed development. It is expected that the development will be constructed over six phases and it includes 6 no. neighbourhoods. The layout of the neighbourhoods has been formed from the alignment of the distributor road which provides access from the Ballyhooly Road and runs through the site from west to east providing access to individual neighbourhoods, the lands zoned for a school campus and providing potential access to undeveloped lands to the south east of the site in the future.

The proposed greenway/ urban park and the local centre are distinct elements of the proposed development and will act as focal points and be recognisable features within the scheme. The houses will be 2 to 3 storeys, the duplex units 4 storeys and the apartments 4-6 storeys. The taller buildings are located centrally within the site close to the local centre and in neighbourhood 6 close to the bus stop on Ballyhooly Road. The house types and palette of materials proposed has been carefully considered to provide a coherent and mixed variety to the overall development that will contribute to the locality. This is evident from the images included below.

The principles of the Design Manual for Urban Roads and Streets (DMURS) have been incorporated into the design of the development's roads, to clearly define a hierarchy which aims to improve legibility throughout the scheme. The proposed development has sought to:

- a) Assign higher priority to pedestrians and cyclists, without unduly compromising vehicle movement, in order to create secure, connected places that work for all members of the community.
- b) Create attractive places to live.
- c) Facilitate walking and cycling as alternative modes of transport (both in the layout of spaces and the provision of walks, cycle paths and ample cycle parking).
- d) Deprioritise the car, accommodating it where necessary (the distributor road) and controlling its design effect in the housing areas.

### 2.6.2 Unit Types and Mix

The proposed development will consist of a wide mix of unit types and sizes including studios, 1 bedroom, 2 bedroom, 3 bedroom and 4 bedroom dwellings in houses, duplexes and apartments. A full schedule of accommodation is included at appendix 2.1 of the EIAR. The breakdown of unit types and sizes includes:

- 31 no. 4 bedroom detached houses
- 36 no. 3 bedroom detached houses
- 41 no. 4 bedroom semi-detached houses

- 237 no. 3 bedroom semi-detached houses
- 18 no. 4 bedroom terrace houses
- 96 no. 3 bedroom terrace houses
- 72 no. 2 bedroom terrace houses
- 36 no. 3 bedroom duplex units
- 33 no. 2 bedroom duplex units
- 6 no. studio apartments
- 42 no. 1 bedroom apartments
- 79 no. 2 bedroom apartments
- 26 no. 3 bedroom apartments.

The proposed unit mix has been developed having regard to the existing housing stock in the area and the desirability to create a mixed community which provides a choice of dwelling types and sizes to meet the needs and expectations of people at all stages of the life cycle. The mix proposed is intended to cater for young professionals, couples and smaller families and those looking to downsize with smaller units and for families that require larger units with more space.

### *Houses*

The houses are designed as two and three storey family dwellings, in detached, semi-detached and terraced buildings. There are 67 no. detached dwellings, 278 no. semi-detached dwellings and 186 no. terraced dwellings proposed. These are spread throughout the site in each neighbourhood and will offer choice in accommodation to meet different family sizes and needs. To allow for future adaptability the majority of dwellings have been designed to provide the option of an attic conversion or a single/ two storey extension to the rear as gardens are generally larger than current minimum requirements.

In terms of energy efficiency, the proposed development has been designed to be compliant with The Building Regulations, Technical Guidance Document Part L, Conservation of Fuel and Energy – Dwellings, 2019. All residential units are designed to meet Near Zero Energy Buildings (NZEB) standards. Preliminary Dwelling Energy Assessment Procedures (DEAP) have been carried out and the results confirm that compliance with NZEB will be comfortably achieved. The assessments also set out the potential for further and future improvement in efficiencies of up to 30% with the addition of photo voltaic (PV) technologies. Houses and apartments will achieve A2 / A3 Building Energy Ratings with the potential for improvement to A1 with the addition of PV technology.

Houses are designed in excess of current energy efficiency standards and there is potential for the incorporation of photovoltaic panels and heat recovery systems to enhance further the efficiency of homes. Passive house principles have been applied in designing the scheme. The application on of these principles, has resulted in potentially 90% of all units having the primary, living room i.e. kitchen, dining, living, availing of direct sunlight from the south east, south and south west. Such an arrangement provides passive solar gain to the most frequently occupied living space in the home, improving quality of living and directly

reducing heating and lighting requirements and thus further reducing carbon dioxide emissions.

**Figure 2.9** Houses Neighbourhood 5



**Figure 2.10** Neighbourhood 5



**Figure 2.11** Neighbourhood 4

### *Apartments*

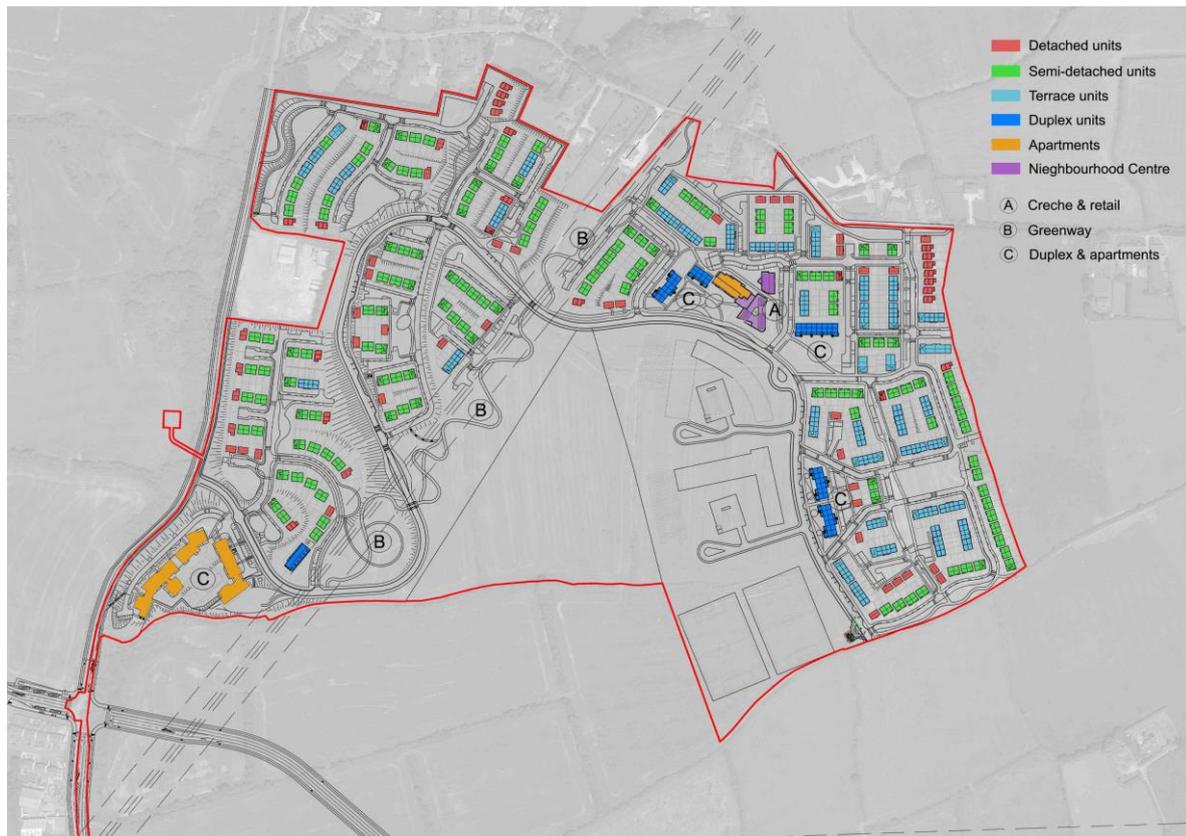
The massing and scale of the proposed apartment buildings respond directly to the topography and positioning at focal points within the site. Neighbourhood 6 consists of the taller apartment blocks to respond to the steep slope of the area. The apartments along the Ballyhooly Road provide a distinctive gateway into the development and a focal point along the road. The form of the apartment blocks allow for an undercroft parking area and apartments on lower parts of the site to compensate for drops in levels. Neighbourhood 2 apartments are designed as a node or focal point within the site close to the local centre.

**Figure 2.12** Proposed Apartments in Neighbourhood 6

### *Duplexes*

There are 69 no. two and three bedroom duplex dwellings proposed in neighbourhoods 1, 2 and 5 of the proposed development.

Figure 2.13 below shows the mix of unit types spread throughout each neighbourhood of the proposed development.

**Figure 2.13** Proposed Site Layout Plan showing Unit Mix

### 2.6.3 Local Centre

The development proposes a local centre which includes retail, a doctors' surgery, crèche facility and community use to serve and support the needs of the proposed development. The centre is accessible from both within the development and from future surrounding developments. The crèche and community use are proposed to be single storey buildings. The crèche has been designed in accordance with the Universal Design Guidelines for Early Learning and Care (ELC). To the north of the crèche a two storey building with two no. ground floor retail units and a doctor's surgery on the first floor is proposed.

**Figure 2.14** Local Centre in Neighbourhood 2

#### **2.6 4 Open Spaces and Landscaping**

The open space strategy for the site includes the provision of a circa 3Ha park in phases 2 and 3 as well as a range of green spaces within the neighbourhoods. This creates a corridor of green spaces that are linked with paths and cycle ways that create a linkage through the site. The park comprises the wayleave for the 110 kv overhead powerlines as the area beneath the power lines cannot be built on. The park area also functions as an important greenway up through neighbourhoods 1, 3 and onto 2. This greenway extends through the entire site in the form of a combined off road pedestrian and cycle path. This is in addition to cycle and pedestrian paths along the distributor road. It is a key feature of the green strategy for the proposed development facilitating an alternative convenient connection through the site between neighbourhoods, the local centre and the park.

The park area proposed in this planning application includes circulation and boundary infrastructure that is configured to accommodate ease of connectivity to the wider urban parkland that will be developed in the future. The eastern boundary of the park area proposed in this planning application where it interfaces with the remainder of the lands zoned for urban park will be defined by a hedge bank and fence with future linkages indicated when the remainder of the lands zoned for urban parkland are developed. This will facilitate maintenance and management of the park with a view to it being taken in charge by Cork City Council. The landscape masterplan included with this planning application shows potential circulation and amenity provision in the wider urban parkland to the east.

**Figure 2.15** Proposed 3 Hectare Park within the Site



**Figure 2.16** Image of Proposed Park



The park area facilitates a range of kick about and play areas. An outdoor gym facility is also proposed within the park. Two amphitheatre structures are proposed to provide opportunities for resting and socialising and benches will be positioned along the path in the park. The recreation and amenity strategy has been central to the design development process of the proposed development. Recreation and amenity provision within the development comprises a combination of formal and informal features including public open space, local play areas, neighbourhood play areas, pocket parks along the distributor road, an outdoor gym, playground facilities and kickabout spaces.

The recreation and amenity strategy for the site has been developed in accordance with the *Cork County Council Recreation and Amenity Policy Interim Approach to Implementation 2019*. Seven no. local play areas are proposed in accordance with the recommended minimum of 1 per 100 no. units and eight no. neighbourhood play areas are proposed in accordance with the recommended minimum of 1 per 100 no. units. The play areas consist of compacted Ballylusk gravel surfaces and timber or re-cycled plastic edges located within grassed open spaces. They provide an alternative to the grass surface for informal play as well as being functional when the grass areas are wet. One local play area and two neighbourhood play areas are to be equipped with play facilities to provide an additional layer of play value. The focus will be on natural play and features within the play areas will include stepping stones, balance beams and logs, tunnels and grass mounds and integrated slides.

## **2.6.5 Access, Car and Bicycle Parking and Public Transport**

### **Access to the Proposed Development**

Two no. site vehicular accesses are proposed from the Ballyhooly Road and a third vehicular access from the local road to the north of the site. The main access from the Ballyhooly Road will provide for the service/ distributor road through the site as required by local area plan objective NE-U-03 and NE-U-04 (in part). This distributor road will serve the proposed development and open up additional lands within the urban expansion area to the east and south east of the site. It is the only service road sought under planning policy that brings access from the Ballyhooly Road to lands to the west of the UEA. The service road runs west to east across the site. The service road runs south along neighbourhood 5 to the west of the site therefore partly providing for the NE-U-04 service road objective. The service road runs to the boundary of the applicants site and can therefore be easily extended in the future to continue service road NE-U-04 and develop service road NE-U-02 to serve additional lands within the UEA.

**Figure 2.17** Proposed Entrance on Ballyhooly Road

### **Car and Bicycle Parking**

The total car parking requirement for the proposed development based on Cork County Council car parking standards is 1,389 no. car parking spaces. A total of 1330 car parking spaces are proposed to serve the development. This is less than the County Council standards but is considered an appropriate level of parking having regard to the provision of generous bicycle parking, proximity to bus stops on the Ballyhooly road and the provision of bus stops internally within the site. A summary car parking schedule is set out in Table 2.1. This schedule sets out the car parking provision for each neighbourhood against the adopted standards. The proposed development includes 591 no. bicycle spaces.

**Table 2.1** Car Parking in the Proposed Development

LONGVIEW CAR PARKING SUMMARY		Cork County Council Car Parking Standards Residential 2 2 1.25 1.25 1.25					Cork City Council Car Parking Standards Residential 2.25 1.25 1.25 1.25 2.25					Issue: Draft 1	
		HOUSING MIX					horgan carroll ARCHITECTS						
Neighbourhood	Proposed Car Parking Provision	3&4 Bed House	2 Bed House	1 Bed Apt.	2 Bed* Apt.	3 Bed* Apt.	TOTAL	COUNTY Req.	Balance	% of requirement	CORK CITY Req.	Balance	% of requirement
Neighbourhood 1	143	64	2	0	3	6	75	143	0	100	164	-21	87
Housing		126	29	12	33	18	218	389			417		
Creche								16			17		
Community Room								4			4		
Medical Practice								14			4		
Convenience Retail								15			15		
Neighbourhood 2*	393							438	-45	90	457	-64	86
Neighbourhood 3	133	61	2	0	0	0	63	126	7	106	140	-7	95
Neighbourhood 4	174	84	9	0	0	0	93	186	-12	94	200	-26	87
Neighbourhood 5*	327	124	30	0	12	12	178	338	-11	97	359	-32	91
Neighbourhood 6	160	0	0	36	64	26	126	158	2	102	184	-24	87
<b>TOTAL</b>	<b>1330</b>	<b>459</b>	<b>72</b>	<b>48</b>	<b>112</b>	<b>62</b>	<b>753</b>	<b>1389</b>	<b>-59</b>	<b>96</b>	<b>1502</b>	<b>-172</b>	<b>89</b>

\* Duplex units included within Apartment mix  
\* N2 & N5 include a centrally located bus stop.

## Existing Public Transport

The existing closest bus stop to the site is located outside Brookwood estate, 300m from the proposed main site entrance on Ballyhooly Road. The no. 207 bus route serves this stop which runs from Ballyvolane to Donnybrook via Cork City Centre with a terminus at Glenheights Park on Glenheights Road and a terminus at Scairt Cross, Donnybrook. The route serves Glen Rovers Hurling Club, Ballyvolane Business Park, Ballyvolane Shopping Centre, Cork City Centre and Douglas. The current service takes approximately 20 minutes from the closest bus stop to the site to the bus station on Parnell Place in the city.

Services depart every 30 minutes from Glenheights between 07.10 to 23.00 Monday to Saturday and on Sundays from 09.30 to 23.00. The outbound route runs from Donnybrook to Ballyvolane through Patrick Street with the same frequency as the inbound route. The inbound route commences at Glenheights Park, travels via Ballyvolane Business Park, east along the North Ring Road, northeast along Ballyvolane Road past the shopping centre, then south along Ballyhooly Road through Dillon's Cross, St. Luke's and down Summerhill North, across Brian Boru Bridge to the bus station at Parnell Place before commencing its southbound part of the route.

## Future Public Transport Proposals

The draft Cork Metropolitan Area Transport Strategy (CMATS) includes for bus public transport enhancements on the Ballyhooly Road. Cork City Council and the National Transport Authority have instructed consultants to commence the design of such improvements as of August 2019 – the *Ballyvolane Strategic Transport Corridor Project: North Ring Road to Ballincolly (BSTC)*.

The proposed development allows for the future upgrade of the Ballyhooly Road to accommodate a high frequency bus service with the set-backs that have been incorporated into the design of the development as agreed with Cork City Council. This is in accordance with CMATS as it identifies the Ballyhooly Road as a priority route for the proposed Bus Connects. Enhancing the bus network is consistent with the National Development Plan 2018-2027 which envisages a significantly enhanced Bus Connects service for Cork by 2027. The Ballyvolane Donnybrook bus route forms part of the core radial bus network and significant improvements to the frequency of these routes are proposed under CMATS.

The proposed development also includes for the construction of a new bus stop on the Ballyhooly Road close to the Ballyhooly/ Kilbarry Link Road junction. In addition to this, the proposal includes for bus stops along the internal distributor road. These are located on the distributor road between neighbourhood 1 and the greenway and on the distributor road adjacent to the local centre. A temporary bus turning area is proposed until such a time as the bus can continue along the distributor road and serve other lands within the expansion area as they are developed.

There is currently no footpath on the Ballyhooly Road north of Mervue Lawn. Improvements proposed as part of the development include for the provision of cycle lanes and a footpath to connect to the existing footpath network to the south of the site. It is proposed to have 2m wide cycle lanes and footpaths to the east of the Ballyhooly Road for cyclists travelling to and from Ballyvolane and the City Centre. This is in accordance with the Cork Cycle Network Plan which envisages a primary cycle route along the Ballyhooly Road from Glen Avenue to Mervue Lawn with the potential to be extended further north to serve other areas of the master plan if required.

### **2.6.6 Childcare and Education**

The proposed development includes for the construction of a crèche of 692.88 sq.m in neighbourhood 2 to be delivered in phase 2/3 of the proposed development. The crèche is conveniently located next to the local centre and central to the proposed development. The proposed crèche includes rooms for the various age groups –children aged 0-1 years, 1-2 years, 2-3 years and 3-6 years, kitchen and dining areas, sleep rooms and nappy changing areas. The crèche has an attractive internal courtyard area and a safe and secure outdoor play area to the rear.

The crèche can cater for approximately 103 children and has been carefully designed in accordance with the *Universal Design Guidelines for Early Learning and Care Settings 2019*. The size of the crèche was determined by a Childcare Assessment carried out during the design process and from discussions with the local childcare committee – Cork City Childcare Committee. The crèche has been increased in size since the Section 5 tripartite meeting on the basis of advice from Cork City Childcare Committee who advised that it should be increased to cater for 100 no. children and designed in accordance with the most recent guidelines (see letter attached at Appendix 2.2).

As noted above, the overall site is partly zoned for a school campus. A School Demand Assessment was carried out that included a review of enrolment figures in local primary and secondary schools in the area. The School Demand Assessment concluded that existing schools should be capable of providing a number of school places for this first phased tranche of residential development to be proposed in the Ballyvolane expansion area. Given the sites proximity to the City Centre, it is likely that existing and future children in the Ballyvolane area will avail of places in popular City Centre schools.

Cunnane Stratton Reynolds liaised with the Mr Alan Hanlon in the Site Acquisition and Property Management Section of the Department of Education and Skills regarding the site zoned for a school campus. Mr Hanlon's response letter noted that "*this Department conducts nationwide demographic exercises into current and future need for primary and post primary school places across the country and these are constantly monitored and updated as further demographic information emerges. While this Department has no current plans for the acquisition and development of the zoned school site at Ballyvolane, this position will continue to be reviewed as part of those nationwide demographic exercises*". There is therefore no current requirement for a school campus on this site (see letter attached at Appendix 2.3).

Notwithstanding this, the project architects, Horgan Carroll, have assessed the practicality of providing a school campus at this location with a secondary and primary school provided. A draft layout was developed incorporating a campus style development on the site and has been included for information purposes with this planning application. This exercise demonstrates that it is possible to fit a campus containing a primary and secondary school at this location and that the proposed development therefore does not jeopardise the future development of the school site by the Department of Education and Skills if the need for same arises.

### **2.6.7 Site Services**

#### *Water Supply*

It is proposed to connect the sites water supply to an existing pipeline present in the Dublin Hill area approximately 780m to the west of the site boundary. The extension of this watermain has been agreed with Irish Water and will comprise a 250mm HDPE watermain.

#### *Foul Water*

The topography of the site generally falls from the east towards the Ballyhooly Road to the west. This allows for the majority of the network to be gravity fed with the exception of phase 5 on the far eastern side of the site. The following indicates how the foul network will develop as the various phases are complete.

Phase 1: Foul network will be gravity fed and will connect to existing 225mm foul sewer running north to south on Ballyhooly Road.

Phase 2: A new strategic pump station is required along Ballyhooly Road to the south of the residential development. This station is required to accommodate additional phases and future developments in the Urban Expansion Area (UEA). The existing foul network has capacity for Phase 1 only. The applicant has entered into a Project Works Service Agreement (PWSA) with Irish Water for the delivery of this infrastructure.

Phase 3: Additional foul network required for Phase 3 housing will be tied into development foul network and be gravity fed to new Irish Water pumping station.

Phase 4: Additional foul network required for Phase 4 housing will be tied into development foul network installed along Ballyhooly Road and be gravity fed to new Irish Water pumping station.

Phase 5: Due to topography constraints, wastewater from Phase 5 will need to be pumped in order to connect to the overall development foul network. A new pumping station will be constructed bordering Phase 5 to achieve this. The rising main from the pumping station will extend north along the main distributor road through the proposed development before tying into the overall development foul network at a location adjacent to Phase 2. Wastewater will then be gravity fed to the new Irish Water pumping station.

Phase 6: Additional foul network required for Phase 6 will be tied into development foul network and be gravity fed to new Irish Water pumping station.

### *Surface Water*

A combination of infiltration to the east and stormwater attenuation to the west of the site is proposed to drain the development. Soil infiltration rates to the east of the site were identified as being high while infiltration rates to the west of the site were low. These results informed the design team that a Sustainable Urban Drainage System (SUDs) compliant system could be used for surface water collection for the eastern portion of the proposed development while the remainder of the site would need to be positively drained off the site via attenuation tanks. In areas where soil infiltration was not possible due to topography and soil type, SuDS type measures such as the use of permeable paving on internal junctions and open drainage swales are being proposed.

To ensure a robust design, attenuation flow rates were restricted to  $Q_{bar}$  rates for each of the individual phases. The use of soakaways for surface water infiltration is proposed in locations generally to the east of the site (in phases 2 & 5). Surface water quality will be treated through the use of Oil Separators and SUDS measures. For this development, the following SUDS measures are proposed:

- Planted swales running adjacent to roadways where feasible.
- Kilsaran permeable paving at suitable locations throughout the site.
- Storm-tech attenuation chambers in conjunction with Hydroflow vortex control to maintain a maximum outflow of 5 l/s/ha (Avg  $Q_{bar}$ ).
- Infiltration soakaways on the eastern portion of the development where the topography is flatter and infiltration tests were conducive to infiltration.

It is proposed to connect the main surface water discharge to the local network at a location 0.8km south on Ballyhooly Road, Outfall 2. Neighbourhood 4 (Phase 4) will connect at Outfall 1, and will be used to recharge the existing stream during low flow periods.

The proposed tie-in locations were selected following discussions with Cork City Council. The proposed outlets into the existing watercourse will incorporate outfall header walls to mitigate riverbed (stream) erosion; no works will occur within the stream.

## **2.7 Cumulative Projects**

The assessment of impacts has considered the following projects for their potential cumulative impacts:

- Cork County Council planning ref. 19/5326 for the construction of 20 no. residential units and all ancillary site works at Banduff Road approved in August 2019.
- Cork County Council planning ref. 17/6781 for the construction of 74 no. residential units at Dublin Pike, Ballincroig approved in April 2018
- Cork County Council planning ref. 16/5477 for development comprising the demolition of 1 no. building accommodating an existing Lidl Licenced Discount Foodstore (1,749 sq m Gross Floor Area with 1,391 sq m Net Retail Sales Area) and a disused retail unit formerly occupied by the New Furniture Centre (970 sq m Gross Floor Area with 776 sq m Net Retail Sales Area), and the construction of a new mono-pitched Licenced Discount Foodstore with ancillary infrastructure and associated site development works at Ballyhooly Road approved in August 2016.

- The Ballyvolane Strategic Transport Corridor Project: North Ring Road to Ballincolly. Design of the scheme is being advanced by a team of consultants instructed by Cork City Council supported by the National Transport Authority. The detailed design will be the subject of a Part 8 planning application by Cork City Council. The instructed Consulting Engineers are the same as for this project; MHL Consulting Engineers Ltd.
- The development of the remainder of the Ballyvolane Urban Expansion Area. The lands have been designated for development through the Local Area Plan land use zonings. Infrastructure proposed as part of this planning application i.e. the distributor road and waste water infrastructure will help to unlock other lands within the expansion area for development. These lands will be subject to separate planning applications in the future whereby individual needs / loading implications will receive greater consideration.

## 2.8 Proposed Phasing

It is intended to develop the proposed development over six phases of development as described below. An indicative phasing plan has been developed by Horgan Carroll Architects and is included with this planning application along with details on the phasing in the Architects Design Report. The final construction sequencing will be confirmed subject to any planning conditions of the decision and once the site contractor has been appointed. A ten year planning permission is being sought from An Bord Pleanála. A determination on the application is expected from An Bord Pleanála in Q1 2020. Allowing a reasonable period for mobilisation and site set up, potentially works will commence in 2021, subject to the details of a grant of permission and the discharge of any pre commencement planning conditions.

This section of the EIAR summarises the construction and phasing of the proposed development and sets out the measures included within the Construction Environment Management Plan (CEMP) prepared by MHL and Associates Ltd that are to be used to ensure that the impact of construction activity is minimised.

### *Site Works*

It is intended that initial site works (including access road depending on conditions) will take 6-12 months and include construction of the compound area and storage area (where Neighbourhood 6 is proposed) together with offices and associated welfare facilities and “cut and fill”/ reprofiling of land being developed (including the relocation on site of excess spoil and the storage on site of excess general fill material acceptable for re-use). During this stage it is envisaged that the access roads and internal distributor road are to be constructed (provided for as one full build out or a phased delivery in accordance with housing provision) along with all necessary underground services, ducting etc to accommodate foul and service water demands for later phases. The undergrounding of the 38KV line will be commenced and the construction of all surface water drainage infrastructure to facilitate Phase 1. The areas around the 110KV pylons will be secured for construction safety as agreed with the ESB. Planting and the construction of boundary walls is also proposed along the northern boundary as agreed during consultation with local residents.

Phasing will be broadly consistent with the sequence of Neighbourhoods proposed. However, some of the Neighbourhoods are larger than what can be practically constructed in one year with local construction resources. This will see partial delivery of phases and delivery of envisaged unit numbers as opposed to Neighbourhoods on a year by year basis.

### *Phase 1 – End 2021*

Phase 1 includes entrance works, the construction of 75 no. units and landscaping for Neighbourhood 1 and roads and services (1-2 units in this portion of the scheme will be permanent show houses until the crèche is open in Phase 2). The construction of retaining structures and embankments to facilitate roads and development areas. This Phase will also see the erection of temporary sales signage at the site entrance and is consistent with Neighbourhood 1.

Phase 1 also allows for local widening of the Ballyhooly Road at the entrance to the site at Phase 1 and the setback of Ballyhooly Road for the bus corridor and delivery of the permanent cycle lanes and pedestrian footpaths for the widened road. Landscaping along the boundary of Phase 6 with the Ballyhooly Road and landscaping along the Ballyhooly Road and at the Irish Water pumping station access is also proposed in this phase. Phase 1 is proposed to include for the new bus stop on the Ballyhooly Road and the pedestrian crossing. Public lighting is also proposed along the Ballyhooly Road in this phase.

Phase 1 also includes the provision of the signal controlled crossing to Lower Dublin Hill/ Ballyhooly Road junction. This phase includes the construction of all underground services, ducting etc to accommodate foul and surface water demands for later phases.

### *Phase 2 / Phase 3 – End 2022*

Neighbourhood 2 is envisaged as being delivered in two phases from 2022 to end 2023. Phase 2/3 includes the proposed construction of approximately 100 no. units. It includes the Irish Water Type 1 pumping station and associated infrastructure and land take to support the services facilities for the entire Ballyvolane Urban Expansion Area. This phase includes landscaping to phase 1/2 embankments and the distributor road and the construction of local access to the northern local road. This phase will also include ground works for neighbourhood 2 and park land works as per objective NE-O-04 of the local area plan for the provision of an urban park for public recreation. Phase 2 will commence the provision of the park with the residual lands for the park retained as existing natural hedgerows and features.

Phase 2/3 will include the provision of an internal temporary bus turning bay and the construction of the crèche and local neighbourhood centre. This phase will include the construction of all underground services, ducting etc to accommodate foul and surface water demands for later phases.

### *Phase 2 / Phase 3 – End 2023*

This phase proposes the construction of approximately 100 no. units and park land provision and public lighting as per objective NE-O-04 of the MD LAP. As noted the balance of the lands zoned for the provision of the urban park in the applicant's control are to be retained as passive amenity. The construction of all underground services, ducting etc to accommodate foul and surface water demands for later phases are proposed in this phase. Provision is also made for landscaping of this phase.

### *Phase 4 – End 2024*

Neighbourhood 3 is envisaged as the initial part of Phase 4. Neighbourhood 4 (the portion accessed from the Ballyhooly Road) is envisaged as being delivered as part of this phase also. Phase 4 proposes the construction of 100 no. units, associated landscaping and the second access from the Ballyhooly Road (the access to Neighbourhood 4). This phase

includes the construction of the footpath fronting the Ballyhooly Road to the west of Phase 4. It also includes the construction of Park Land / Greenway north of Internal Distributor Road and pedestrian links to local rural road to the north of the site.

#### *Phase 5 – End 2025*

Phase 5 proposes the construction of approximately 100 no. units and associated landscaping in Neighbourhood 5. Phase 5 includes the Irish Water Type 3 pumping station being delivered to support lands to the north east of the site. Phase 5 also includes the construction of all underground services, ducting etc to accommodate foul and surface water demands. . The Balance of housing in Neighbourhood 5 will be delivered in the last Phase of development; Phase 6.

#### *Phase 6*

Phase 6 is proposed to be delivered in two parts as follows:

##### *Phase 6a – End 2026*

This phase proposes 125 no. units; approximately the residual housing in Neighbourhood 5. It is proposed to reduce the size and layout of the construction compound to allow for the construction of the apartments in Neighbourhood 6 at this stage also so as to allow for their construction as a sub stage.

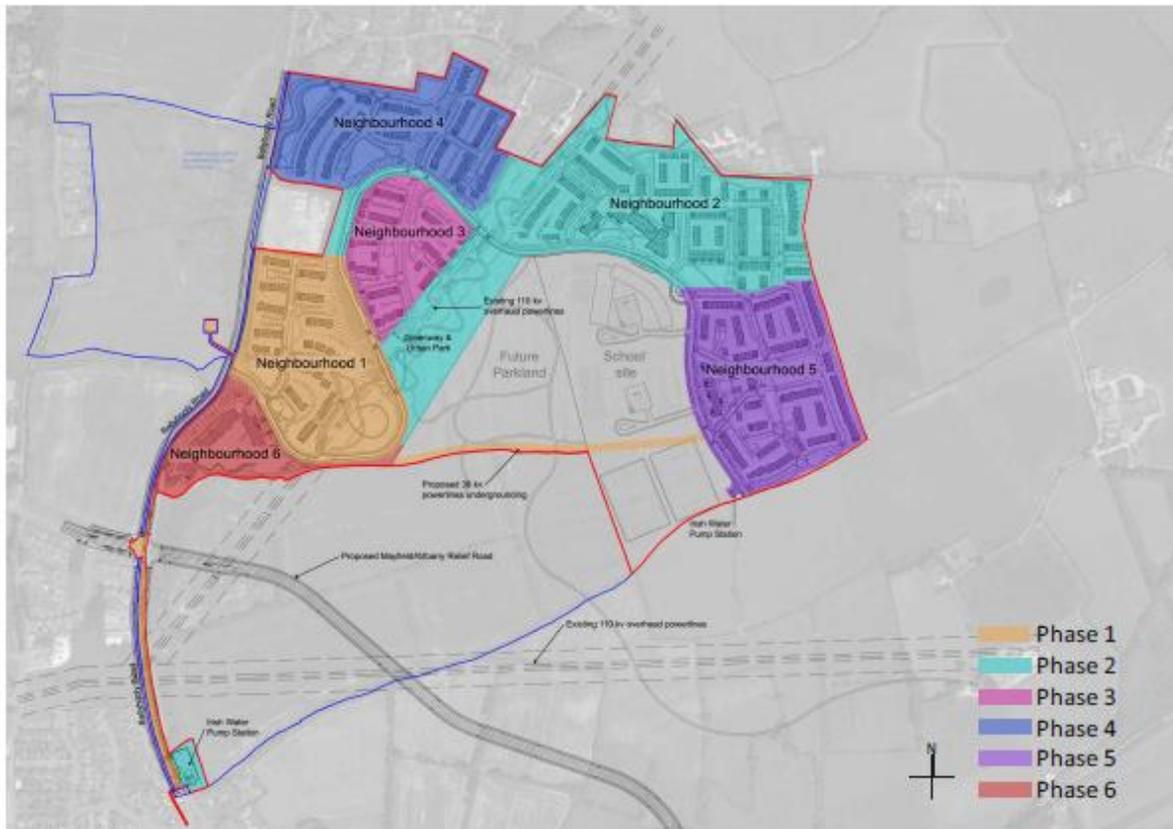
##### *Phase 6b – Mid 2027-2029*

153 no. units are proposed in this phase of the construction. This will include apartments in Neighbourhood 6 and Neighbourhood 2 if they have not been developed at this stage. The apartments and community space in Neighbourhood 2 may be delivered at an earlier date subject to demand.

All phasing may be subject to Irish Water connection agreements and local connections within phases as required by IW.

Table 2.2 below summarises each proposed phase of construction and Figure 2.18 illustrates the proposed sequence.

**Figure 2.18** Proposed Phasing Plan



**Table 2.2** Indicative Delivery Programme<sup>1</sup>

Neighbourhoods		N1	N2	N3	N4	N5	N6	
Number of Residential Units		75 Units	218 Units (Incl 27 Apts)	63 Units	93 Units	178 Units	126 Units	
Phases	Site Works	Phase 1 – End 2021	Phase 2 / 3– End 2022	Phase 2 / 3– End 2023	Phase 4– End 2024	Phase 5– End 2025	Phase 6 - End 2026	Phase 6- Mid 2027 – 2029
Indicative House & delivery Programme	Q2 2020 Early 2021	75 units <sup>2</sup>	100 units <sup>3</sup>	100 Units <sup>4</sup>	100 Units <sup>5</sup>	100 Units <sup>6</sup>	125 Units <sup>7</sup>	153 <sup>8</sup> Units (Incl Apts in Neighbourhood 2 & 6)
Indicative Cumulative Delivery	0	75	175	275	375	475	600	753
Modal Shift		13% <sup>9</sup>	25%	35%	40%	45%	45%	45%
Range of Deliverables	Confirmation of Draft Section 47 Agreement between Cork City Council and Applicant prior to the commencement of development.  Compliance / Submission & sign off by CCC.  CEMP Preparation.	Widening of Ballyhooly Rd at entrance to site at Phase1.  Setback of Ballyhooly Road for bus corridor and delivery of the permanent cycle lands and pedestrian footpaths for widened road.  New Bus Stop on Ballyhooly Road.  Pedestrian Crossing to Ballyhooly Road	IW Type 1 Pumping Station and associated infrastructure & Landtake to support the services facilities for the entire Ballyvolane Urban Expansion Area. Pumping Station to be taken in charge by Irish Water when requested by IW.  Internal Access Distributor	Park Land Provision and Public Lighting to Park as per NE-O-04.  Balance of Park Zoned lands in Applicant Ownership / Control secured for passive amenity use as per NE-O-04  Construction of all underground	Construction of Second access to Ballyhooly Road.  Construction of Park Land / Greenway north of Internal Distributor Road and pedestrian links to local rural road to the north.  Construction of footpath on Ballyhooly Road	IW Type 3 Foul Pumping Station delivered to support lands to the north east of the land holding / site.  Construction of all underground services, ducting etc to accommodate foul and surface water demands.	Reduce the size and layout of construction compound to allow for the construction of the apartments.  Groundworks and sub level formation (relocation of compound to this area if necessary once complete).	Construction of Community Room in Neighbourhood 2 as part of apartment building in Neighbourhood 2; these apts and community space may be delivered at an earlier date subject to demand.  Commence Apartment Construction.

<sup>1</sup> Delivery of all units subject to Multi phase Connection Agreement with Irish Water<sup>2</sup> All Neighbourhood 1<sup>3</sup> 100 Units from Phase 2<sup>4</sup> Remainder 91 Units from Neighbourhood 2 and 9 from Neighbourhood 3<sup>5</sup> 54 Units from Neighbourhood 3 and 46 from Neighbourhood 4<sup>6</sup> Balance of 47 Units from Neighbourhood 4 and 53 from Neighbourhood 5<sup>7</sup> Residual Houses in Neighbourhood 5<sup>8</sup> Balance of Neighbourhood 5 and Neighbourhood 6<sup>9</sup> Public Transport and Non Vehicle use in area currently at 13%

	<p>Statutory Services Sign off (ESB / ESBI / IFI)</p> <p>Construction of compound, storage area together with offices and associated welfare facilities, cut &amp; fill of land being developed including the relocation on site of excess spoil and the storage on site of excess general fill material acceptable for re-use in Neighbourhood 6.</p> <p>Access Road and Internal Distributor Road Works and the construction of all necessary underground services, ducting etc to accommodate foul and surface water demands for later phases.</p> <p>Commence undergrounding of 38KV Line traversing the site.</p>	<p>including Signal Controlled crossing at Lower Dublin Hill / Ballyhooly Rd Junction.</p> <p>Landscaping to Phase 1.</p> <p>Landscaping to Ballyhooly Road boundary Phase 6.</p> <p>Landscaping to the Ballyhooly Road / Access to IW Pumping Station.</p> <p>Entrance Works.</p> <p>Public Lighting to Ballyhooly Road.</p> <p>Construction of houses including roads and services together with all construction works to facilitate the development.</p> <p>Construction of retaining structures and embankments to facilitate roads and development areas.</p> <p>Construction of all underground services, ducting etc to accommodate foul and surface</p>	<p>Road and Lighting.</p> <p>Landscaping to Phase 1 / 2 embankments and Distributor Road.</p> <p>Construction of Local Access to the Northern Local Road.</p> <p>Ground Works for Neighbourhood 2 &amp; Park Land Works as per NE-O-04 (commence provision of Park and retain residual lands for park as open space – retain existing natural hedgerows and features).</p> <p>Internal Temp Bus Turning Bay.</p> <p>Creche Construction.</p> <p>Construction of all underground services, ducting etc to accommodate foul and surface water demands for later phases.</p>	<p>services, ducting etc to accommodate foul and surface water demands for later phases.</p> <p>Landscaping to Phase 3.</p>	<p>to west of Phase 4 frontage.</p> <p>Construction of all underground services, ducting etc to accommodate foul and surface water demands for later phases.</p> <p>Landscaping to Phase 4.</p>	<p>Landscaping to Phase 5.</p>	<p>Complete landscaping to Phase 6.</p>
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	Construction of all Surface Water Drainage Infrastructure to facilitate Phase 1.  Securing construction safety areas around 110 Kv Pylons to the as agreed with ESBI.  Planting to enhance boundary to the north and construction of boundary walls to the north as proposed to local residents.	water demands for later phases.	Construction of Local Neighbourhood Centre.					
<b>Timeline</b>	6-12 months	12 months	12 months	12 months	12 months	12 months	12 months	24-30 months
<b>Average Construction Workers</b>	30	80	80	80	80	80	80	80
<b>Peak Construction Workers</b>	50	100	100	100	100	100	100	100
<b>Est Average Daily Construction Vehicles</b>	60	60	60	60	60	60	60	60
<b>Est Peak Daily Construction Vehicles (HGV / Van / Workers)</b>	80 (2 HGV'S / 7 Vans / 15 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)	80 (2 HGV'S / 15 Vans / 60 Cars)

## 2.9 Construction Activities and Management

A Construction and Environmental Management Plan (CEMP) for the proposed development accompanies this planning application. This plan will be updated and implemented by the Developer and appointed Site Contractor as the project progresses. The CEMP sets out the typical arrangements and measures which may be undertaken during the construction phase of the proposed development in order to mitigate and minimise disturbance and disruption to the surrounding area. Due to the nature and size of the proposed development, the potential impacts of the construction stage must be considered. The construction stage will involve typical site work components including site clearance and preparation, excavation, stockpiling, removal of material or re use elsewhere on site, infrastructural works and landscaping. The potential impacts from the construction phase include increased volume of traffic in the area as a result of construction associated traffic, noise and vibration disturbance as a result of construction activity and dust in the air and debris on local roads.

The proposed CEMP details measures to avoid, reduce or mitigate the construction impacts wherever possible. In considering the potential impacts that may occur during the construction of the proposed development the CEMP sets out Environmental Management Procedures (EMPs) that have been developed and will be implemented to manage the environmental impacts of activities associated with the construction of the proposed development. The monitoring and mitigation of the construction stage is detailed further in Section 2.10. The EMPs are set out in Table 2.3.

**Table 2.3** Environmental Management Procedures

Reference	Procedure:-
EMP-1	Fuel and Oil Management
EMP-2	Traffic Management
EMP-3	Waste Management
EMP-4	Noise Management
EMP-5	Dust Management
EMP-6	Site Environmental Training and Awareness
EMP-7	Environmental Emergency Response
EMP-8	Monitoring and Auditing Procedure
EMP-9	Environmental Accidents, Incidents and Corrective Actions Procedure
EMP-10	Environmental Complaints Procedure
EMP-11	Odour Control Procedure
EMP-12	Light Pollution Control Measures
EMP-13	Surface Water Management and Run-off Control Measures

### 2.9.1 Construction Plant and Equipment

The typical plant and equipment to be used during the construction of the proposed development include those listed in Table 2.4.

**Table 2.4** Typical Plant and Equipment for Construction Period

Plant Item	Purpose
Hydraulic excavators – various	Excavation, substructures, drainage
Mobile cranes- various	Erection of buildings, movement of large materials and plant
Dumpers	Excavations, drainage, landscaping, movement of materials
Concrete saw cutting	Used for cutting concrete slabs in yard areas, building substructure and superstructures.
Volvo dump trucks	Removal of demolition materials off site
Ready-mix concrete trucks	Delivery of concrete to site for new structures, slabs, etc.
Pump unit for ready-mix concrete	For placement of concrete.
Vibrating rollers	Used for compacting stone in roads, yard areas, substructures etc
HGV – 20 foot trailers	Delivery of materials, steel, cladding, concrete blocks,
HGV – 40 foot trailers	Delivery of structural steel, cladding, large elements of new plant and equipment
Telescopic site handlers	Handling and moving materials on site
Road sweeping equipment	Management of dust and excavation residues on site and off site on road approaches.
Welding gear	Demolitions, erection of structural steel and in mechanical installations
Elevation platforms	For use by employees erecting steel, cladding and general construction at height.
Small tools – grinders, saws, drills, kango hammers, powerfloats, temporary lights, water pumps, concrete vibrators	For use during all stages of construction

### 2.9.2 Construction Hours

It is proposed that the site construction hours will be as per standard site working hours – 07.00 am –19.00 pm on weekdays and 07.00 am –16.00 pm on Saturdays with no works on Sundays or Bank Holidays and a planning condition imposing these working hours is welcomed. It may on occasion during certain stages of construction be necessary to work outside of the permitted working hours. In the event that these hours need to be extended, agreement will be sought from the Local Authority in advance.

### 2.9.3 Proposed Construction Site Access

It is proposed to use the main access from the Ballyhooly Road as the construction site access for the project.

### 2.9.4 Construction Traffic and Parking

The appointed Contractor will develop a Construction Stage Temporary Traffic Management Plan in compliance with the Preliminary Temporary Traffic Management Plan developed in consultation with Cork City Council Roads and Transportation Department.

The purpose of this plan is to set out measures for the management of traffic, including construction traffic and oversized loads, for the minimisation of disturbance and nuisance to the local community. The plan will include:

- Details of site access and any site traffic rules must be included, including security, parking, loading and unloading, required speed and other relevant details.
- Details of equipment delivery.
- Site operating hours (including delivery).
- Details for communicating with the community and the Local Authority and Gardaí where required.

In order to mitigate from a significant impact during peak traffic hours, the majority of staff will either arrive on site before or after the peak morning traffic (08.00-09.00) and finish work before or after the evening peak traffic hours (17.00-18.00). The condition of the public road will be monitored on an on-going basis and a road sweeper provided to clean the road if required.

Adequate parking will be provided on site for both employees and visitors and there will be no parking of any vehicles on the public road near the site entrance.

### 2.9.5 Construction Personnel

It is anticipated that approximately 30 construction workers will be required for the site development works stage with a peak of 50 workers during this period and a daily average of 80 construction workers for each phase during the duration of the build with an estimated peak of 100 construction workers.

### 2.9.6 Site Compound

Once the main entrance is in place and the bulk excavation has reached the appropriate stage, the Contractor will set up their temporary construction facilities. The site compound to be located where neighbourhood 6 will be developed in the future as shown in Figure 2.19 will include:

- Site offices, canteen and toilet / changing facilities with temporary water supplies and wastewater treatment unit.
- Secure compound and containers for storage of materials and plant.
- Temporary vehicle parking areas.
- Contained area for machinery refuelling and construction chemical storage.



- Excavation wastes
- Construction waste from building materials such as Off Cuts of Metal and Insulation
- Pipe Off Cuts, Wrapping, Insulation, Weld Rods
- Materials Wrapping
- Oils, Filters and Cleaning Materials
- Food Waste, Packaging Materials, Dry Recyclables
- Metal, Wire
- Wash Out from Trucks

There are no demolition works proposed as part of this development so the main waste will arise from site preparation works, site excavation and the generation of surplus construction materials. As noted in the CEMP it is assumed that all of the soil and stone waste arising from the project will be categorised as non-hazardous and will be kept on-site. The initial site investigation report carried out by Priority Geotechnical has identified soil strengthening methods that are to be utilised to ensure excavated granular material will be used as aggregate construction material. Top-soil excavated will be stored for re-use on the site and in the area designated Parks.

All wastes will be managed, collected, stored and segregated in separate areas and removed off site by a licensed waste management contractor at regular intervals during the works. All concrete trucks will have to return to their respective yards for washout.

Material arising from site clearance works will be stored at different locations according to material identification. Figure 2.20 indicates the proposed location of stockpiles generated from the different phases based on excess material being generated. Table 2.5 presents the estimated quantities of materials to be generated per phase of development. The precise location of stockpiles will be identified at construction phase:

- Stockpile 1 - excavated top-soils
- Stockpile 2 - excavated sub-soils suitable for reuse as structural fill
- Stockpile 3 - excavated materials unsuitable for reuse as structural fill

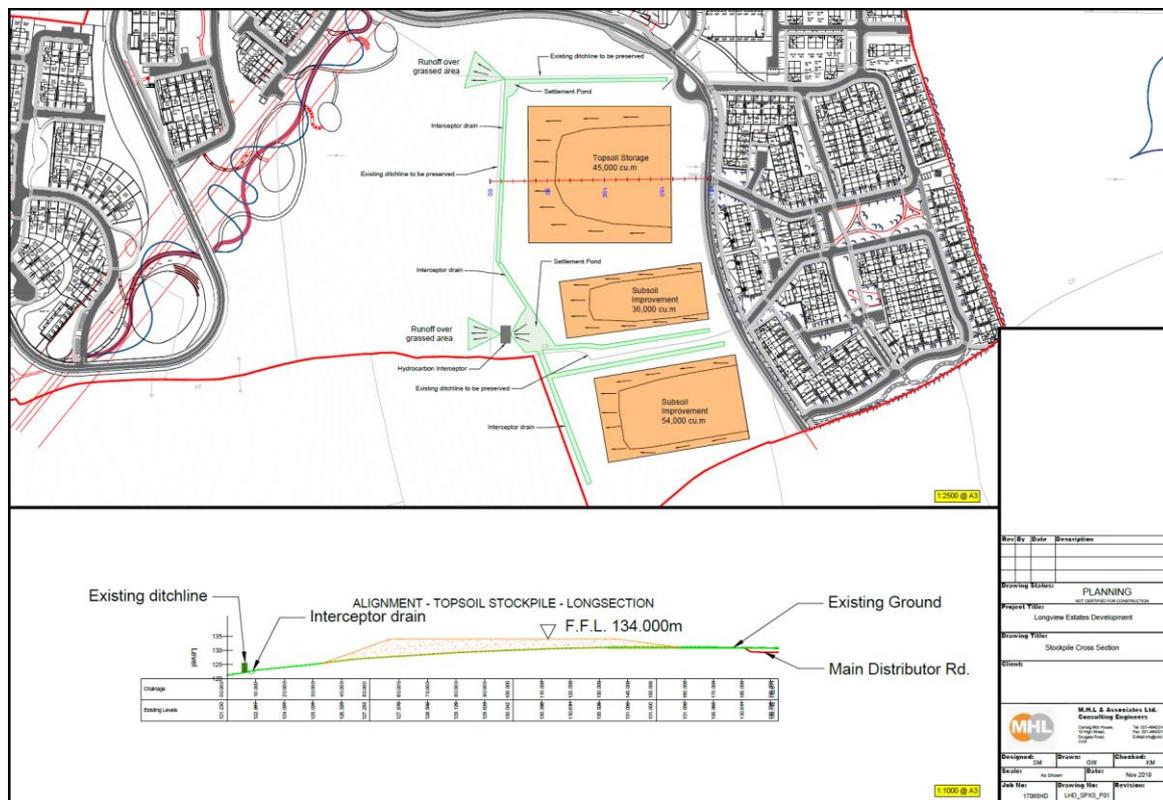
Removed topsoil will be kept separate from the general spoil. All turfs and topsoil will be stored on geotextile matting. Once deposited, the topsoil will be trafficked to the minimum possible extent to prevent damage and dusting. Stockpiled sub-soils will be located in an area away from drainage ditches and will be bunded on the down gradient edges with a silt curtain or other suitable materials to reduce risk of silt run-off.

All excavated material is being proposed for the purposes of filling or general landscaping on site. However, should any surplus or rejected excavated material be generated, it is to be transported off the site to an approved waste facility. It will be tested in advance of disposal to verify the acceptability of the constituents.

**Table 2.5** Breakdown of Materials to be generated per Neighbourhood

Summary Description	Cut (m2)	Fill (m2)	Cut Breakdown		
			Topsoil	Subsoil	Rock
Main Distributor Road	33025.15	28830.26	6758.158	17621.66	8645.337
Neighbourhood 1 (new N6)	17600.46	4760.655	2695.258	6229.607	8675.59
Neighbourhood 2 (new N1)	58223.55	12171.37	7448.902	30180.86	20593.79
Neighbourhood 3 (new N4)	31270.01	22554.65	7708.464	15569.45	7992.096
Neighbourhood 4 (new N3)	17088.67	38556.4	4220.603	8655.356	4212.708
Neighbourhood 5 (new N2)	12923.79	33821.76	5843.401	6305.963	774.425
Neighbourhood 6 (new N5)	16701	11741.69	10940.72	5755.966	4.312
<b>Subtotal</b>	<b>186832.6</b>	<b>152436.8</b>	<b>45615.51</b>	<b>90318.86</b>	<b>50898.26</b>

**Figure 2.20** Proposed Stockpile Locations



In addition, the Material Assets Chapter of this EIAR includes details regarding the anticipated amounts of waste that will be generated from the project once operational, the subsequent potential impacts and the mitigation measure proposed to ameliorate any anticipated negative impacts. All waste generated during the construction and operational periods is proposed to be appropriately disposed of in accordance with the Waste Management Plans.

**2.10.2 Noise and Vibration Management**

The Contractor shall comply with the general recommendations set out in the Code of Practice BS 5228: “Noise Control on Construction and Open Sites” together with the specific requirements described below.

The Contractor shall employ the “best practicable means” to minimise noise and vibration from the site and compound and shall pay particular attention to the selection of the most appropriate available plant to ensure that neighbourhood noise (as defined in BS 5228 Part 1, Section 3) is kept to a minimum.

All vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order. In addition, all diesel engine powered plant shall be fitted with effective air intake silences.

All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers, and where commercially available, dampened tools and accessories shall be used. Machines in intermittent use shall be shut down in the intervening periods between work.

All ancillary plant, such as generators and pumps, shall be positioned so as to cause minimum noise disturbance. If operating outside the normal working week, acoustic enclosures shall be provided.

A Construction Noise Management Plan will be put in place for the construction process, a third-party consultant will be engaged to prepare this report and monitor activity and noise levels generated.

A baseline noise monitoring programme will be completed prior to construction works commencing. It is proposed that noise monitoring will be carried out at a number of locations yet to be determined. Survey details, procedures and results of this aspect of the baseline noise monitoring programme will be in general in accordance with ISO 1996: Part 2: 2007 2.

During the construction phase the development shall comply with British Standard 5228 ‘Noise Control on Construction and open sites Part 1. Code of practice for basic information and procedures for noise control.’

BS 5228 include guidance on the various aspects of construction site noise mitigation, including, but not limited to:

- Liaison with neighbours;
- Noise monitoring;
- Hours of works;
- Selection of quiet plant;
- Control of noise sources and screening.

Noise control audits will be conducted at regular intervals through the construction phase of the development. In the first instance it is envisaged that such audits will take place monthly. This is subject to review and the frequency of audits may be increased if deemed necessary.

The purpose of the audits will be to ensure that all appropriate steps are being taken to control construction noise emissions. To this end, consideration will be given to issues such as the following:

- Hours of operation being correctly observed;
- Opportunities for noise control 'at source';
- Optimum siting of plant items;
- Plant items being left to run unnecessarily;
- Correct use of proprietary noise control measures;
- Materials handling;
- Poor maintenance;
- Correct use of screening provided and opportunities for provision of additional screening.

### **2.10.3 Dust Management**

The Contractor shall take all necessary steps to control dust caused by construction traffic. This will include measures such as:

- Wetting of haul road and storage areas;
- Covering or dousing of any dry, imported or excavated material;
- Reducing the duration for stockpiling in fill materials;
- Use of a wheelwash for construction traffic.

The objective of dust control at the site is to ensure that no significant nuisance occurs at nearby sensitive receptors. To develop a workable and transparent dust control strategy, the following framework plan has been formulated by drawing on best practice guidance from Ireland, the UK and the USA. Effective site management regarding dust emissions will be ensured by the formulation of a Dust Management Plan (DMP) for the site.

The key features of the DMP are:

- The specification of a site policy on dust;
- The identification of the site management responsibilities for dust;
- The development of documented systems for managing site practices and implementing management controls;
- The development of means by which the performance of the dust management plan can be assessed.

The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design and effective control strategies. At the planning stage, the siting of construction activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions to minimise the potential for significant dust nuisance.

In addition, good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures quickly before the potential for nuisance occurs:

- During working hours, technical staff shall be on site and available to monitor dust control methods as appropriate;
- Complaint registers will be kept on site detailing all telephone calls and letters of complaint received about construction activities, together with details of any remedial actions carried out;
- It is the responsibility of the contractor always to demonstrate full compliance with the dust control conditions herein;
- At all times, the procedures put in place will be strictly monitored and assessed.

The dust minimisation measures shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust using best practice and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed, and satisfactory procedures implemented to rectify the problem.

#### **2.10.4 Odour Management**

An odour control procedure will be implemented by the Site Contractor to set out measures to minimise potential malodours and emissions associated with the construction of the proposed development. The odour control measures that will be implemented include:

- Control potential odours during excavation by minimising the working surface area and covering with a clean fill as soon as practical.
- Should putrescent wastes/soils or materials be unearthed during excavation, a deodoriser might be needed to minimise emissions of malodorous gases to the atmosphere.
- Transport any odorous wastes in covered vehicles.
- Ensure sedimentation ponds and drainage systems are functioning correctly to avoid becoming stagnant.
- Ensure sanitary facilities are appropriately maintained and wastewater from holding tanks routinely collected and removed by an appropriate Licenced Contractor.
- Ensure wastes are stored correctly in appropriate waste receptacles.
- Ensure all wastes, in particular food wastes, are removed from site at regular intervals.
- Ensure all plant is in good working order.

#### **2.11 Operation of the Project**

As demonstrated in the following sections of this EIAR, post construction the operation of the proposed development is not likely to give rise to any significant additional impacts in terms of activities, materials or natural resources used, residues or emissions.

### **2.11.1 Direct and Indirect Effects resulting from use of natural resources**

Details of significant direct and indirect effects arising from the proposed development are outlined in Chapters 3-15 which deal with '*Aspects of the Environment Considered*'. No significant adverse impact is predicted to arise from the use of natural resources.

### **2.11.2 Direct and Indirect Effects resulting from emission of pollutants, creation of nuisances and elimination of waste**

Details of emissions arising from the development together with any direct and indirect effects resulting from same have been comprehensively assessed and are outlined in the relevant in Chapters 3-15 which deal with '*Aspects of the Environment Considered*'. There will be no significant direct or indirect effects arising from these sources.

### **2.11.3 Forecasting Methods used for Environmental Effects**

The methods employed to forecast and the evidence used to identify the significant effects on the various aspects of the environment are standard techniques used by each of the particular individual disciplines. The general format followed was to identify the receiving environment, to add to that a projection of the "*loading*" placed on the various aspects of the environment by the development, to put forward amelioration measures, to lessen or remove an impact and thereby arrive at net predicted impact.

Where specific methodologies are employed for various sections they are referred to within the relevant chapter of the EIAR.

### **2.11.4 Transboundary Impacts**

Large-scale transboundary projects<sup>10</sup> are defined as projects which are implemented in at least two Member States or having at least two Parties of Origin, and which are likely to cause significant effects on the environment or significant adverse transboundary impact.

Having regard to the nature and extent of the proposed development, which comprises a residential development, located in Ballyvolane, within the administrative area of Cork City, transboundary impacts on the environment are not considered relevant, in this regard.

### **2.11.5 Description of Secondary and Off-Site Developments**

No significant secondary enabling development is deemed necessary to facilitate the proposed development. The planning application includes details of the necessary works, which are required to facilitate this development. These works are assessed within this Environmental Impact Assessment Report.

### **2.11.6 Risks of Major Accidents and/or Disasters**

The surrounding context consists of a mix of residential, agricultural, employment, educational and open space and amenity areas. It does not include any man-made industrial processes (including SEVESO II Directive sites (96/82/EC & 2003/105/EC) which would be likely to result in a risk to human health and safety.

Article 3 of the Environmental Impact Assessment (EIA) Directive 2014/52/EU, requires the assessment of expected effects of major accidents and/or disasters within an EIA. Article 3(2) of the Directive states that "*The effects referred to in paragraph 1 on the factors set out*

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<sup>10</sup> The definition is based on Articles 2(1) and 4 of the EIA Directive and Article 2(3) and (5) of the Espoo Convention, respectively.

<http://ec.europa.eu/environment/eia/pdf/Transboundary%20EIA%20Guide.pdf>

*therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned*". Accordingly, an assessment of the expected effects of major accidents and/ or disasters is contained within Chapter 13 of this EIAR.