

# **Chapter 3.0**

## **Alternatives Examined**

### 3.0 Introduction

The EIA Directive (2014/52/EU) states that “*the environmental impact assessment report to be provided by the developer for a project should include a description of reasonable alternatives studied by the developer which are relevant to that project, including, as appropriate, an outline of the likely evolution of the current state of the environment without implementation of the project (baseline scenario), as a means of improving the quality of the environmental impact assessment process and of allowing environmental considerations to be integrated at an early stage in the projects design*”. Annex IV (2) of the Directive requires “*a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects*”.

As noted within the Environmental Protection Agency Guidelines on the Information to be contained in Environmental Impact Assessment Reports (2017 Draft) the objective is for the developer to present a representative range of the practicable alternatives considered. The alternatives should be described with “*an indication of the main reasons for selecting the chosen option*”. It is generally sufficient to provide a broad description of each main alternative and the key issues associated with each, showing how environmental considerations were taken into account in deciding on the selected option.

The assessment of alternatives is an important requirement of the EIA process. This chapter of the EIAR was prepared by Orla O’Callaghan, BA, MPlan, Senior Planner at Cunnane Stratton Reynolds with input from Paul Horgan, Director of Horgan Carroll Architects; Dip. Arch. Tech., Registered Passive House Designer.

Article 94 and Schedule 6, paragraph 1(d) of the Planning and Development Regulations 2001, as amended, requires the following information to be furnished in relation to alternatives:

*“(d) A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment.”*

The DHPLG 2018 EIA Guidelines state:

*“Reasonable alternatives may relate to matters such as project design, technology, location, size and scale. The type of alternatives will depend on the nature of the project proposed and the characteristics of the receiving environment. For example, some projects may be site specific so the consideration of alternative sites may not be relevant. It is generally sufficient for the developer to provide a broad description of each main alternative studied and the key environmental issues associated with each. **A ‘mini- EIA’ is not required for each alternative studied.**” (Emphasis added).*

Pursuant to Section 3.4.1 of the Draft 2017 EPA Guidelines, the consideration of alternatives also needs to be cognisant of the fact that “*in some instances some of the alternatives described below will not be applicable – e.g. there may be no relevant ‘alternative location’...*”

The Draft 2017 Guidelines are also instructive in stating:

*“Analysis of high-level or sectoral strategic alternatives cannot reasonably be expected within a project level EIAR... It should be borne in mind that the amended Directive refers to*

*‘reasonable alternatives... which are relevant to the proposed project and its specific characteristics’.*

The consideration of the main alternatives in respect of the development of the subject lands was undertaken by the Design Team and has occurred throughout an extensive and coordinated decision-making process, over a considerable period of time. The main alternatives considered are identified below.

The EPA Guidelines include the following types of alternatives that can be considered as part of an EIAR:

- Alternative locations
- Alternative layouts
- Alternative designs
- Alternative processes

The EPA Guidelines notes that in some instances some of the alternatives will not be applicable – e.g. there may be no relevant alternative location. It is further noted that the analysis of high level or sectoral strategic alternatives cannot reasonably be expected within a project level EIAR.

This chapter sets out the main alternatives considered during the design process and the main reasons for choosing the development as proposed.

### **3.1 Alternatives Considered**

The Draft EIAR Guidelines also note that:-

*“Higher level alternatives may already have been addressed during the strategic environmental assessment of relevant strategies or plans. Assessment at that level is likely to have taken account of environmental considerations associated, for example, with the cumulative impact of an area zoned for industry on a sensitive landscape.”*

This is of relevance to the proposed development of the lands at Ballyvolane. On the strategic or *‘higher’* matters of already determined policy, we refer to the Cork County Development Plan and the Cobh Municipal District LAP for the area which make reference to policies in support of the development of specific sites within the area.

The zoning of the subject site had undergone a Strategic Environmental Assessment (SEA) as part of the compilation of the Cobh Municipal District LAP. The SEA considered *inter alia* alternative strategies for development having regard to environmental considerations.

Three alternative development scenarios were considered in the preparation of the Cobh Municipal District Local Area Plan and the Strategic Environmental Assessment process. It is noted that as the preparation of the Local Area Plan is at the lower end of the statutory plan hierarchy, the scope for considering alternatives is very limited as the key parameters have already been determined by the higher level plans. Three scenarios for development were considered, each with the same overall level of growth in line with the Core Strategy of the Cork County Development Plan 2014. The scenarios were as follows:

- Scenario 1 Public Transport

This scenario seeks to focus a greater proportion of development in a smaller number of settlements to enhance the vitality of bus and rail based inter-urban public transport services. Under this scenario the potential for growth is still dispersed over the entire settlement network but a greater proportion of the growth is focused on a smaller number of locations.

- Scenario 2 Employment Towns

This scenario looks at employment led growth which focuses development in key locations where employment growth is more likely to be delivered and differs from previous plan strategies which spread growth more evenly across all the main settlements.

- Scenario 3 Balanced Growth

In this scenario significant growth is allocated across the main settlements with lower levels of growth in the villages and rural areas. The principal strength of this scenario lies in the balanced approach allowing for the majority of growth to take place in the main settlements but at the same time allowing for continued, more modest growth in the villages and rural areas, continuing to support the economies of these areas to underpin local services and quality of life. The pattern of population distribution in this scenario is more dispersed than in the other scenarios as it seeks to support all the main towns. However this is balanced with an employment strategy which seeks to bring people and jobs closer together either in the same settlement or by high quality transport links connecting settlements together. In the Cobh MD LAP the majority of growth is assigned to Carrigtwohill, Monard and the North Environs, followed by Glanmire and Cobh with more modest growth in the other towns, villages and rural areas.

The evaluation of the three scenarios in terms of their respective impacts on the environment was undertaken utilising Environmental Protection Objectives (EPO's) specifically developed to protect, maintain, conserve or restore environmental elements within the municipal district. Each scenario was assessed as to whether it was likely to have a positive, negative, uncertain or neutral impact on the EPO's.

The preferred scenario was scenario 3 as it is the scenario that places the most emphasis on building on what has already been achieved within the county in terms of supporting the network of settlements, the established employment areas while continuing to support the development of villages and rural areas. Scenarios 1 and 2 promoting more focused development patterns would inevitably lead to the decline and contraction of some other towns, villages and rural areas resulting in the loss of economic opportunities in those areas, reduced investment and an overall reduction in the quality of life for the people living in those areas.

The proposed development is consistent with the preferred Scenario 3. The site is located within the Northern Environs of Cork city which is one of the areas designated for the majority of growth under Scenario 3. As previously noted the site forms part of the Ballyvolane Urban Expansion Area which has been identified and reinforced through multiple planning policy processes, stemming from the Cork Area Strategic Plan 2001, as one of the best locations for the development of a new community in Metropolitan Cork. The future residents of the proposed development will be supported by employment and services due to the sites proximity to the City Centre and key employment hubs including Blackpool and Kilbarry. The proposed development will be served by high quality transport. 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.

### 3.1.1 The “Do Nothing” Scenario Alternative

The “*do nothing*” approach would mean that the lands are not developed and remain as is. The baseline scenario has been considered as part of this EIAR through the collection and collation of data through testing, desktop and field studies and surveys and analytical review. An overview of the baseline scenario is that the lands the subject of this EIAR are greenfield and have been used as tillage farmland for at least the past two decades.

The “*do nothing*” approach is considered to be an inappropriate, undesirable, unsustainable and inefficient use of these zoned lands that are located in the Metropolitan Cork Strategic Planning Area within close proximity of Cork City Centre (c. 3 km) and have been earmarked as an important expansion area for the city since the Cork Area Strategic Plan. The proposed development will make a significant contribution to meeting Corks housing needs and the ambitious growth targets for Cork set out in the National Planning Framework.

The “*do nothing*” approach is not considered to be realistic for a site which is predominately zoned for medium B residential development in an urban expansion area within the Cork City Council administrative area in the current challenging housing supply market. If the do nothing approach is adopted the lands will continue to be farmed and will not deliver 753 no. high quality residential units. The do nothing approach would be detrimental to the future growth of the urban expansion area as unlike smaller landholdings, the proposal is of a large enough scale to carry the additional costs associated with the required infrastructure to unlock this area.

The “*do nothing*” approach would be contrary to the Councils objectives for these lands, the promotion of significant residential development as part of a mixed use urban expansion area that is supported by local, regional and national planning policies. From an environmental perspective, the do nothing approach would have a long-term negative impact on population and human health due to the failure to provide sustainable residential development within the built up area close to the city centre. Otherwise the “do nothing” approach is likely to result in a neutral impact on the environment as the lands remain as is.

As such the “*do nothing*” scenario is not considered to be a reasonable alternative as the positive benefits in terms of meeting national, regional and local planning policies would not be realised if the LAP lands are not developed.

### 3.1.2 The “Do Minimum” Scenario Alternative

The “*do minimum*” alternative could involve the development of these lands at residential densities in accordance with the Local Area Plan. The minimum net density for Medium B zoned lands is 12 dwellings per Ha. The density of the initial layouts developed were in accordance with the Medium B density zoning prescribed in the Local Area Plan. While this was compliant at a local planning policy level with the Local Area Plan and the County Development Plan, it was not consistent with the current national planning policies and guidance on density. The ‘*do minimum*’ alternative was therefore not desirable and the scheme had to be redesigned to achieve a residential density that is consistent with national planning polices and guidance.

### 3.1.3 Alternative Locations

The applicant has acquired a substantial landholding in the Ballyvolane UEA in two tranches. The initial tranche, located to the north of the landholding, formed the basis of 2018 discussions with An Bord Pleanála. The additional lands were acquired to the south and west of the landholding subsequently. The lands are zoned for development with the presumption that they would be developed. The lands at Ballyvolane have been earmarked for significant population growth since the Cork Area Strategic Plan Update 2008 and the Cork County Development Plan 2009.

The previous LAP, the Blarney Electoral Area Local Area Plan 2011 and 2015 Update, designated the lands as a Special Policy Area noting that a masterplan should be prepared to inform the future development of these lands.

The intended future development of these lands was made clearer in the 2017 LAP in which the lands were designated with specific zonings. The lands are zoned for development in the current Cobh Municipal District Local Area Plan 2017 as follows:

- 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 service road within the Ballyvolane. The Cobh MD LAP was subject to Strategic Environmental Assessment (SEA) as part of the LAP development process.

The proposed development of these lands for residential and other use is in accordance with the Core Strategy of the Cork County Development Plan which sees the North Environs as part of the main engine of population and employment growth for the region. At a regional level the importance of the Ballyvolane expansion area is also evident in the draft Regional Spatial and Economic Strategy for the Southern Region and the draft Cork Metropolitan Area Transport Strategy. The lands are therefore being actively promoted for significant residential development at local and regional planning policy levels. On this basis the proposed development in this planning application is a plan led development that is entirely suitable at this location.

During the pre-planning discussions with An Bord Pleanála, the potential for concerns with regard to leapfrogging of development were raised. Item 1 of the An Bord Pleanála Opinion required *“further consideration of documents as they relate to the planning rationale for developing at this location having specific regard to the general sequential approach to developing on serviceable lands proximate to urban centres, the topography of the lands and potential environmental and sustainability impact of the proposed development in the wider area, the possible prematurity of development at this location pending the completion of infrastructure related studies and upgrades as set out in the ‘Indicative Development Programme’ in the Cobh Local Area Plan 2017 and the extent of infrastructure to be delivered in Phase 1 of the proposed development. Further consideration of these issues may require an amendment to the documents and/ or design proposals submitted”*.

The above item is responded to in more detail in the Response to An Bord Pleanála Opinion Report prepared by Longview Estates Ltd. In relation to the sequential development of the urban expansion area, the Cobh Municipal District Local Area Plan sets out an indicative development programme for the Ballyvolane lands with a breakdown of the phasing and the

strategic infrastructure and service requirements for each phase. The indicative phasing programme of the LAP is based on unit numbers triggering specific infrastructure and service requirements.

There are three indicative phases of development as follows:

*Phase 1: 0-1175 units*

*Phase 2: 1175-2325 units*

*Phase 3: 2325-2995*

It is important to note that the LAP states that where capacity in existing infrastructure exists, lands benefitting from this should be developed first and can be considered for permission. The LAP does not specify the spatial sequence for the development of the residentially zoned lands i.e. what lands should be developed first. However, the site must be developed first as it develops and delivers critical infrastructure to the balance of the lands. The LAP goes on to state that the purpose of the urban expansion area is to ensure the orderly and phased development of lands. However, it is recognised that the development of the lands is reliant on the timely phased delivery of infrastructure such as roads, amenity lands, foul and surface water provisions.

In this context and in order to secure the timely and orderly development of this strategic urban expansion area, the LAP notes that the Planning Authority will consider alternative delivery focused phasing programmes which would not compromise the overall strategy. The proposal includes all the necessary infrastructure for the development to be delivered on a phased basis in tandem with the housing. Cork City Council, and previously, Cork County Council are in agreement with the principle of the delivery of the lands now having regard to the services solutions proposed.

The indicative phasing programme of the LAP is based on unit numbers triggering specific infrastructure and service requirements.

The applicant's landholding has to be developed first for a number of reasons:

- It is the only site required to deliver access points off the Ballyhooly Road that services the northern parts of the UEA; servicing the applicants' landbank and adjacent lands.
- The landholding is large enough to facilitate a development of significant, large scale that is able to deliver or provide for the strategic infrastructure and services requirements identified in the local area plan. In this respect the site is unlike smaller sites along the Ballyhooly Road that cannot deliver the necessary mix of uses and services demanded by the LAP.
- The services provided include; water services infrastructure for which major new investment is required to provide the infrastructure required as noted in the local area plan; access roads / distributor roads; park lands; road improvements. A development of significant scale is required to achieve a services solution for the development of the urban expansion area.
- The lands to the south of the proposed development zoned as NE-R-16 in the local area plan for medium B residential development are predominantly also within the applicant's control. These lands are being reserved by Longview Estates Ltd so as not to compromise the development of the Northern Distributor Road (Mayfield Kilbarry Link Road). The lands further south on the eastern side of the Ballyhooly

Road between the location of the proposed pumping station and the junction of the Ballyhooly Road and Ballyvolane Road to the south known as the Fox and Hounds Junction have also been carefully considered.

These lands to the south are in multiple ownerships are capable of piecemeal development only and we are not aware of any plans to develop them. These lands have a number of constraints in that they are impacted by the detailed alignment of the Mayfield Kilbarry Link road and additional 110kv power lines. These sites are not capable of helping to achieve the Phase 1 objectives set out in the local area plan. Please refer to Appendix 3.1 for the folio by folio assessment of these sites.

In terms of alternative locations therefore, the location of the proposal within the urban expansion area is entirely appropriate for residential development and the application site is the only site within the expansion area that is accessible from the Ballyhooly Road, serviceable and capable of delivering housing at scale such that it supports the services needed for future developments. It is the only site capable of achieving or providing for the early phase requirements of the LAP. Alternative locations for the proposed development are therefore not currently appropriate, or deliverable.

#### **3.1.4 Alternative Uses**

As noted above the lands the subject of this planning application are zoned in the Local Area Plan for Medium B residential development, primary and secondary school campus with playing pitches and open space for public recreation as an urban park. The proposed development. On residentially zoned lands, the Cork County Development Plan seeks to:

- a) Promote development mainly for housing, associated open space, community uses and, only where an acceptable standard of amenity can be maintained, a limited range of other uses that support the overall residential function of the area.
- b) Normally discourage the expansion or intensification of existing uses that are incompatible with residential amenity.

The proposed development provides a predominantly residential development including a local centre with a crèche and local services to support and serve the residential community. These uses are limited and ancillary to the residential development. The initial layouts developed included a crèche but no other local services. As the size of the development increased it was considered appropriate to include a local centre with local services to serve residents daily needs.

The school campus is not being proposed in this planning application, the only development proposed within that zoning in this development is the bus turning area and a pumping station. The area will be used for reprofiling of material as part of construction management plans. The project Architects Horgan Carroll have indicated a standard school campus layout (one secondary and one primary school) on the drawings included with this planning application to show that the proposed development is possible without impacting the future development of a school campus at this location. The Department of Education have indicated that they currently have no plans to develop a school in Ballyvolane.

The proposal constructs distributor roads indicated as NE-U-03 and NE-U-04 on the local area plan zoning map. These provide access from the west through the landholding and beyond. We note that the alignment of NE-U-03 differs from that indicated in the local area plan as a more circuitous route is required to facilitate access to the site and compliance with the Design Manual for Urban Roads and Streets (DMURS).

The proposed development is consistent with the relevant land use zonings and as such no other uses were considered appropriate on these lands which have been zoned to contribute to the significant future residential development that has been designated at this location.

While there were no alternative locations considered reasonable, the design progression has resulted in a number of alternative layouts and designs. These are considered in detail below. The process of engagement with the relevant Local Authorities and An Bord Pleanála raised environmental matters including traffic and transportation, infrastructure and services, site topography and permeability and connectivity. Addressing the feedback on these matters has resulted in alternative layouts and designs.

### **3.1.5 Alternative Layouts and Designs**

A number of alternative site layouts and designs were considered during the design stage in consultation with the relevant Local Authorities and An Bord Pleanála. The main alternatives considered during the design process comprise of alternative layouts and design solutions for a predominately residential development in accordance with the sites zoning. The proposed development has evolved significantly during the design process resulting in a number of changes to the layout and design. The chosen layout and design has been formed by a combination of the site constraints, the parameters and requirements of the relevant planning policies from national to local level and from feedback from Cork City and County Councils and An Bord Pleanála.

Initial discussions commenced with Cork County Council in May 2017 and the first meeting with Officers from the Planning Department and the Councils Housing Delivery Unit took place on 1<sup>st</sup> June 2017. The initial sketches prepared by Horgan Carroll Architects were presented at this meeting. The initial sketch can be seen at figures 3.1.

**Figure 3.1** Initial Sketch June 2017

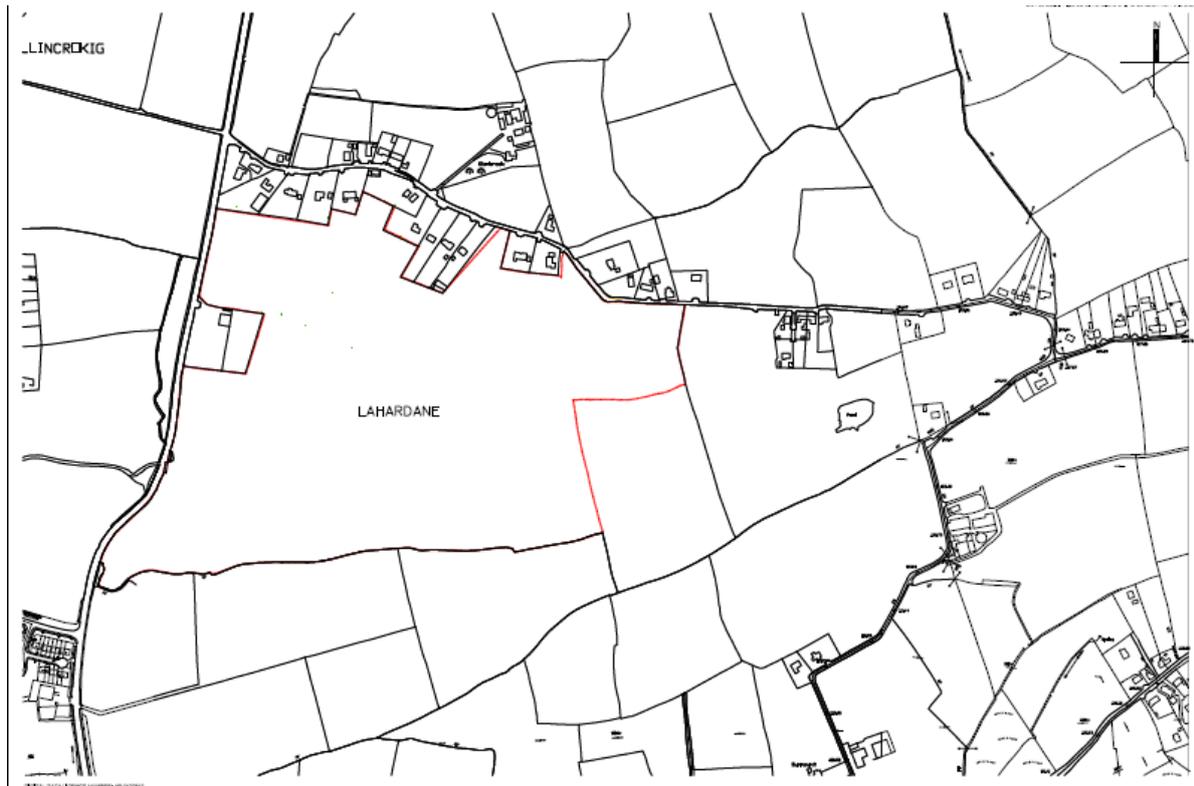
### Alternative 1 – Section 247 meeting Cork County Council December 2017/ First tripartite meeting with An Bord Pleanála February 2018 (ABP ref. PL 04.300557)

Following meetings with Cork County Council in May and June 2017, the sketches were developed into a layout that was included in a Section 247 request to Cork County Council in August 2017. This layout is shown at figure 3.3. We note that the site area was smaller at this stage than now proposed in the current planning application (Figure 3.2). The layout presented in figure 3.3 comprised 451 no. units in six clusters of development with a density of 19 Units per Ha.

The approach when developing this initial layout was to be as consistent as possible with the Cobh MD LAP. The density was compliant with medium B density requirements set out in the LAP and the County Development Plan which required a minimum net density of 12 units per Ha and a maximum of 25 units per Ha. The layout at this stage was dictated by the route of the distributor road as it was shown going through the applicant's lands in the adopted LAP and the challenging topography of the site.

At a meeting between the design team and Officers from Cork County Council Roads Department at the end of August 2017, it was suggested by the Council Officers that the applicant should evaluate different design solutions for the distributor road that deviated from the adopted LAP alignment. The applicants design team committed to exploring alternative layouts for the proposal.

**Figure 3.2** Applicants Landholding in 2017



**Figure 3.3** Layout submitted to Cork County Council August 2017

At the first Section 247 meeting with Cork County Council in September 2017, all relevant staff members from the various departments of Cork County Council offered feedback on the proposal and those that could not attend the meeting offered feedback via email. The two key items that were discussed at that meeting were the alignment of the distributor road and housing design. The layout at this point allowed for a distributor road with a gradient of less than 8.3%. Cork County Council Housing Delivery Unit and Roads Departments suggested that a gradient in the region of 5% would be more appropriate. Or at least that no long section of road would have a slope exceeding a gradient of 8%. It was also suggested by the Council that the need to connect to the local road to the north of the site may need to be revisited and that there was no need to slavishly follow the road alignment set out in the LAP.

Following the Section 247 meeting in September 2017, the layout of the proposed development was amended and a request for another Section 247 meeting with Cork County Council was made in November 2017. In the interim period engagement had occurred with Cork County Council Housing Delivery Unit and Roads Department. Feedback from this engagement resulted in modifications to the distributor road including increased curvature of the road to provide natural traffic calming and sections of slope of 5 degrees at intersections of the distributor road with the estate roads

The amended layout resulted in a scheme for 457 no. units. The distributor road was redesigned. The alignment no longer proposed to connect to the local road to the north of the site. Instead the distributor road now proposed moved through the site in a north eastern direction to connect to other zoned lands to the east in the future.

At the second Section 247 meeting with Cork County Council in December 2017, it was stated that the Council were satisfied with the revisions to the distributor road such that it no longer proposed an access to the local road to the north of the site. At this meeting there was a lengthy discussion on the compatibility of the distributor road with DMURS standards and the Council queried the alignment proposed given the significant amount of cutting which would be required to achieve the gradients.

Refinement of the layout that was presented to Cork County Council in December 2017 occurred and a request to enter into pre-planning discussions with An Bord Pleanála was made.

The layout for the first tripartite meeting with an Bord Pleanála and Cork County Council (ABP ref. PL 04.300557) as shown at Figure 3.4 had 457 no. units at a density of 18 units per Ha. The key amendments to earlier layouts of the proposed development are indicated in Figure 3.4. In addition to the challenges associated with the sites topography and the existing power lines, the initial approach to the development density was cognisant of the fact that although the lands were zoned for development, they were approaching a rural fringe area of low density development. The scheme had been designed to be consistent with the Medium B residential zoning and the guidance in the LAP which stated that *“the pockets of existing one-off houses will necessitate a buffer of low density housing to protect their residential amenity. The areas concerned are along the existing roads. The higher densities should be concentrated on the western and southern sections of the site”*.

**Figure 3.4** Layout submitted to Cork County Council December 2017/ First tripartite meeting with An Bord Pleanála February 2018 (ABP ref. PL 04.300557)



The key amendments that had been made to the layout since the earlier discussions with Cork County Council resulted in:

- 457 no. units being proposed overall.
- A density of circa 18 units per hectare.
- Amendments to the curvature of the distributor road and the removal of the access to the local road to the north of the site.
- The relocation of the crèche.

An Bord Pleanála issued an Opinion following the tripartite meeting in February 2018 stating that the documents submitted with the request to enter into consultations required further consideration and amendment to constitute a reasonable basis for an application for strategic housing development. The key issues raised by the An Bord Pleanála Opinion related to the following:

1. Timing and Phasing of Development
2. Site Topography
3. Water and Waste Water Infrastructure
4. Surface Water Management and Flooding

5. Traffic and Transportation
6. Residential Density
7. Public Open Space
8. Design, Layout and Unit Mix

The above are addressed in the Statement of Response to ABP's Opinion accompanying this planning application.

### **Alternative 1 – Comparison of Environmental Effects**

It was clear from the meeting and the feedback from both An Bord Pleanála and Cork County Council that the scheme needed to be significantly redesigned to achieve the densities required to meet national planning policies and to reduce the amount of excavation while working as much as possible with the sites challenging topography and creating linkages through the site.

The layout proposed under PL04. 300557 resulted in a density that while compliant with the LAP was too low to be consistent with national planning policies. This layout proposed a distributor road alignment at Design Manual for Roads and Bridges gradients on the basis of Cork County Councils feedback. The distributor road alignment was not desirable to An Bord Pleanála.

Concerns were expressed at the meeting over the extent of cut and fill being proposed to accommodate the distributor road alignment, the volumes of material to be removed off site and the associated traffic movements to and from the site. This alternative would have required c. 150,000 cubic metres to be exported off site. Further information was required on water and wastewater infrastructure and the wider road infrastructure upgrades to service the proposed development. While the applicant was engaging with Irish Water at this point, no detail for the infrastructure required to serve the site had been detailed or included within the layout.

The Board also expressed concerns with regard to the quantum and usability of active open spaces on the site and the integration and connections to the proposed public urban park, ensuring surveillance of the open spaces and addressing level changes across the site.

The potential environmental effects resulting from the low density development, the extent of cut and fill required, the uncertainty regarding infrastructure to serve the site and concerns raised with regard to the open space provision of alternative 1 had to be addressed in a revised proposal.

During 2018, Longview Estates Ltd increased the size of their landholding in Ballyvolane (Figure 3.5). The additional lands have allowed the applicant to substantially increase the size of the proposed strategic housing development and to address the delivery of infrastructure and amenity objectives for the overall Phase 1 stage of the Ballyvolane urban expansion area development. The additional lands are highly beneficial for the following reasons:

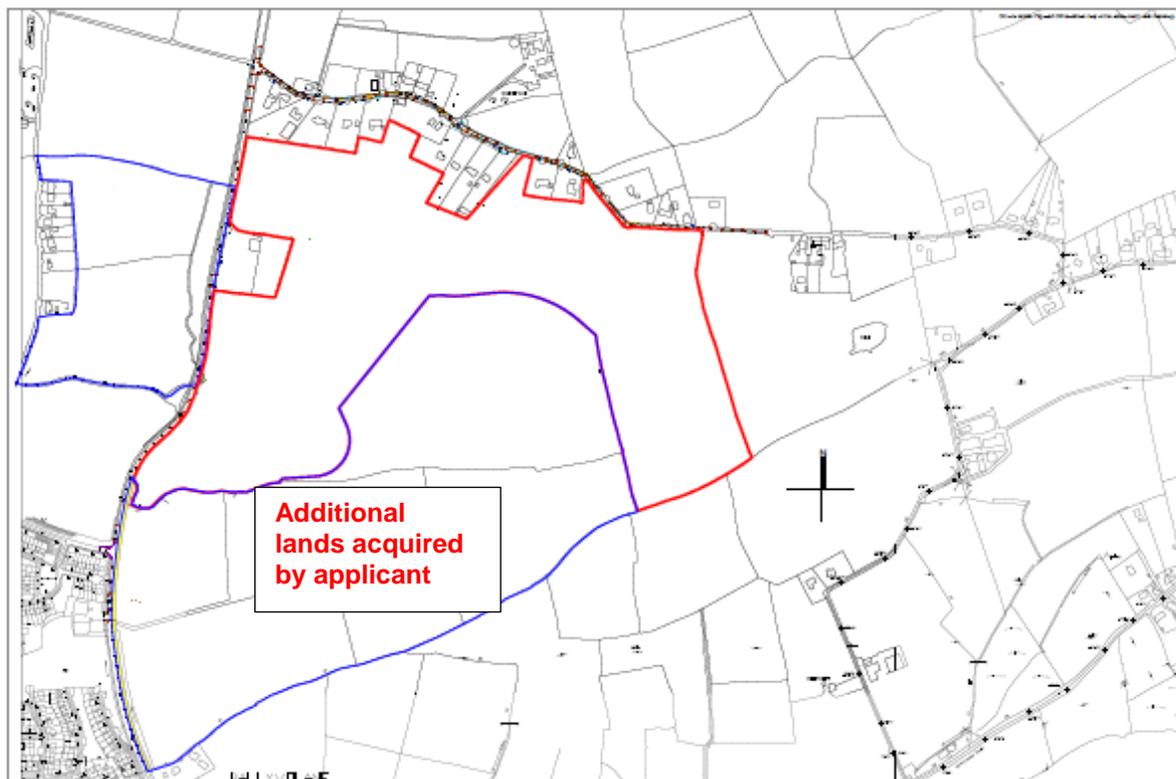
- They facilitate direct linkage to the existing footpath network to the south of the site at Mervue Lawn through the provision of a footpath and cycle path and allow for the creation of a signalised crossing at the junction of Ballyhooly Road and Lower Dublin

Hill. A bus stop is also now proposed to the south of the site at the eastern side of Ballyhooly Road.

- The additional lands allow for the provision of a necessary Irish Water pumping station to the south of the site which was not included in the initial layouts.
- The partial undergrounding of the 38kv power line traversing the site can now occur.
- The land further south can be reserved for the future provision of the Mayfield Kilbarry Link Road (LAP objective NE-U-06) or the Northern Distributor Road as it is known in the draft Cork Metropolitan Area Transport Strategy (CMATS). A Draft Section 47 with respect to the lands is submitted as part of this planning application.
- The extended distributor road facilitates access to the site zoned for a school campus and the developing urban park. The extension of the distributor road means that service road NE-U-04 as shown in the LAP would also be partially constructed in this development facilitating future access to the adjoining zoned lands. Neighbourhood 5 proposed on the additional lands acquired also facilitates access to the adjoining zoned lands. A Draft Section 47 with respect to the school lands is submitted as part of this planning application.

The redesign of the scheme was guided by carefully evaluating site levels and the cut and fill required to design an access and distributor road alignment that creates a more appropriate solution for pedestrians; by allowing for lower gradients.

**Figure 3.5** Increased Size of Applicants Landholding





- An increase in the overall no. of units being proposed to 742; the introduction of apartments and a change in unit types and mix.
- Increase in density to 30.2 units per ha.
- The alignment of the distributor road had been further amended.
- The integration of 110kv power lines into the proposed landscaping strategy.
- Potential local centre introduced.
- Additional lands acquired were able to facilitate pedestrian and cyclist connectivity south of the proposed main site entrance to connect to the existing footpath network further south of the site at Mervue Lawn.

### **Alternative 2 – Comparison of Environmental Effects**

The density had been significantly increased from Alternative 1 to 30.2 units per hectare in Alternative 2. While this would result in a much more sustainable use of these strategic zoned lands, the density was still below the range of 35-50 units per hectare as set out in the Sustainable Residential Development in Urban Areas Guidelines. A density of 30.2 units per hectare would not make the most efficient use of this land. It was suggested by the Council that there may be scope to increase the density further in certain parts of the site.

The estimated cut and fill export material had been reduced from 150,000 cubic metres to 15,000 cubic metres as the alignment of the distributor road had been amended resulting in the achievement of a significantly better gradient.

As the applicant had acquired additional lands to the south of the site, it was now proposed to construct a footpath and cycle path that would connect to the existing footpath network to the south of the site to improve accessibility to public transport, local services and amenities.

The Council in the Section 247 meeting noted that the proposed development would need to address the development programme and strategic infrastructure requirements as set out in the Local Area Plan to address off site infrastructural requirements and a mechanism to ensure the provision of same in the context of the sites development. While it was intended that the site would be served by an Irish Water pumping station, this infrastructure was not included within the layout for the proposed development.

### **Alternative 3 – Second tripartite meeting with An Bord Pleanála June 2019 (ABP ref. PL04 .304350)**

Between August 2018 and April 2019 further amendments to the scheme occurred resulting in the layout at Figure 3.7. A request for a second tripartite meeting with An Bord Pleanála was made in April 2019.

The proposal submitted to the Board in April 2019 was significantly different to the proposal considered by the Board in the first Section 5 application under ABP ref. PL04. 300557. The main differences are set out below:

- The density of the scheme had been increased from 18units per Ha to 35.3 units per Ha. The increased density was achieved by acquiring additional lands that are not constrained by topography influencing road gradients, zoning objectives or

wayleaves to the south, increasing the unit numbers and introducing apartments into the proposal to increase the unit mix and offering to residents.

- The distributor road had been completely redesigned. The first iterations of the scheme had followed closely the alignment of the distributor road as shown in the LAP. This resulted in significant volumes of excavation and adverse impacts on housing levels and connectivity. The distributor road was re-aligned to follow the sites topography in a more circuitous route which resulted in a better relationship between the road and the residential clusters and significantly reduced excavation requirements. The redesigned access solution and distributor road alignment has allowed the proposal to create a more appropriate solution for pedestrians by allowing lower gradients.
- The access and design solution has also allowed the integration of the 110 KV wayleave corridors into the landscaping of the site to create a dedicated greenway through the proposed development along desire lines from the south-western corner of the site to the eastern part of the site. The scope of the landscaping strategy has been expanded with a strong focus on utilising the greenway as a convenient and attractive connection through the site that links open spaces and play areas proposed, neighbourhoods and the local centre.
- Connections were formed with the surrounding zoned lands and future access when developed to the urban park and the school site. Connections with surrounding lands via the distributor road to the south and internally via the neighbourhoods, to open up development.
- In addition to the crèche originally proposed, the local centre includes a retail unit, doctor's surgery and a community building. The local centre is centrally located within the site close to the park and the site zoned for a school campus and within convenient access of all neighbourhoods. It is set within an attractive plaza area with apartments proposed to the west of it.
- The housing mix was amended as follows:

*Unit Mix proposed for first tripartite meeting with ABP ref. PL04. 300557*

Detached .....	93 Units
Semi-detached .....	286 Units
Terrace .....	46 Units
Duplex .....	32 Units
Total .....	457 Units

*Unit Mix proposed for second tripartite meeting with ABP ref. PL04.304350*

Detached .....	59 Units
Semi-detached .....	276 Units
Terrace .....	172 Units
Duplex .....	92 Units
Apartments.....	154 Units
Total .....	753 Units

- This layout made provision for 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 and the provision of a new bus stop on Ballyhooly Road

as well as bus stops internally within the site along the distributor road. The proposal included the proposed signalisation of the junction of Ballyhooly Road and Kilbarry Link Road.

- The proposal included an Irish Water pumping station that will provide services for the site under an agreed Project Works Service Agreement with Irish Water.
- The neighbourhoods were fundamentally redesigned since the first Section 5 with An Bord Pleanála to form distinctive character areas of individual neighbourhoods with varying forms and landmark identities linked by a dedicated greenway offering increased connectivity for pedestrians and cyclists. The relationship between neighbourhoods and the distributor road was also improved in that they were no longer set back from the road. The re-alignment of the road resulted in a more natural integration with the proposed development resulting in improved connectivity, interaction and passive surveillance.

### **Alternative 3 – Comparison of Environmental Effects**

The layout in alternative 3 resulted in an increase in the density to over 35 units per hectare in accordance with the national guidance.

The inclusion of a pumping station within the planning application was proposed following agreement with Irish Water. This pumping station will address a previously insolvable drainage solution for foul water services in the expansion area.

The revised landscape strategy had more of a focus on connectivity and permeability through the site. The landscape strategy was further developed to incorporate the 110kV power lines into a dedicated greenway through the site allowing the formation of a primary pedestrian and cyclist route for easy and safe movement between the park, neighbourhoods and local centre. This also allowed for linkage between the various open spaces and play areas throughout the site.

**Figure 3.7** Scheme for Second Tripartite Meeting with An Bord Pleanála June 2019 (ABP ref. PL04 .304350)



Further amendments to the proposal occurred in the interim period since the second tripartite meeting in June 2019 resulting in the current layout proposed in this planning application.

#### **Alternative 4 – Current Proposed Development October 2019**

The design process for the development of the lands at Ballyvolane commenced in 2017. The design development has been a lengthy and challenging process with various learnings from engagement with the relevant Local Authorities, An Bord Pleanála, Stakeholders, local residents, decisions and An Bord Pleanála feedback on other strategic housing developments that have been through the FastTrack process and internally within the design team.

The further amendments which have occurred since the second tripartite meeting with An Bord Pleanála under ref. PL04 .304350 include the following:

- The density of the proposed development has been increased to 35.7 units per hectare.
- An access to the local road running along the north of the site has been included. This access is proposed from neighbourhood 2.
- The local centre has been redesigned to improve the pedestrian and cyclist environment in this area. The current layout facilitates the dedicated pedestrian/cyclist greenway directly through the local centre.

- The crèche has been redesigned and increased in size based on feedback from Cork City Childcare Committee. Initially the crèche was intended to serve 81 no children. The Childcare Committee suggested that the crèche should be increased in size to cater for 100 no. children. The feedback from the committee has been adhered to and the crèche will now cater for approximately 103 no. children. The design of the crèche has been amended to be in accordance with the most up to date crèche design guidance the Universal Design Guidelines for Early Learning and Care Settings 2019.
- The interaction between the proposed development and the distributor road has been increased to allow overlooking and supervision from houses addressing the road.
- Interconnectivity between neighbourhoods has been increased resulting in a clear hierarchy of open spaces and legibility across the site with priority given to pedestrians and cyclists.
- The landscaping strategy has been further developed. The park area proposed is pro rata to the housing proposed. The principle of the design and layout of the park is to allow the progressive expansion of the formal park lands over time as required by the City Council so as to cater for population growth in the expansion area. An approx. 3 hectare park is to be provided on the subject site equating to 15% percent of the lands zoned as urban parkland within the ownership of the applicant. This correlates with the overall expansion area unit provision being approx. 5,000 units and the subject site supporting 753 units thereby requiring 15% of the projected 20 hectare park provision.
- The network of green routes through the site is an integral part of the landscaping and movement strategy for the proposed development. Off road greenway pedestrian and cycle paths are proposed through the site – alongside neighbourhoods 1 and 3, through the park and neighbourhoods 2 and 5 with easy access to the dedicated greenways from neighbourhoods 4 and 6 also. The dedicated cycle and pedestrian routes are linked by a series of open spaces and play areas. The site greenway route connects to the Ballyhooly Road where cycle lanes are proposed in accordance with the Cork Cycle Network Plan.
- The Sustainable Urban Drainage Strategy for the site was expanded to include various interception measures such as open drainage swales, permeable paving, storm water storage butts for each unit, roof drainage to soakaways in rear gardens in parts of the development, green roofs for apartment blocks in neighbourhood

The layout proposed is shown at Figure 3.8.

#### **Reasons for Selecting Preferred Alternative 4**

With regard to the (preferred) final layout, the iterative process outlined above, which included alternative site layouts were considered with the objective of producing a new high-quality residential development, which has undergone a robust consideration of relevant alternatives having regard to the comparison of environmental effects and meets the requirements of the EIA Directive, based on the multidisciplinary review across all environmental topics.

A comparison of the main environmental effects of each layout have been considered during the development design. The initial iterations of the scheme including Alternative 1 proposed densities of circa 18 units per hectare. Although compliant with the relevant local planning

Chapter3/pg.22

policies, on review these layouts were not considered to deliver on the requirement to develop at sufficiently sustainable densities to provide for an appropriate efficiency in the use of serviceable zoned lands.

**Figure 3.8** Layout proposed in Planning Application (Alternative 4)



In summary, the design of the proposed development takes into account all environmental effects raised with respect to previous design alternatives and within the Board's Opinion, and provides for a development that has been optimised to amplify positive environmental effects whilst reducing negative environmental impacts wherever possible. Table 3.1 summarises the comparison of the main environmental effects.

**Table 3.1** Summary Table of Comparison of Main Environmental Effects

Criteria	Alternative 1	Alternative 2	Alternative 3	Final (Preferred) Layout
Population and Human Health	Negative	Negative	Positive	Positive
Biodiversity	Neutral	Neutral	Positive	Positive
Land and Soils	Negative	Neutral	Neutral	Neutral
Water and Hydrology	Negative	Negative	Positive	Positive
Air and Noise	Neutral	Neutral	Neutral	Neutral
Air Quality and Climate	Neutral	Neutral	Neutral	Neutral
Landscape and Visual	Neutral	Neutral	Positive	Positive
Material Assets Transportation	Negative	Negative	Positive	Positive
Material Assets Utilities/ Services	Negative	Negative	Neutral	Neutral
Material Assets Waste Management	Negative	Neutral	Neutral	Neutral
Archaeology	Neutral	Neutral	Neutral	Neutral

To summarise the comparison of environmental effects, in terms of Population and Human Health, the initial layouts would have had a negative impact in that the lower density was not in accordance with national planning guidance and would not have resulted in an efficient use of the zoned lands to accommodate the significant population growth allocated to the Northern Environs. The initial layout had less choice in terms of dwelling sizes and typologies as no duplexes or apartments were included.

Non-residential support services and amenities were introduced as the design progressed to include a local centre with a crèche, doctor's surgery, retail and community use. Following engagement with Cork City Childcare Committee the proposed crèche has been increased in size. The local centre will have positive benefits on population and human health in terms of meeting local service needs and increased social interaction in the community. It will also provide additional employment in the area. The local centre proposed will be a focal point in

the proposed development that will assist in place making and enhance the amenity for future residents of the scheme that will avail of these local services. The convenient location will also reduce the need to travel for these services and amenities which are accessible on foot and bicycle from all parts of the site.

Initial layouts for the site followed closely the alignment for route/ service road NE-U-03 – the distributor road shown in the local area plan resulting in very significant volumes of cut and fill which could result in adverse impacts on the environment including greater disturbance to the land and soil, increased energy demand for earthworks and the need to remove considerable amounts of excess material off site. As the design progressed an alternative alignment for the distributor road was developed that followed a more circuitous route through the site working with the challenging gradients and therefore resulting in less cutting.

The landscape strategy for the site has evolved significantly from the initial layouts. The strategy has been influenced by the need to create a corridor of high quality open spaces and amenity areas throughout the site to facilitate safe and convenient connectivity. These spaces and the cycleways proposed create a network of linkages. A key feature of the green network is the combined pedestrian and cycle pathways which provides off road circulation between the neighbourhoods, park and local centre.

The active open spaces on the site include the proposed 3 hectare park that contains a gym/ exercise area, play areas, kickabout space in addition to a jogging/ walking route that extends from the park through the neighbourhoods and a range of green spaces and play areas within neighbourhoods throughout the site. Circulation and boundary infrastructure within the park is configured to accommodate ease of connectivity to the wider urban parkland at any time in the future. The landscape masterplan indicates potential circulation and amenity provision in the wider urban parkland immediately to the east of the greenway.

During the design development, and subsequent to additional land acquisitions by the applicant, Irish Water advanced their site identification process for the proposed pumping station and determined that appropriate sites would either be in the public park at Kempton or on the applicants lands where now shown. Given the relationship of the applicant's proposal to the services upgrades and the desire to minimise impact on public lands in the park area it was determined that the pumping station would be proposed on the applicants landholding

The preferred layout (alternative 4) includes an Irish Water pumping station that was not included in the earlier layouts. Irish Water has entered into a Project Works Services Agreement with Longview Estates Ltd to service the area by way of a pumping station to be included on the applicant's lands within this planning application. The pumping station proposal is central to the provision and commercial implementation of the foul water services strategy locally and within the entire urban expansion area. This results in a positive impact on Water Services and Material Assets Utilities.

### **3.1.6 Alternative Processes**

This is not considered relevant to this EIAR having regard to the nature of the proposed (residential) development.