

4. CONSIDERATION OF ALTERNATIVES

This Chapter provides *'a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) 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 selecting the chosen option, including a comparison of the environmental effects'* as required by Schedule 6 of the Planning and Development Regulations, 2001-2019

The preparation of this Chapter has had regard to the Revised Guidelines on the Information to be Contained in Environmental Impact Statements (Draft), September 2017. Regard has also been had to the previous EPA Guidance, to the European Commission Impact Assessment Guidelines, 2017, and to the new EIA Directive 2014/52/EU, which states that information for the Environmental Impact Assessment Report should include:

'a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer.'

The Guidelines summarise that the Developer needs to provide:

- A description of the reasonable alternatives studied; and
- An indication of the main reasons for selecting the chosen option with regard to their environmental impacts.

The Guidelines provide that an alternative may be considered unreasonable/unfeasible if there are technological, budget, stakeholder or legal/regulatory obstacles preventing it from being carried out.

The principle rationale for the development proposal is outlined in this section, to provide context for the proposed development and the selection of the proposed development site. The section goes on to identify the reasonable alternatives considered in terms of size and scale, and the environmental factors considered in respect of each alternative and the main reasons for select the option chosen. The identification of reasonable alternatives has been carried out in the context of the nature and scale of the development proposed being predominantly residential, together with the established regulatory context.

4.1 Rationale for the Proposed Development

Since the economic collapse in 2008 very low levels of housing have been constructed, especially in the main cities and urban areas where there is ongoing under-supply. The recovery of the economy and increasing population and employment is creating a significant increase in demand for new homes to support a growing and working economy, and to address the significant level of social housing need. Under-provision of housing is one of the last significant legacies of the economic downturn to be tackled. Accelerating delivery of housing for the private, social and rented sectors is a key priority for the Government.

Construction 2020 - A Strategy for a Renewed Construction Sector and the *Social Housing Strategy 2020*, both of which were published in 2014, contain measures to address issues and constraints in the construction and development sectors and in the provision of a range of social housing outcomes, respectively. The Government's *Action Plan for Housing and Homelessness, Rebuilding Ireland*, July 2016 seeks to ramp up the

delivery of housing from its current under-supply across all tenures to help individuals and families meet their housing needs.

The proposed development provides for the delivery of high-quality residential development on available, serviced and appropriately zoned lands, which will contribute towards Newcastle fulfilling its role as a Small Town as designated under the South Dublin County Development Plan 2016-2022.

The application site has been specifically designated under the Newcastle Local Area Plan 2012-2022 as part of the planned development of neighbourhoods to enable the sustainable expansion of Newcastle, highlighting sites to be prioritised over the lifetime of the Plan in order to meet the housing allocation. The proposed development will facilitate the sustainable growth of Newcastle in a coherent, plan-led, manner; protecting and maximising opportunities presented by the unique natural and built environment of the town; and delivering an exemplar quality of life for its residents.

4.2 Consideration of Alternatives

4.2.1 Alternative Locations

The lands on which the application is made are zoned RES-N in the Newcastle Local Area Plan 2012-2022, *'to provide for new residential communities in accordance with approved area plans'*. The Newcastle LAP 2012-2022 was the subject of a Strategic Environmental Assessment (SEA).

The issue of alternatives is a critical function of the Strategic Environmental Assessment (SEA) process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the settlement within the constraints imposed by environmental conditions. The SEA for the Newcastle LAP 2012-2022 considered alternatives at an early stage of the process and through an iterative process with the Local Area Plan, SEA and AA teams the most appropriate scenario was selected.

The preferred strategy of the SEA provided for adopting the 'RES-N' zoning of the site. Section 4.2 of the SEA stated that the chosen option for the LAP *'is more likely to bring about better environmental outcomes because of its ability to protect the historical heritage of the area and integrate it into the biodiversity networks as well as the ability to provide for the SUDs network in the plan lands, as well as providing for increased connectivity and permeability thereby improving the surrounding environment.'*

The development of the lands for residential use is also consistent with the detailed framework for each neighbourhood detailed within the LAP, and as such, represents a plan-led development.

The site provides opportunities for the coherent integration, consolidation and sustainable development of the established town of Newcastle, as designated in the LAP, and provides opportunities for improved permeability between established neighbourhoods and the town centre. The site and proposed development provide significant opportunities to deliver a substantial quantum of housing in the form of the sustainable urban expansion of Newcastle town and thereby contribute in a sustainable manner to meet strategic planning objectives at a local and regional level.

On the basis of the foregoing, no alternative sites were considered or assessed for the purposes of preparing this EIAR, nor is it considered necessary to do so.

4.2.2 Alternative Construction

The Applicant controls approximately 34ha to the south of Main Street that are zoned for a mix of residential uses (RES-N and RES) and open space (OS) in the South Dublin County Development Plan 2016-2021. Early alternatives for the proposed development were developed on a masterplan basis for the overall landholding.

As part of the early consideration of the construction phase of the proposed development, alternatives were considered as to the appropriate progression of construction of the lands. In order to minimise environmental impacts on surrounding amenities and the duration of a standard planning permission (5 years), it was considered appropriate for the proposed landholding to be delivered over two separate phases.

In this regard, the main alternatives considered comprise of developing the western portion of the lands initially with access provided from the Athgoe Road (L6001) or construction of the eastern portion of the lands initially with access via Main Street/the adjoining Ballynakelly development.

It was considered that the development of the eastern portion of the landholding as the first phase would result in the development of lands previously disturbed as part of ground works associated with Reg. Ref. SD05A/0344 (ABP Ref. PL06S.217096). In this regard, the commencement of development on the eastern portion of the lands would not result in the loss of agricultural lands and would provide an opportunity to reinstate and enhance some of the burgage plots and hedgerows lost due to previous works on site.

Furthermore, it is sequentially preferential to commence development on the eastern portion of the overall landholding, facilitating infill development and consolidation of the established urban area. This approach would assist in enhancing permeability for existing residents of the Ballynakelly development to the east providing new connections to Main Street and amenity spaces forming part of the proposed development.

Accordingly, it was considered that the construction of the eastern portion of the overall landholding would be preferable having regard to the environmental effects assessed.

4.2.3 Alternative Layouts & Designs

A number of alternative layouts for the proposed development were considered over the design process. In addition, the proposals for the development were subject to detailed discussion with the Planning Authority prior to the principles of the proposed layout being finalised.

The significant environmental issues and potential effects which informed the proposed layout included population and human health, biodiversity, cultural heritage, transportation and visual impact. Other factors which were fundamental to informing and directing detailed design included the land use zoning objectives under the South Dublin Development Plan 2016-2022 and the detailed design brief established in Chapter 6 of the Newcastle Local Area Plan 2012-2022 which sets out specific framework objectives for designated neighbourhoods in Newcastle.

In this respect, the design team considered a number of options in terms of overall layout as follows:

- Design Iteration 1 – Layout as per the Newcastle Local Area Plan 2012-2022
- Design Iteration 2 – Relocation of Main Public Space to Centre of Scheme
- Design Iteration 3 – Centrally Located Open Space with Strong Green Links to Main Street

- Design Iteration 4 – Location of Open Space to South of Site on lands Zoned for Open Space
- Design Iteration 5 – Preferred Iteration – Proposed Development

It is noted that early alternatives considered were undertaken at an overall Master Plan level including lands under the control of the Applicant to the west of the site. This approach is consistent with the requirements of the Newcastle LAP 2012-2022, which require a Master Plan approach, and was considered appropriate to ensure that the preferred option facilitated the future development of the overall LAP lands to the south of Main Street.

Design Iteration 1 adopted the indicative layout as provided for in the Newcastle Local Area Plan 2012-2022. The initial scheme replicated the open space and street network as per the overall framework for the plan lands. While detailed layouts were not developed, it was estimated that this iteration would yield in the order of 310- 380 no. units for the overall lands within the Applicants ownership (approximately 25 ha within the LAP boundary).

Figure 4.1 Design Iteration 1



The LAP indicative layout didn't respond appropriately to the site's natural features including the network of hedgerows, historic burgage plots and topography of the site. This iteration resulted in an overprovision of streets which created an imbalance between the overall area reserved for housing, green spaces and the area reserved for vehicular traffic.

It was considered that Design Iteration 1 resulted in significant environmental impacts, particularly in respect to biodiversity, cultural heritage and visual impact due to the removal of substantial lengths of existing and established burgage hedgerows. It is considered that the extent of hedgerow removal would impact on local biodiversity, potentially resulting in mortality to fauna during construction. Furthermore, the burgage

hedgerows are identified as an important cultural heritage feature which should be protected where possible.

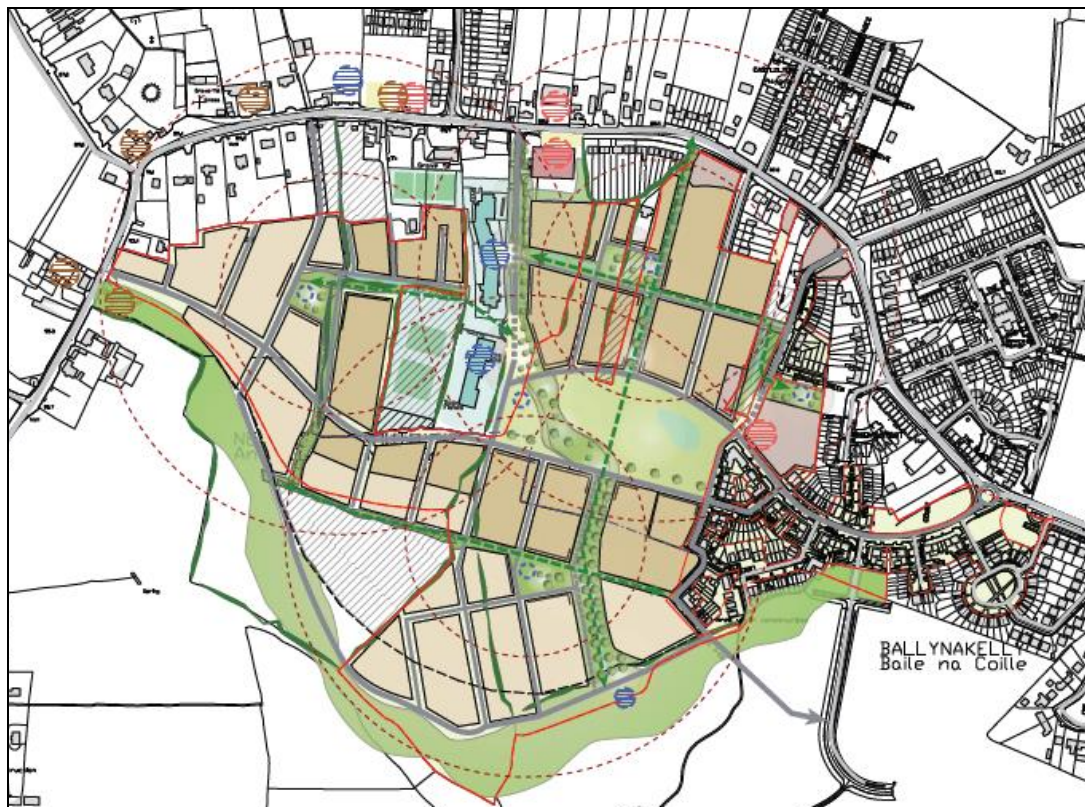
Similarly, Design Iteration 1 gave rise to potential impacts in terms of traffic and transport due to the overprovision of streets, resulting in a street dominated scheme, leading to potential traffic hazard and safety concerns. The layout failed to provide a clear hierarchy of roads and streets in accordance with the requirements of DMURS¹. Furthermore, the over provision of streets resulted in the inefficient use of zoned land proximate to the town centre and public transport links.

Based on the foregoing a number of alternative iterations were explored, which deviated from the indicative LAP layout based on the environmental impacts identified.

Design Iteration 2 provided for the relocation of the main public park to a more central location proximate to the existing school site. This design also provided for the potential co-location of the proposed school site with St Finian's National School. The concept layout rationalised the street network and sought to incorporate a strong north-south green link. This iteration also sought to retain where possible existing hedgerows and incorporate them into public open spaces.

Detailed layouts were not developed. However, it was estimated that this iteration would yield in the order of 340-415 no. units for the overall lands within the Applicant's ownership.

¹ Design Manual for Road & Streets – Department of Transport Tourism & Sport and Department of Environment, Community & Local Government

Figure 4.2 Design Iteration 2

This iteration resulted in a greater quantum of hedgerows being retained which assisted in mitigating against some of the environmental impacts associated with Design Iteration 1 in terms of biodiversity, visual impact and cultural heritage. The centrally located open space improved the accessibility of the space to the surrounding residential development.

The centrally located green space resulted to two distinct neighbourhoods which were poorly connected with no strong links to Main Street. This layout would also route east-west traffic via the existing development to the east with limited potential to connect to Main Street. It was considered that the lack of vehicular connectivity to Main Street could give rise to socio-economic impacts in terms of protecting and enhancing the vitality of the town centre and well as potential traffic impacts within the established development to the east.

This iteration resulted in the co-location of a future school with the existing school to the north of the site. While there are advantages to the co-location of schools in terms of sharing facilities, it is considered that such an approach could give rise to traffic impacts at peak times and noise impacts for surrounding residential development. Furthermore, the school location was inconsistent with the location identified in the LAP which would be more accessible to the existing population to the east.

Based on the foregoing Design Iteration 3 sought to provide for improved linkages to Main Street and relocate the school to the site designated by the LAP.

Design Iteration 3 provided a centrally located open space which was overlooked on all sides by proposed development with strong green links north towards Main Street and south towards the proposed school site. Significant emphasis was placed on the need to protect, where possible, existing hedgerows. This option provided for the relocation of the school site to the south-eastern corner, as identified in the LAP, to facilitate access from the existing Ballynakelly development and for future residents. Furthermore, linkages to Main Street were improved to provide a more permeable layout.

This version was subject to early pre-planning consultation with South Dublin County Council. The scheme as presented provided for approximately 600 no. units across the overall lands within the Applicant's ownership.

Figure 4.3 Design Iteration 3



This layout addressed many of the environmental impacts identified in earlier iterations. In particular, the proposed layout retained where practical existing hedgerows, provided key community infrastructure including a public park and a future school site at easily accessible locations for existing and future residents, and facilitated improved vehicular linkages both east-west and north-south. It is considered that this iteration had similar environmental effects to the proposed development.

Density had been increased to align with national planning policy requirements for the efficient and sustainable use of the zoned land.

The southern portion of the proposed development site is zoned Objective OS, 'to preserve and provide for open space and recreational amenities' in the South Dublin County Development Plan 2016-2022. Similar to the previous iteration, Design Iteration 3 provided for a redistribution of the zoned open space throughout the development resulting in residential development being proposed on Objective OS lands. However, following

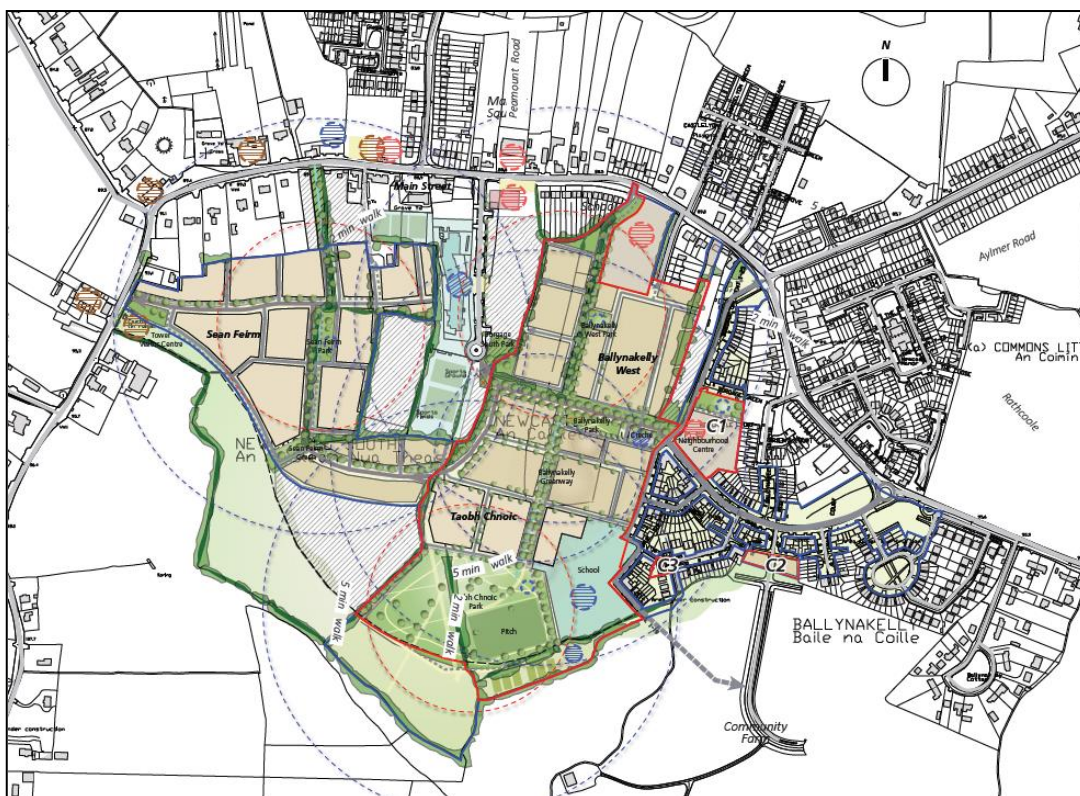
consultation, it was considered that Design Iteration 3 deviated significantly from the requirements of the County Development Plan and the Newcastle LAP, and potentially would not fall within the definition of strategic housing which requires development to be located on land zoned for residential use or for a mixture of residential and other uses².

On this basis Design Iteration 3 was not progressed any further due to legal and regulatory obstacles which prohibited the development of this alternative.

Design Iteration 4 provided for the relocation of the public open space to the area zoned Objective OS. The layout retained the principal features of the indicative LAP layout, provided a series of pocket parks and green links in addition to the Public Park, facilitated the retention of existing hedgerows where possible and provided for a high level of connectivity to the existing and future communities.

This version was subject to further pre-planning consultation with South Dublin County Council dated 27 June 2018, and SHD pre-application consultation with An Bord Pleanála (ABP) dated 7 January 2019. This iteration was developed on an overall masterplan basis, with Phase 1, the eastern portion of the site, developed to detailed design stage. The proposed scheme (Phase 1) provided for 420 no. residential dwellings, together with a childcare facility and a retail unit on Phase 1 lands comprising approximately 17.5 hectares.

Figure 4.4 Design Iteration 4



² Section 3 of the Planning and Development (Housing) and Residential Tenancies Act, 2016 defines 'strategic housing development' (SHD) as 'the development of 100 or more houses on land zoned for residential use or for a mixture of residential and other uses.....'

An Environmental Report was prepared in respect of the proposed scheme as part of the submission to ABP. Having regard to the context and character of the site and the receiving environment, and the nature, extent, form and character of the proposed development, the Environment Report concluded that the proposal would not result in any significant adverse effects on the environment. Mitigation measures were proposed to avoid, remedy or reduce any identified impacts.

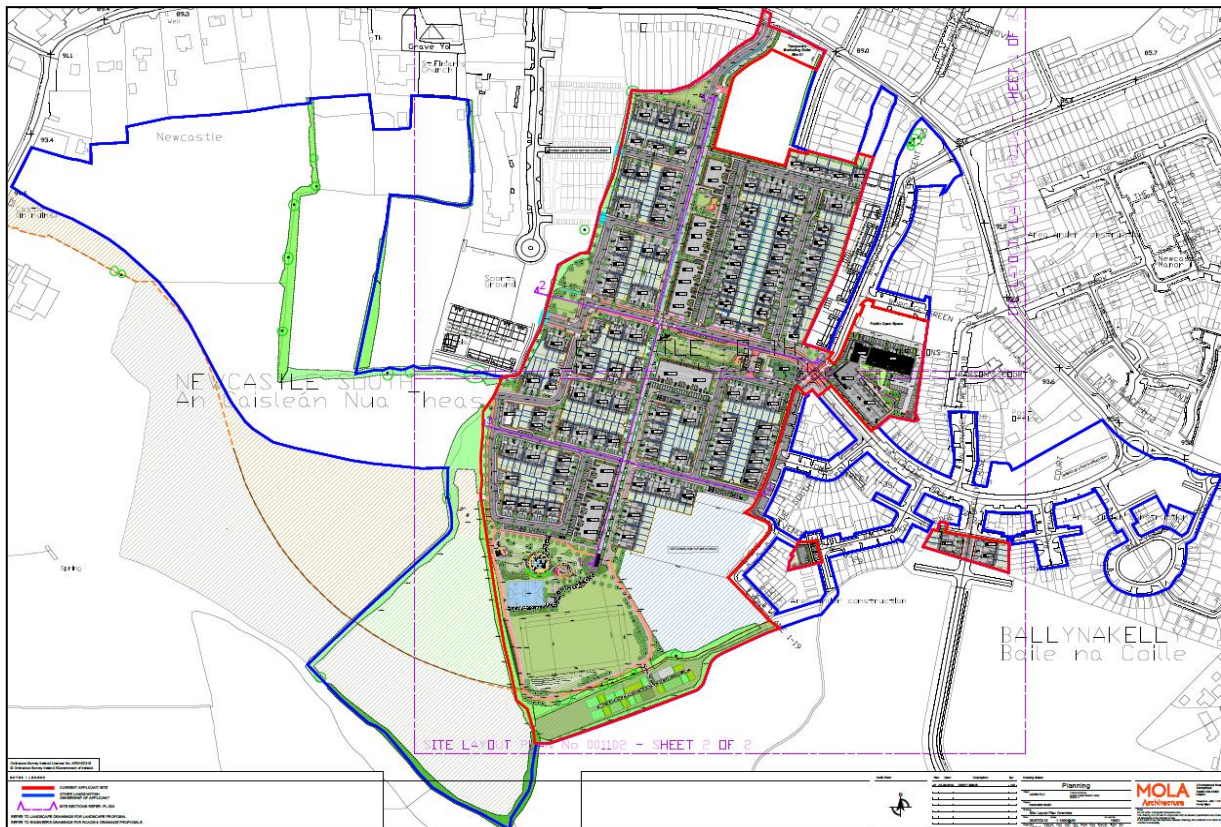
The pre-application consultation opinion from An Bord Pleanála in relation to the proposed strategic housing development states that An Bord Pleanála *'is of the opinion that the documents submitted with the request to enter into consultations require further consideration and amendment to constitute a reasonable basis for an application for strategic housing development'*. The Opinion further identifies specific issues which need to be addressed in the documents submitted in order for them to constitute a reasonable basis for an application for strategic housing development. The issues stated included compliance with Development Plan zoning and roads objectives; ensuring appropriate street frontage along the main street through the site and the main open spaces; avoiding doubling up of carriageways and showing links to adjoining lands.

Subsequent to the Board issuing its Opinion, the extent of Phase 1 was modified, to omit part of the Public Park, and further consultation was held with South Dublin County Council, dated 26 February 2019, and ABP, dated 30 April 2019. No substantial changes were made to Design Iteration 4 save for the omission of part of the lands from the Phase 1 application boundary and the reduction in total number of units to 404 no. units due to minor modifications to the layout. This modification did not give rise to any additional environmental effects.

Design Iteration 5 is the current proposed development and incorporates the design changes required in order to address the pre-application consultation opinions issued by An Bord Pleanála.

The proposed development relates to Phase 1 only, and provides for 406 no. residential dwellings, together with a childcare facility and a retail unit on Phase 1 lands comprising approximately 16 hectares.

Figure 4.5 Design Iteration 5 – Proposed Development



For the purposes of this section of the EIAR the following summarises the key changes to the proposed scheme.

- The east-west road has been adjusted to align with the Objective OS zoning boundary, along the western boundary of the site, which together with Objective OS zoned lands, is to form part of a larger square serving the wider community. The east-west road now follows an alignment to the south of the open space and provides for the continuation of the road across third party lands.
- The alignment of the north-south access road has been modified to form the eastern boundary of the planned square, consistent with the Development Plan roads objective, with dwellings directly overlooking the zoned open space.
- The road alignment serving the properties immediately north of the main east-west route has been rationalised to omit parallel carriageways and ensure those properties appropriately address the street providing a strong urban edge.
- The total number of units were increased from 404 no. units to 406 no. units due to the alterations in layout described above and the adjustment of the street alignment to the south of the site to ensure that street infrastructure did not encroach on the Objective OS zoned lands.

This layout addresses many of the environmental impacts identified in earlier iterations. The proposed development has been chosen as it is considered the most efficient design in terms of environmental effects

as it represents the sustainable use of zoned lands, in a manner consistent with regulatory and legal requirements.

Based on a comparison of the environmental effects, as described for each Iteration above, together with the regulatory requirements of the South Dublin County Development Plan 2016-2022 and the Newcastle Local Area Plan 2012-2022, it is considered the proposed development has been selected for the following reasons:

- The proposed development maximises the opportunity to protect, and where possible, existing and replace lost, burgage plots and associated hedgerows resulting in significant benefits in terms of biodiversity; cultural heritage and visual impact.
- The proposed development minimises the proportion of the proposed development site given over to roads and streets infrastructure, ensuring the efficient use of land and reducing potential traffic and transport impacts and hazards.
- The proposed development results in a high degree of permeability, resulting in a highly connected neighbourhood with strong connections with existing development and future development lands which will have positive impacts on population and human health.
- The proposed development is consistent with the regulatory requirements of the of the South Dublin County Development Plan 2016-2022, in terms of the statutory zoning objectives for the land, and the Newcastle Local Area Plan 2012-2022, in terms of development objectives and the detailed framework plan.

4.2.4 Alternative Mitigation Measures

The mitigation measures outlined in this EIAR, where appropriate, have been developed by competent experts relevant to the aspect of the environment under consideration and represent best practice with a view to avoiding or otherwise minimising potential impacts on the environment.

There are no predicted residual impacts once mitigation measures have been successfully applied and as such, alternative mitigation is not considered necessary.

4.2.5 “Do Nothing” Alternative

A ‘do-nothing’ scenario is considered an inappropriate and unsustainable approach that would result in the inefficient use of a strategically located and serviced landbank of zoned residential lands. A ‘do nothing’ scenario would also frustrate the delivery of the strategic planning objectives for the area and the region.

With the mitigation measures proposed in this EIAR and having regard to the findings that no significant effects on the environment are expected with such measures in place, the comparative environmental effects are not considered sufficient to rule out proceeding with the proposed development.

4.3 Conclusion

The proposed development provides for new residential development on lands zoned for residential use under the South Dublin County Development Plan 2016-2022 and the Newcastle Local Area Plan 2012-2022,

both of which were subject to the SEA process. As such, consideration of alternative sites for the construction of houses and apartments proposed in this residential development was not considered necessary.

During the design process, the layout and design of the proposed development evolved in response to architectural, landscape and environmental requirements and several iterations of the site layout and alternative designs were considered. Any difficulties from an architectural, landscape or environmental viewpoint were assessed and, where necessary, the design was amended to address the issues encountered.

The evolution of the current scheme was informed by consideration of a number of environmental aspects; vehicular and pedestrian movements; maximisation of pedestrian connectivity through the site; protection of adjoining residential amenity and retention of existing burgage plots, hedgerows and natural features. Furthermore, the final scheme has been directly influenced by the specific issues raised in the Board's Opinion.