

3. REASONABLE ALTERNATIVES

3.1 Introduction

Article 5 of the Environmental Impact Assessment (EIA) Directive as amended by Directive 2014/52/EU states that the information provided in an Environmental Impact Assessment Report (EIAR) should include a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the final choice, taking into account the environmental effects.

The primary obligation under Article 5(1)(d) of the EIA Directive is upon the developer to provide a description of the 'reasonable alternatives' considered in the course of the application process. In this regard, the Directive states as follows:

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;

The consideration of alternatives is an effective means of avoiding environmental impacts. As set out in the 'Draft Guidelines on The Information to be Contained in Environmental Impact Assessment Reports' (EPA, 2017), the presentation and consideration of reasonable alternatives investigated is an important part of the overall EIA process.

This chapter of the EIAR contains a description of the reasonable alternatives that were considered in respect of the development of the site, in terms other land-use options, unit numbers, unit types, design, construction methods and site layout.

It is important to acknowledge that although the consideration of alternatives is an effective means of avoiding environmental impacts, there are difficulties and limitations when considering alternatives. Indeed, as is clear from the provisions of the EIA Directive itself, the requirement is to consider "reasonable alternatives" which are relevant to the project and its characteristics. In general terms, issues such as hierarchy, non-environmental factors and certain site-specific issues may also be relevant to the consideration of reasonable alternatives by the developer.

Hierarchy

EIA is concerned with projects. The Environmental Protection Agency's draft guidelines (EPA, 2017) state that, in some instances, neither the applicant nor the competent authority can be realistically be expected to examine options that have already been previously determined by a higher authority, such as a national plan or regional programme for infrastructure which are examined by means of a Strategic Environmental Assessment (SEA), the higher tier form of environmental assessment.

Non-environmental Factors

EIA is confined to the potential significant environmental effects and that influences consideration of alternatives. However, other non-environmental factors will be important to the developer of a project, for example project economics, engineering feasibility or planning considerations.

Site-specific Issues

The EPA guidelines state that the consideration of alternatives also needs to be set within the parameters of the availability of the land, i.e. the site may be the only suitable land available to the

developer, or the need for the project to accommodate demands or opportunities that are site-specific. Such considerations should be on the basis of alternatives within a site, for example design and layout.

3.2 Methodology

The EU Guidance Document (EU, 2017) on the preparation of an EIAR outlines the requirements of the EIA Directive and states that, in order to address the assessment of reasonable alternatives, the Developer needs to provide the following:

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

There is limited European and National guidance on what constitutes a ‘reasonable alternative’ however the EU Guidance Document (EU, 2017) states that reasonable alternatives “*must be relevant to the proposed project and its specific characteristics, and resources should only be spent assessing these alternatives*”.

The guidance also acknowledges that “*the selection of alternatives is limited in terms of feasibility. On the one hand, an alternative should not be ruled out simply because it would cause inconvenience or cost to the Developer. At the same time, if an alternative is very expensive or technically or legally difficult, it would be unreasonable to consider it to be a feasible alternative*”.

The current Draft EPA Guidelines (EPA, 2017) state that “*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 is deciding on the selected option. A detailed assessment (or ‘mini-EIA’) of each alternative is not required.*”

Consequently, taking consideration of the legislative and guidance requirements into account, this chapter addresses alternatives under the following headings:

- ‘Do Nothing’ Alternative;
- Alternative Sites;
- Alternative Layouts;
- Alternative Design Considerations;
- Alternative Land-uses;
- Alternative Processes and
- Alternative Mitigation Measures.

Each of these is addressed in the following sections.

3.3 “Do Nothing” Alternative

If the proposed development was not to proceed, the opportunity to develop 121 no. units comprising a mixture of houses, duplexes and apartments, childcare facility, open space, landscaping and ancillary works at this long standing residential zoned site would be lost. Similarly, the provision of a public linear park along Trusky Stream on lands zoned Open Spaces/Recreation and Amenity would not be realised.

Under the “Do Nothing” alternative, the zoned residential lands would not be used for the development of housing. There remains a long standing housing need both in Bearna, and the area of the Galway MASP in general, as identified in the RSES and Galway County Development Plan 2015 – 2021 (including Variation 2(a) – the Bearna Plan). Therefore, under this “Do Nothing” scenario, the construction of badly needed housing would have to occur on another site in the Bearna or Galway MASP area to fulfil that need. It is entirely possible that any alternative site would be less suitable than

the proposed development site and would potentially put pressure on the use of lands not currently zoned residential or serviced with utilities. In circumstances where the utilisation of alternative unzoned lands and the non-utilisation of lands zoned for residential development would represent an unsustainable land use, the “Do-Nothing” alternative was not considered the appropriate option.

3.4 **Alternative Sites**

As outlined above the vast majority of the site is zoned for Residential (phase 1) development (R) with a small section zoned for Open Space/Recreation & Amenity (OS) development within Variation No.2(a) to the Galway County Development Plan 2015-2021 (“the Bearna Plan”). The lands comprising the site of the proposed development are available to the applicant for development and, in circumstances where proposed site is the only suitably zoned Residential (Phase 1) site available to the applicant for the proposed development, consideration of alternative sites which are not available to the applicant for the proposed development is not considered necessary or appropriate. During the design process for the proposed development, as set out below, several iterations of the site layout and alternative designs were considered. The documentation submitted with this planning application demonstrates that the subject site and the surrounding area have the environmental capacity to accommodate the proposed development without any significant impacts on the environment.

3.5 **Alternative Layouts**

This section analyses a number of alternative development options for the site and provides an overview as to the manner in which the proposed development design has evolved and provides evaluation of the comparable potential for environmental effects. The design process was an iterative process, where findings at each stage of the design’s evolution were used to further refine the design, always with the intention of minimising the potential for environmental impacts. In particular, in developing the proposed design, cognisance was taken of the designs proposed in respect of two previous SHD proposals. Accordingly, the applicant for permission has ensured that elements of the site layout which were unfavourably viewed in either or both the previous decision made by An Bord Pleanála to refuse permission (in February 2018, under ref. no. ABP-300009-17) or the decision of the High Court to quash permission granted (under ref. no. ABP-302216-18) are not replicated in the proposed development the subject of this application.

3.5.1 Alternative Layout 1

As outlined in Section 2.2.2. of this EIAR, Burkeway Homes Ltd., previously applied for permission (ref. no. ABP-300009-17) to develop a Strategic Housing Development scheme comprising 113 no. residential units, community room, new vehicular and pedestrian access at Trusky East, Barna, Co. Galway.

The site layout is indicated below in Figure 2-2. That proposal comprised:

- The construction of 113 no. new dwelling houses comprising
 - 46 no. 2 Storey detached units
 - 64 no. 2 storey semi-detached units and
 - 3 no. 2 storey terraced units



Figure 3-1: Alternative Layout 1

An Bord Pleanála refused planning permission for the development On 6th February 2018. In their direction, the Board considered that the “*density of the proposed development was contrary to the provisions of the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009), which was not considered to be developed at a sufficiently high density to provide for an acceptable efficiency in serviceable land usage given the proximity of the site to the built-up area of Beama and Galway City*”. Furthermore, it was considered that the “*development as proposed did not have an adequate mix of dwelling types, being predominantly semi-detached and detached housing*”.

The development of this design would, according to An Bord Pleanála, have led to potential negative effects on population and people as well as the material assets serving the site (utilities). It was therefore decided to redesign the project in a manner so as to avoid these potentially negative effects.

3.5.2 Alternative Layout 2

On the 31st July 2018 Burkeway Homes Ltd., submitted a subsequent application to develop a Strategic Housing Development scheme comprising an increased density scheme of 197 no. residential units, community room, new vehicular and pedestrian access at Trusky East, Barna, Co. Galway.

The site layout is indicated below in Figure 2-3. That proposal comprised:

- > 107 no. houses
- > 24 no. duplex units
- > 66 no. apartments

In proposing this alternative development layout, the developer sought to address the concerns of An Bord Pleanála by increasing the density of the development and improving the housing mix proposed.



Figure 3-2 Alternative Layout 2

An Bord Pleanála granted permission for the proposed development on the 16th November 2018. However, the decision was subsequently subject to Judicial Review proceedings and by way of Judgment delivered on 21st June 2019, the High Court held that the decision made by the Board to grant permission would be set aside (as outlined in Section 2.2.2 of this EIAR).

Among the grounds found by the High Court for setting aside the grant of permission was that the (then) proposed development comprised a material contravention of the Galway County Development Plan 2015 – 2021 (as varied) (GCDP), on the basis that roads, bridges and hard standing were not properly located within lands zoned as ‘open space’. Paragraph 19 of the recent High Court Judgment in Heather Hill Management Company CLG Anor. v An Bord Pleanála [2019] I.E.H.C. 450 held that *‘roads, bridges and hard standing are properly characterised as ancillary to the residential development, and accordingly, must be characterised as ‘residential development for the purposes of the land use matrix.’*

3.5.3 Alternative Layout 3

For the current planning application an initial design concept was developed and subsequently circulated to the planning authority as part of the statutory Pre-Application Consultation process of the SHD procedure.

The site layout is indicated below in Figure 2-4. That proposal comprised:

- > 120 no. units
- > Overall site area of 3.43ha,
- > Density of 35 units per ha
- > 50 no. apartments (41.66%), 19 no duplexes (15.83%) and 51 no. houses (42.5%)
- > Public open space of 25.9%

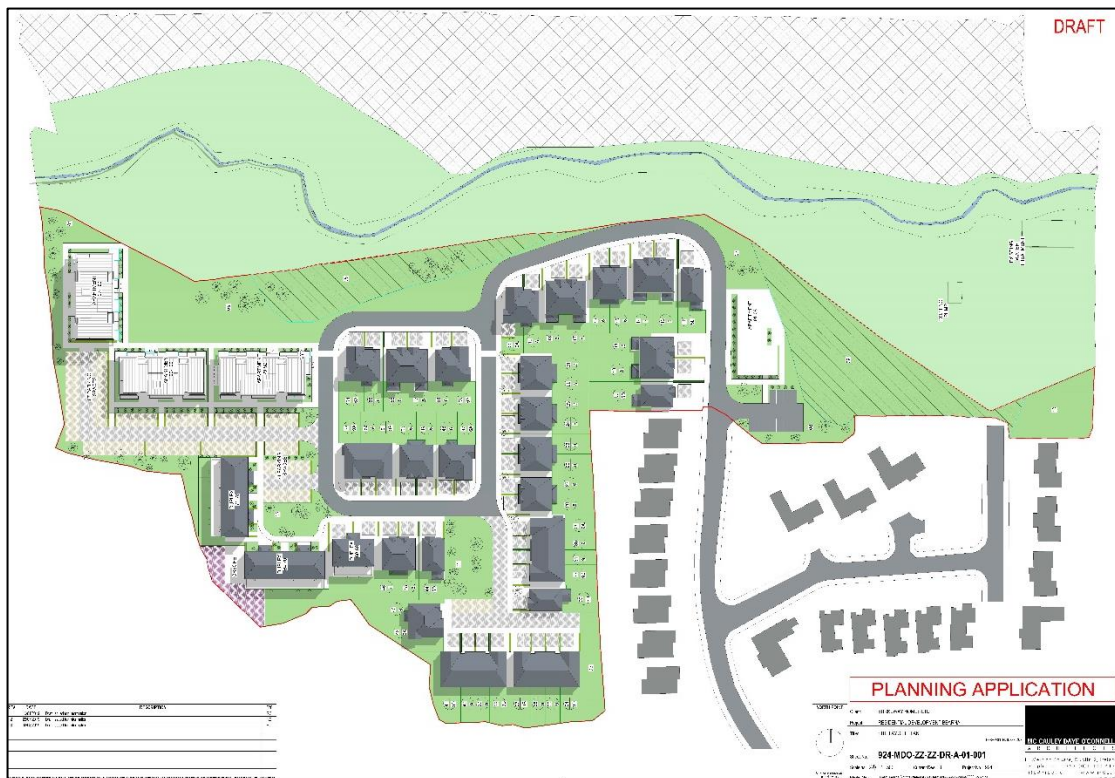


Figure 3-3 Alternative Layout 3

This initial design concept sought to find a balance between meeting the density requirements of the *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)*, providing an appropriate housing mix, and staying within the population allocation of the GCDP. Through the pre-application consultation process the Planning Authority raised concerns regarding the layout, place making and pedestrian connections to the village centre.

This layout included for the removal of built infrastructure from east of the Trusky Stream and also from potential flood zone areas. These changes are considered to have a potential positive environmental effect compared to the previous layouts in the context of potential emissions to water and the enhancement of biodiversity in particular.

3.5.4 Alternative Layout 4

The draft application pack prepared for Stage 2 of the SHD process – that is, the tripartite meeting with An Bord Pleanála and the Planning Authority – contained the following revisions:

- Increase in overall unit numbers to 121.
- An increased site area of 5.96ha.
- A density of 35 units per ha (net of main distributor road and open space zoning on east side of site)
- The main distributor road is not located on lands zoned as “open space”
- 48 no. apartments (39.67%), 15 no duplexes (12.40%) and 58 no. houses (47.93%)
- Relocation of apartment units to lower part of the site
- Inclusion of a footpath connectivity link along the L1321 within the Red Line Boundary

The site layout is indicated below in Figure 2-5



Figure 3-4 Alternative Layout 4

Alternative Layout 4 was developed to incorporate the feedback received on the initial design concept. The revised design sought to address certain issues raised by the Planning Authority by the inclusion of footpath connectivity and a revised development layout.

This layout is marginally different to Layout 3 and therefore there is no significant change from that previous layout.

3.5.5

Layout 5 - Proposed Development

The proposed development layout is indicated below in Figure 2-6. The proposed development layout builds on Alternative Layout 4 and seeks to address issues in relation to a more appropriate spread of density throughout the development. In this layout the overall number of units remains at 121 with a reduction in size of the site area to 5.38 ha. The final configuration is 33 no. apartments, 36 no. duplexes and 33 no. apartments with a residential density of 35 units per ha. The apartment buildings to the entrance area reduced to 2 no. 3 storey apartment buildings rather than 3 no. 3.5 storey buildings. Two storey, own door apartment buildings and 3 storey duplex units aid the spreading of density along the OS zoned land. Narrow plan terrace units are located to the west of the site increasing range of house type and further supplementing the density within the western section of the scheme. In particular, the proposed development also includes the provision of a public linear park along the Trusky Stream



Figure 3-5 Proposed Development

The proposed development layout is the culmination of an extensive design process. Overall, the proposed development is a better design from an environmental perspective than the alternatives previously considered. The proposed development provides for an appropriate number of residential units at a density that is consistent with the provisions of the *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)*. Furthermore, the mix of housing types has been improved over previous iterations of the development. A network of footpaths throughout the proposed development will provide a high rate of accessibility to the landscaped amenity areas including parks, playgrounds and open play areas. The inclusion of these attractive, well designed walking routes will encourage pedestrians to access the local facilities on foot as opposed to taking their personal vehicles. Connectivity to Bearna village centre has been improved through the provision of a footpath along the L-1321 which will benefit not only the proposed development but also the existing residents of the area. The development of the linear park will enhance biodiversity and the set back from the Trusky stream reduces the potential for any environmental emissions. For these main reasons, the proposed development is considered the most appropriate alternative from an environmental impact assessment perspective.

3.6 Alternative Design Considerations

The proposed mix of uses are mutually compatible and support the viable completion of the development on site as well as complementing existing adjacent land use. Increased public access to the site facilities and amenities benefit both the future residents and the local community.

The proposed residential development has been prepared in accordance with the Policies and Objectives, contained in the National Planning Framework, Regional Spatial and Economic Strategy, Galway County Development Plan 2015-2021 which incorporates the Bearna Plan (Variation 2(a)) and the Gaeltacht Plan (Variation 2(b)) and has been the subject of a pre-application consultations meetings with the Planning Authority and An Bord Pleanála prior to lodgment.

3.7 Alternative Land Uses

The proposed development comprises development of a greenfield site zoned 'R' and 'OS'. The residential development proposed on lands zoned R accords with the Phase 1 residential zoning and 'Objective RD1 – Residential Development Phasing', which requires that development be directed into lands which are zoned and serviced. The proposed residential development on lands zone R complies with the Land Use Zoning Matrix and Objective RD3. All proposed buildings will be located on lands zoned Residential (Phase 1) that are not subject to 'Objective CCF6 – Inappropriate Development on Flood Zones'. The proposed development complies with Objective CCF6 as outlined above. In particular, a Site Specific Flood Risk Assessment (SSFRA), which demonstrates how the criteria of the Development Management Justification Test are met in relation to the proposed development and accompanying flood study of the Trusky East Stream are submitted with this application. The proposed development also includes public open space/linear park and 2 no. surface water drainage pipes on land zoned 'OS', which lands are also subject to Constrained Land Use 'CL'. These proposed land uses, namely recreational and utilities infrastructure, are open for consideration on the Land Use Zoning Matrix and the proposals comply with Objectives LU4, LU8 and DM Guideline FL1 as outlined above. Finally, the proposed pedestrian link along the L1321 complies with the Land Use Zoning Matrix and Objectives LU6 and RT2.

Therefore, the proposed development is in accordance with the Land Use Zoning Objectives in the Bearna Plan including the Land Use Zoning Map, associated Objectives and the Land Use Zoning Matrix. As such, consideration of alternative land uses were not considered necessary.

3.8 Alternative Processes

The management of processes that affect the volumes and characteristics of emissions, residues, traffic and the use of natural resources has formed part of the consideration of reasonable alternatives through the project's development.

The construction works on the site will require the use of raw materials in the form of energy to supply plant and machinery, standard building materials including stone, metals, pipework, concrete, electrical, plumbing etc and raw materials are consumed to manufacture building materials. The use of these resources will be controlled by the employment of best practice construction techniques including waste management practices.

The processes to be employed during the construction of the proposed development, and described in Chapter 4 of this EIAR, are standard best practice for the construction industry in Ireland. There will be no novel processes or methods employed. Since the proposed processes represent industry standard best practice, alternative processes were not considered to be reasonable and were therefore not considered further in the EIAR.

Alternative Mitigation

The best practice design and mitigation measures set out in this EIAR will contribute to reducing any risks and have been designed to break the pathway between the site and any identified environmental receptors. The mitigation methods proposed follow the principal of avoidance of impact where possible in the first instance, followed by minimisation of impacts where full avoidance is not possible. The mitigation methods proposed represent industry best practice. Alternative mitigation methods that are not best practice were not considered to be reasonable and were therefore not considered further in the EIAR