

## 4 EXAMINATION OF ALTERNATIVES

### 4.1 Introduction

This Chapter of the EIAR sets out the reasonable alternatives that have been considered for the Proposed Project and provides an indication of the main reasons for the final scheme choice, taking into account the effects on the environment in the context of the characteristics of the site (receiving environment). The EIA Directive (2014/52/EU) requires Environmental Impact Assessment Reports (EIAR) to include the following: -

*“A description of 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.”*

Pursuant to Section 3.4.1 of the Draft Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2017), 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’...”*

In accordance with Draft EPA Guidelines (EPA, 2017), different types of alternatives may be considered at several key phases during the process. As environmental issues emerge during the preparation of the EIAR, alternative designs may need to be considered early on in the process or alternative mitigation options may need to be considered towards the end of the process.

The Draft EPA Guidelines (EPA, 2017) states: -

*“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. A detailed assessment (or ‘mini-EIA’) of each alternative is not required.”*

Thus, the reasonable alternatives studied by the project design team and in the context of the associated Regulations, the alternatives of the proposed project in this EIAR Chapter as follows: -

- Alternative Locations.
- ‘Do Nothing’ Alternative.
- Alternative Processes.
- Alternative Mitigation Measures.
- Alternative Layouts & Designs.

This Chapter of the EIAR has been prepared by the following staff at Stephen Little & Associates, Chartered Town Planners & Development Consultants: -

Name	Role	Qualifications
Stephen Little	EIAR Director	Dip Env Mgmt, BA (Hons) TP, Dip TP, Dip EIA Mgmt, MRTPI, MIPI.
Michael O’Sullivan	EIAR Co-ordinator	Masters in Planning & Sustainable Development (MPlan), MIPI.
John Wallace	EIAR Assistant	MSc Planning and Sustainable Development.

## 4.2 Development Rationale

The proposed development seeks to provide a residential development and related facilities on residentially zoned land. The nature of the development proposed is actively promoted at this location by Meath County Council (MCC), through its development plan and having regard to other local and strategic plans and guidance.

The assessment of the proposed scheme in this EIAR has had regard to the detailed design as described and illustrated in the accompanying plans & particulars which accompany the planning application to the Board. This includes the relevant drawings and reports prepared by the Design Team.

## 4.3 Main Alternatives Studied

The main alternatives considered during the development of this project comprise alternative design solutions and layouts for a predominantly residential development at the subject site.

### 4.3.1 Alternative Locations

Under the Meath County Development Plan 2013 – 2019 (hereafter the Development Plan), the subject site is zoned 'Objective A2', the objective of this is: -

*"To provide for new residential communities with ancillary community facilities, neighbourhood facilities and employment uses as considered appropriate for the status of the centre in the Settlement Hierarchy."*

A portion of the lands within Character Areas 3 & 4 of the subject site are zoned Objective F1, the objective of which is: -

*"To provide for and improve open spaces for active and passive recreational amenities."*

The Dunshaughlin Local Area Plan 2009 – 2015 (hereafter the LAP) was prepared by MCC to provide a framework for future development of this new residential community at the subject lands. The LAP itself was subject to the Strategic Environmental Assessment (SEA) process.

As such it is considered that the site is entirely suitable for the nature of development as proposed in the SHD Planning Application. It is not considered necessary to consider an alternative site location for the proposed development.

### 4.3.2 'Do-Nothing' Alternative

In the event of a 'do-nothing' scenario, the site would remain 'as-is' with the undeveloped nature of the site or its former agricultural use retained.

The subject site is considered a 'tier 1 serviced lands as defined in the National Planning Framework (NPF) and has been zoned for residential development at the eastern edge of Dunshaughlin, to meet identified housing need in the Development Plan. Meath's strategic location in the Greater Dublin Area (GDA) gives the county direct access to the largest market in the country and the county is part of this strong economic centre.

A do-nothing approach would be contrary to the Council's objectives to promote residential land use at this site, in accordance with national, regional and local planning policy and guidance. It would potentially result in a failure of the housing needs of the County being appropriately met and the site being identified as 'vacant land'. An opportunity to achieve efficient and compact development which will benefit from future public transport connectivity in the form of new train station (long standing objective to develop rail link from Dublin to Navan) would be undermined. A 'do nothing' approach would be considered inappropriate from a planning and housing perspective.

From an environmental perspective, beyond impact on human health from a failure to deliver sustainable residential development to meet housing and community development needs and further sustainable based on alternatives to travel by private car, a 'do nothing' approach is otherwise likely to result in a neutral impact on the environment in respect of material assets, land, water, air, climate, cultural heritage, biodiversity and landscape.

#### 4.3.3 Alternative Processes

Alternative processes for the proposed housing, supporting facilities, amenities and infrastructure, at construction and operational phase of the development, are discussed below: -

- **Construction Phase:** The proposed construction works comprise relatively standard building construction processes. As such there are no specific alternative construction processes identified in this EIAR.
- **Operational Phase:** No new, unusual or technically challenging operational techniques are required, as such no alternative operational processes have therefore been considered at this point.

#### 4.3.4 Alternative Mitigation Measures

The mitigation measures as outlined in the various chapters of this EIAR are considered appropriate to the location, nature and extent of the project and its potential impacts. Due to this no alternative mitigation measures have been considered.

#### 4.3.5 Alternative Layouts & Designs

A number of site layout and alternative designs were considered during the design process, with further design alterations taking place following receipt of the An Bord Pleanála Opinion after the Pre-Planning Consultation meeting which was held on 03 June 2020.

The EIAR provides reasonable evidence that the proposed development can be accommodated in the subject site without predicted risk of significant adverse impact on the environment, subject to the identified mitigation measures at construction and operational stages being implemented.

The Proposed Development also includes an alternative layout which omits a road connection between Character Area 3 and Character Area 4. The road extends through lands zoned F1 – Open Space on which road infrastructure (considered ancillary to residential use) is not considered permissible. It is argued in the Material Contravention Statement, prepared by Stephen Little and Associates Chartered Town Planners & Development Consultants that the road connection on these lands are *de minimus*. Should the Board consider this alternative arrangement more appropriate (i.e. with the road link between Character Area 3 & 4 omitted) full consideration has been given to the potential environmental impact of same.

Please see below under Section 4.3.5.3 for a detailed summary assessment of the potential impact of the alternative layout proposed. Each Chapter has considered the alternative in turn for completeness.

##### 4.3.5.1 MCC Pre-Planning Layout

The Proposed Development was subject to series of Section 247 Pre-Planning meetings with MCC prior to the submission of the SHD Pre-Planning Consultation request to the An Bord Pleanála. These meetings helped to inform the design team's concept proposals for the subject site, with the creation of character areas, wider pedestrian / cycling connections, usable public open space and retention of trees / hedgerow where practically possible.

The initial proposed development consisted of c. 429no. residential units and associated landscaping, parking and open space on a c. 14.8 Ha site.



The key issues from an environmental perspective which arose during the Pre-Planning Consultation that have influenced the current proposals can be summarised as follows: -

- Further detail required on attenuation and SuDS proposals and rationale for the proposed development in context of the identified Flood Zone.
- In terms of connectivity consideration to be given to facilitation of future road connection for lands to the south, north-south pedestrian connectivity through the site and facilitation of connections to the southwest (pedestrian / cycle), southeast (vehicular) and east (pedestrian / cycle) along the River Skane.
- Demonstrate how the proposed layout is in compliance with the Design Manual for Urban Roads & Streets (2013).

#### 4.3.5.2 An Bord Pleanála Pre-Planning Consultation

The scheme as submitted with the Pre-Planning Consultation request to the Board had been progressed via an iterative process, with changes having been made during the pre-application process with the Planning Authority.

The scheme as submitted to the Board at Pre-Planning Consultation comprised of 426no. residential dwellings in a mix of houses, duplexes and apartments in a range of heights from 2 to 5 storeys. The layout provided for significant public open spaces and network of pedestrian / cyclist facilities. A childcare facility and ancillary site development and landscape works were also provided for.

The key issues from an environmental perspective which arose during the Pre-Planning Consultation that have influenced the current proposals can be summarised as follows: -

- Details of pedestrian movement on and around the site. Further consideration to be given regarding the proposed shared pedestrian and cyclist facilities.
- Ensure spaces that are being provided will act as useful open space.
- Further consideration / clarification on water supply, drainage and flooding.
- Consideration should be given to whether road infrastructure is permitted on lands zoned F1 – Open Space.



Figure 4.2: ABP Pre-Planning Site Layout

#### 4.3.5.3 Final Proposed Scheme

Responses to each of the listed items requiring further consideration within the An Bord Pleanála Opinion have been provided as part of this SHD Planning Application. The scheme has been updated and improved as a result. The overall design and layout presented during Pre-Planning Consultation was considered to be broadly acceptable by An Bord Pleanála and the Planning Authority (MCC), and therefore a fundamental redesign was not considered necessary or appropriate

The Board, in its assessment of the key issues to be further examined by the Applicant to support a reasonable basis for an application for strategic housing, identified the following design issue for further consideration and / or justification: -

- Connections between the proposed housing and the rest of the town. The submitted documentation should demonstrate that pedestrians, cyclists and those using public transport would have safe and convenient access from the proposed housing to services and facilities, including those in the town centre and the adjacent school. proposed streets and any works to existing streets comply with the specific requirements of DMURS and that any cycle facilities comply with the specifications set out in the National Cycle Manual.

The proposed development was subject of further alteration to address the matters above and arrive at an optimal solution in respect of making efficient use of zoned, serviceable lands whilst also addressing the potential impacts on the environment relating to residential, visual, natural and environmental amenities and infrastructure. In broad terms, the key change to the layout from Pre-Planning Consultation with An Bord Pleanála are as follows: -

#### **Character Area 3 & 4**

- Omission of road through F1 zoned lands to the east of Character Area 3.
- Revised road layout in southwest area of CA4 reduces length of homezone.
- Addition of sheltered / older person housing.
- Improved cycle and pedestrian connectivity.
- Communal open space for Block 02 now at level 00 as is Block 03.
- New detention basin provided.

#### **Character Area 6**

- Omission of 7no. units.
- Improved connectivity by connecting 2 cul-de-sacs.
- Moving houses and duplexes adjacent to southern shared boundary further north by c. 1.35m.
- Added horizontal deflection along central spine route and improved central open space.
- Inclusion of bicycle stores.
- House in the southeast (adjacent the new vehicular entrance) moved closer to Drumree Road.
- Revised substation location.

A hierarchy of pedestrian infrastructure has been proposed to ensure that the proposed development priorities pedestrian / cyclist movements in Character Area 3 & 4. Connections to lands outside the proposed development will be facilitate included a link to the future River Shane Greenway to connection to Dunshaughlin town centre via the town park.

The development as now proposed is considered to have arrived at an optimal solution in respect of making efficient use of zoned, serviceable lands whilst also addressing the potential impacts on the environment relating to residential, visual, natural and environmental amenities and infrastructure.

The proposed development subject of this SHD Planning Application will generally comprise: -

- 415no. residential units (254no. houses, 55no. duplex and 106no. apartments) in buildings ranging in height from 2 to 5-storeys.
- 1no. childcare facility (c. 409 sq. m gross floor area).
- Provision of access from Drumree Road (Character Area 6) and Dunshaughlin Link Road – R125 (Character Areas 3 & 4) and provision of internal road network including pedestrian and cycle links.
- Provision of public open space including facilitation of planned pedestrian and cyclist connection along River Skane Greenway toward Dunshaughlin Town Centre.
- Provision of wastewater infrastructure including connections to main sewers on Drumree Road and to foul networks in permitted Phase 1 development and provision of SuDS infrastructure.
- All associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works.



Figure 4.3: Final proposed Site Layout.

<b>Environmental Effects of the Preferred Solution compared Alternative Layout (Omission Road Link)</b>			
<b>Environmental Factor</b>	<b>Headings Under which the Environmental Factors were assessed</b>	<b>Topic</b>	<b>Comparative Effect of preferred option</b>
Population and Human Health		Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Biodiversity		Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Land, Soil & Geology		Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Water	Surface Water	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
	Waste Water	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
	Water Supply	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
	Flood Risk	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Climate	Air Quality & Climate Change	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
	Sunlight/Daylight	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Air	Noise and Vibration	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Material Assets	Traffic and Transport	Construction Phase  Operational Phase	<u>Neutral, imperceptible, temporary</u> Site works will be largely identical.  <u>Neutral, imperceptible and permanent</u> Operational levels of traffic will be largely identical.
	Waste	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
	Utilities	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.
Landscape and Visual	Visual Impact	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction / operational phase.

Cultural Heritage	Archaeology & Architectural Heritage	Construction Phase Operational Phase	<u>Neutral, imperceptible and permanent</u> No perceived additional adverse effects during construction/operational phase.
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Please refer to Chapter 3: Description of Proposed Development of the EIAR for a further detailed description of the Proposed Development. The final design presents the most effective utilisation of this significant site, fulfils MCC objectives and ensures the optimum provision of much-needed housing while delivering residentially led, mixed use development of the highest quality.

To summarise it is considered that the final layout: -

- Advances the strategic and statutory objectives applicable to these lands and the wider area.
- Optimises development space within the overall site, in an efficient and sustainable manner.
- Facilitates the introduction of long-term public transport infrastructures to the area, which can be incorporated into future infrastructural networks.
- Facilitates ready access to all parts of the scheme and the future development lands to the east.
- Avoids significant environmental impacts.
- Enables extensive economic development through both employment created at construction and operational stages, and also under future phases of development.
- Avoids the necessity to utilise in a non-sustainable manner other Greenfield lands, particularly those in the Greater Dublin Area.
- Affords excellent play opportunities and open space provision for the proposed development and to members of the public
- Encourages the use of public transport and provides pedestrian and cycle links throughout and under future phases to minimise car usage within the scheme.
- Avoids significant environmental impacts.

The final iteration of the scheme or the alternative layout proposed (omitting the road between Character Area 3 & 4) is not considered to give rise to any significant adverse environmental impacts. Mitigation measures to be implemented at construction and operation stages of the project are summarised in Chapter 19: Summary of Mitigation Measures of the EIAR.

