ENVIRONMENTAL IMPACT ASSESSMENT REPORT

VOLUME I NON-TECHNICAL SUMMARY

PROPOSED RESIDENTIAL, RETAIL, SPORTS HALL & COMMUNITY CENTRE DEVELOPMENT

AT

Athlumney, Navan, Co. Meath

Prepared by

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In Conjunction with

HRA Consulting Engineers/Enviroguide/Byrne Environmental/CSR/ACSU Archaeology

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AA Appropriate Assessment

ABP An Bord Pleanála

CDP County Development Plan

CEMP Construction Environmental Management Plan

CA Competent Authority (Meath County Council/An Bord Pleanála)

CSO Central Statistics Office

DAHG Department of Arts, Heritage and the Gealtacht

DCENR Department of Communications, Energy and Natural Resources

DEHLG Department of Housing, Planning and Local Government

EIA Environmental Impact Assessment

EIAR Environmental Impact Assessment Report

EMP Environmental Management Plan

EPA Environmental Protection Agency

ESRI Economic and Social Research Institute

GDP Gross Domestic Product

GSI Geology Survey Ireland

IAA Irish Aviation Association

IEEM Institute of Ecology and Environmental Management

IFI Inland Fisheries Ireland

LAP Local Area Plan

LRD Large Scale Residential Development

MCC Meath County Council

NHA/pNHA Natural Heritage Area / proposed Natural Heritage Area

NIAH National Archive of Architectural Heritage

NIS Natura Impact Statement

NPWS National Parks and Wildlife Service

NRA National Roads Authority

NPF National Planning Framework

OPW Office of Public Works

RMP Record of Monuments and Places

RPS Record of Protected Structures

SAC Special Area of Conservation

SDZ Strategic Development Zone

SMR Sites and Monuments Record

SPA Special Protection Area

SUDS Sustainable Drainage System

TMP Traffic Management Plan

WFD Water Framework Directive

GLOSSARY OF TERMS[1]

Alternatives: *A description of other options that may have been considered during the conception of a project; these include alternative locations, alternative designs and alternative processes.*

Baseline Scenario: *The current state of environmental characteristics – including any evident trends in its status.*

Competent Authority (CA): *The term 'competent authority' means the Minister or public authority to which an EIAR is required to be submitted, i.e. the authority charged with examining an EIAR with a view to issuing a consent to develop or operate.*

Development: *A project involving new works [including alteration and/or demolition] or altered patterns of activity.*

'Do-nothing' Scenario: *The situation or environment which would exist if a proposed, development, project or process were not carried out. This scenario needs to take account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment.*

Effect / Impact: *A change resulting from the implementation of a project.*

Environmental Impact Assessment – EIA: *The process of examining the anticipated environmental effects of a proposed project – from consideration of environmental aspects at design stage, through consultation and preparation of an Environmental Impact Assessment Report (EIAR), evaluation of the EIAR by a competent authority, and the subsequent decision as to whether the project should be permitted to proceed, encompassing public response to that decision.*

Environmental Impact Assessment Report: *– EIAR A report or statement of the effects, if any, that the proposed project, if carried out, would have on the environment. EPA The Environmental Protection Agency.*

Impact / Effect: *A change resulting from the implementation of a project*

Impact Avoidance: *The modification of project decisions (about site location or design, for example) having regard to predictions about potentially significant environmental effects.*

Infrastructure: *The basic structure, framework or system which supports the operation of a project, for example roads and sewers, which are necessary to support development projects.*

Land Use: *The human activities which take place within a given area of space.*

Likely Effects (or Likely Impacts): *The effects that are specifically predicted to take place – based on an understanding of the interaction of the proposed project and the receiving environment. (See also Potential Effects and Residual Effects.)*

Methodology: *The specific approach or techniques used to analyse impacts or describe environments.*

Mitigation Measures: *Measures designed to avoid, prevent or reduce impacts. These measures can mitigate impacts: \ by Avoidance When no impact is caused (often through consideration of alternatives). \ by Prevention When a potential impact is prevented by a measure to avoid the possibility of the impact occurring. \ by Reduction When an impact is lessened.*

Monitoring: *The observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures and to record any unforseen effects in order to be able to undertake appropriate remedial action. This is typically a repetitive and continued process carried out during construction, operation or decommissioning of a project.*

Pathway: *The route by which an effect is conveyed between a source and a receptor.*

[1] Selected – From Guidelines on the information to be contained in Environmental Impact Assessment Reports – EPA, May 2022

Planning Application Report: *Documentation that accompanies the planning application which describes the conformity of the proposal with relevant legislation and planning matters – such as the County, City or Local Area Plans – and sectoral policies, as well as social and economic activity.*

Pollution: *Any release to the environment which has a subsequent adverse effect on the environment or man.*

Potential Effect/ Impact: *The effect / impact that would occur without mitigation.*

Processes: *The activities which take place within a project.*

Project: *For the purposes of the Guidelines, the term project is used to encompass all of the various forms of development, works and activity which are subject to EIA requirements, as set out in the relevant legislation and as understood by the Directive.*

Sensitivity: *The potential of a receptor to be significantly affected. Significance (of impact) The importance of the outcome of the impact (or the consequence of change) for the receiving environment. Source The activity or place from which an effect originates.*

DOCUMENT CONTROL SHEET

Client:	Albert Developments Ltd.
Project Title:	Boyne Village LRD Athlumney, Navan
Document Title/Job No:	EIAR Volume I Non-Technical Summary

Rev.	Status	Author(s)	Reviewed By	Approved By	Issue Date
DV1	**DV1**	EIAR Team	AT	RK	22-5-2024
F01	**Final**	EIAR Team	AT	RK	29-5-2024

1.0 INTRODUCTION AND METHODOLOGY

John Spain Associates, Planning & Development Consultants, have been commissioned by Albert Developments Ltd., to prepare an Environmental Impact Assessment Report (EIAR) for the construction 322 no. dwellings, (212 no. houses & 110 no. duplex apartments/apartments) consisting of 177 no. 3-bedroom houses, 35 no. 4-bedroom houses, 26 no. apartments/duplex apartments (13 no. 2-bedroom apartments and 13 no. 3-bedroom duplex apartments), 35 no. 1-bedroom apartments and 49 no. 2-bedroom apartments in 3 no. separate blocks, a Community Centre & Sports Hall, creche, as well as a Neighbourhood Centre of c. 2,002 sq. m (including an anchor retail unit 1,000 sq. m net, GP Surgery, Café, Pharmacy and Takeaway), access, infrastructure, car parking, open space, boundary treatments and all associated site development works.

The proposed development will provide c. 3.72 hectares of open space which includes a District Park (c.1.65 ha), neighbourhood park of c. 0.47 ha, western open space areas (0.93 ha) and a series of smaller open space areas and landscaped areas.

This Non-Technical Summary (NTS) was prepared by Rory Kunz, BA (MOD), MScERM, MAT&CP, Dip EIA Mgmt., Executive Director with John Spain Associates.

This Volume of the EIAR was prepared by Rory Kunz, BA (MOD), MScERM, MAT&CP, Dip EIA Mgmt., Executive Director with John Spain Associates. Rory Kunz has a Masters in Environmental Resource Management and a Diploma in EIA Management (both from UCD) as well as a Masters in Town and Country Planning. In addition, Rory is a corporate member of the of the Irish Planning Institute and has over 21 years of experience of Environmental Impact Assessment and urban development.

Rory has acted as lead planning consultant on a range of high-quality complex planning applications across the country over an extended period. Rory has wide-ranging experience in the management and review of Environmental Impact Assessment Reports (EIAR) for major residential and mixed use development and redevelopment projects.

The central purpose of the Environmental Impact Assessment Report (EIAR) is to undertake an appraisal of the likely and significant impacts on the environment of the proposed development in parallel with the project design process, and to document this process in the EIAR. This is then submitted to the competent/ consent authority to enable it to assess the likely significant effects of the project on the environment.

A full description of the proposed development lands together with a description of the proposed development is provided in Chapter 2 of this EIAR document and a summary is provided below in Section 2.

1.1 DEFINITION OF EIA AND EIAR

The EIAR is prepared by the developer and is submitted to a Competent Authority (CA) – in this case, Meath County Council (MCC) as part of the LRD consent process.

The CA uses the information provided to assess the environmental effects of the project and, in the context of other considerations, to inform its decision as to whether consent should be granted. The information in the EIAR is also used by other parties to evaluate the acceptability of the project and its effects and to inform their submissions to the CA.

The EIAR provides a systematic analysis and evaluation of the potentially significant effects of a proposed project on the receiving environment. The amended EIA Directive prescribes a range of environmental factors which are used to organise descriptions of the environment and these factors must be addressed in the EIAR.

The EIAR should be prepared at a stage in the design process where changes can still be made to avoid adverse effects. This often results in the modification of the project to avoid or reduce effects through redesign.

Where significant and likely environmental effects are identified that are unacceptable, the EIA process aims to quantify and minimise the impact specified development projects have on the environment through appropriate mitigation measures. The preparation of an EIAR requires site-specific considerations and the preparation of baseline assessment against which the likely impacts of a proposed development can be assessed by way of a concise, standardised and systematic methodology.

1.2 EIA PROCESS OVERVIEW

The main purpose of the EIA process is to identify the likely significant impacts on the human environment, the natural environment and on cultural heritage associated with the proposed development, and to determine how to eliminate or minimise these impacts. The EIAR summarises the environmental information collected during the impact assessment of the proposed development.
Several interacting steps typify the early stages of the EIA process and include:

- Screening;
- Scoping;
- Assessing Alternatives; and
- Assessing and Evaluating.

Screening: Screening is the term used to describe the process for determining whether a proposed development requires an EIA.

Scoping: This stage firstly identifies the extent of the proposed development and associated site, which will be assessed as part of the EIA process, and secondly, it identifies the environmental issues likely to be important during the course of completing the EIA process through consultation with statutory and non-statutory stakeholders. Scoping request letters were issued to a range of stakeholders at the commencement of this EIA process and the responses received have been considered as part of the compilation of the EIAR.

Assessing Alternatives: This stage outlines the possible alternative approaches to the proposed development. Consideration of alternative sites and layouts within the final chosen site are set out in Chapter 2 of this EIAR.

Assessing and Evaluating: The central steps of the EIA process include baseline assessment (desk study and field surveys) to determine the status of the existing environment, impact prediction and evaluation, and determining appropriate mitigation measures where necessary. This stage of the EIAR is presented in Chapters 3 to 15 of Volume II of the EIAR and summarised below in section 3 of this NTS.

1.3 SCREENING – REQUIREMENT FOR EIA

Screening is the term used to describe the process for determining whether a proposed development requires an EIA by reference to mandatory legislative threshold requirements or by reference to the type and scale of the proposed development and the significance or the environmental sensitivity of the receiving baseline environment.

Projects needing environmental impact assessment are listed in Schedule 5 of the Planning and Development Regulations 2001 (as amended). Schedule 5 (Part 2) of the Planning & Development Regulations 2001 (as amended) set mandatory thresholds for each project class.

Paragraph 10((b)(i) refers to Infrastructure projects comprising the construction of more than 500 dwelling units. The proposed development which comprises 322 no. dwellings is below the threshold.

Paragraph 10(b)(iv) refers to 'Urban development which would involve an area greater than 2 hectares in the case of business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.' The site is c. 13.26 hectares and is therefore considered to require an EIA.

The EIAR provides information on the receiving environment and assesses the likely significant effects of the project and proposes mitigation measures to avoid or reduce these effects. The function of the EIAR is to provide information to allow the competent authority to conduct the Environmental Impact Assessment (EIA) of the proposed development.

1.4 SCOPING

The Environmental Protection Agency (EPA) EIA Guidelines May 2022 state that '*scoping*' is a process of deciding what information should be contained in an EIAR and what methods should be used to gather and assess that information.

The design of the proposed development has taken into account the relevant commentary contained in the Meath County Council Water Services report and the Road Department Reports as well as MCCs Opinion, which are contained in Appendix B2 Volume III of the EIAR. In addition, the EIAR team has extensive professional experience on undertaking similar EIAR projects on similar sites.

The following topics/issues have been reviewed and addressed in the context of the proposed development:

- Introduction and Methodology,
- Project Description and Alternatives Examined,
- Population and Human Health,
- Biodiversity,
- Land and Soils,
- Water,
- Air Quality and Climate,
- Noise and Vibration,
- Landscape and Visual Impact,
- Material Assets - Traffic,
- Material Assets - Waste
- Material Assets - Utilities,
- Cultural Heritage - Archaeology,
- Cultural Heritage Architectural Heritage,
- Risk Management for Major Accidents and or Disasters,
- Interactions of the Foregoing and Cumulative Impacts,
- Summary of EIA Mitigation and Monitoring Measures,
- Non-Technical Summary.

In addition to the above a series of standalone reports have been prepared to accompany the application and which have helped inform the above chapters of the EIAR where relevant. Chapter 2 of Volume II of the EIAR provides details of the envisaged phased delivery of development on the lands.

A series of meetings have taken place with the technical staff of Meath County Council.

1.5 INFORMATION TO BE CONTAINED IN AN EIAR

The content of this Environmental Impact Assessment Report has been prepared in accordance with the provisions of Article 5(1) and Annex IV of Directive 2014/52/EU.

Article 94 and Schedule 6 of the Planning and Development Regulations 2001, as amended, transpose into Irish law the EIA Directive requirements in relation to information to be contained in an EIAR.

The likely significant effects in this EIAR are, unless otherwise indicated in a particular Chapter, described using the terminology in Table 3.4 in the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, EPA, May 2022 (the EPA Guidelines 2022), which are presented in the Table below. The use of these terms for the classification of impacts ensures that the EIA employs a systematic approach, which can be replicated across most disciplines covered in the EIAR. The consistent application of terminology throughout the EIAR facilitates the assessment of the proposed development on the receiving environment.

Table 1.1: Description of Effects

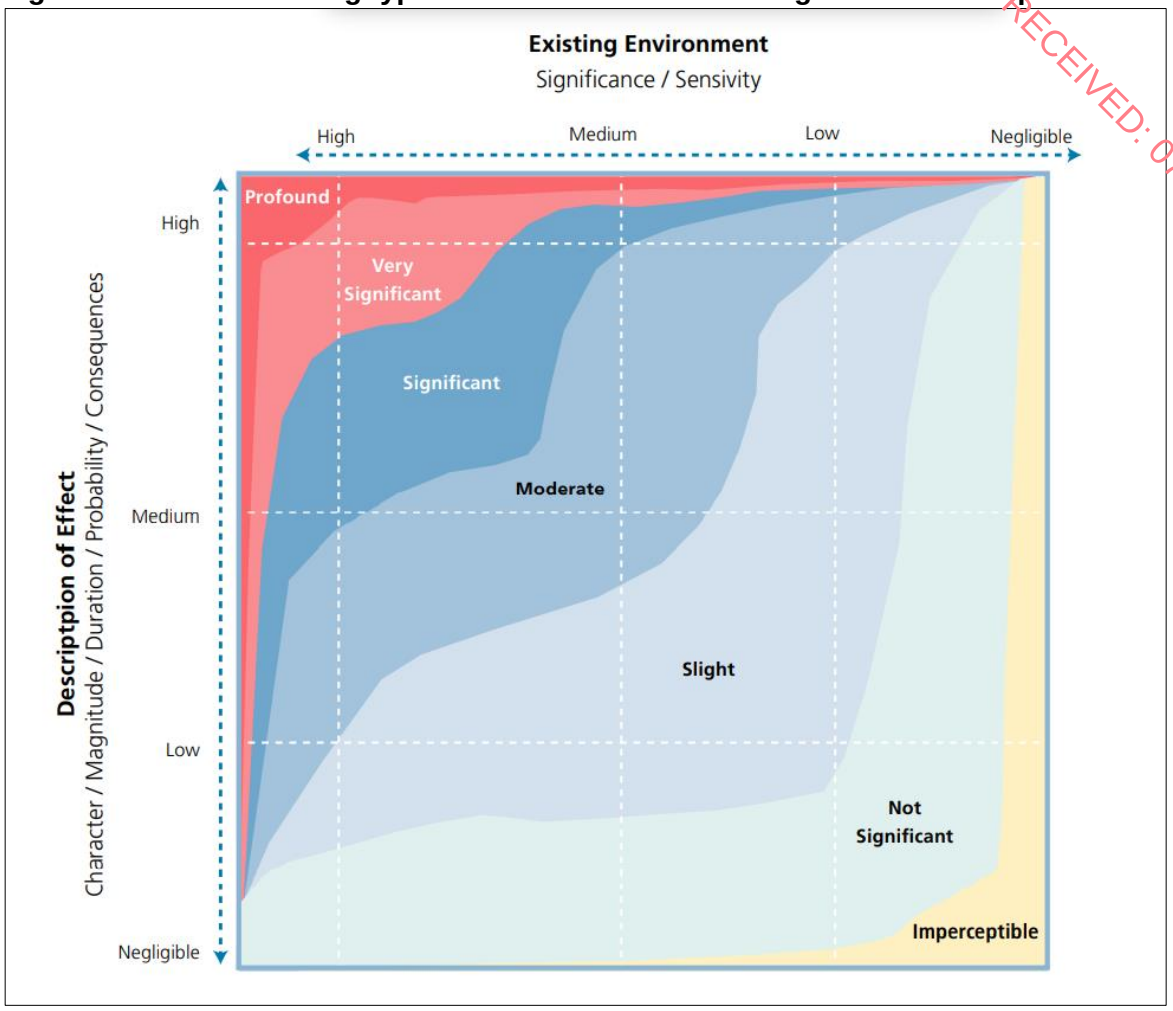
Quality of Effects	**Definition**
Negative /Adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Positive	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Significance of Effects on the Receiving Environment	**Description of Potential Effects**
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.
Extent and Context of Effects	**Describing the Extent and Context of Effects**
Extent	Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
Context	Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effects	**Describing the Probability of Effects**
Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Duration of Impact	Definition
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting one year or less
Short-term	Effects lasting one to seven years
Medium-term	Effects lasting seven to fifteen years
Long-term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years
Reversible	Effects that can be undone, for example through remediation or restoration
Frequency of Effects	Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
Types of Effect	**Describing the Types of Effects**
Indirect Effects (a.k.a. Secondary Effects)	Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
Cumulative Effects	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects
'Do-Nothing Effects'	The environment as it would be in the future should the subject project not be carried out.
`Worst case' Effects	The effects arising from a project in the case where mitigation measures substantially fail.
Indeterminable Effects	When the full consequences of a change in the environment cannot be described
Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of SOx and NOx to produce smog).

Source: Table 3.4 EPA Guidelines 2022

The diagram below shows how comparison of the character of the predicted impact to the sensitivity of the receiving environment can determine the significance of the impact.

Figure 1.1: Chart showing typical classifications of the significance of impacts



Source: Figure 3.4 of EPA Guidelines 2022

1.6 PURPOSE OF THIS EIAR

The EPA Guidelines 2022 state that the main purpose of an EIAR '*is to identify, describe and present an assessment of the likely significant effects of a project on the environment*'. This informs the competent authority's assessment process, its decision on whether to grant consent for a project and, if granting consent, what conditions to attach.

It is intended that this EIAR will assist Meath County Council, statutory consultees and the public in assessing all aspects of the application proposals.

1.7 INFORMATION TO BE CONTAINED IN A NON-TECHNICAL SUMMARY

This Non-Technical Summary (NTS) has been prepared in accordance with *inter alia* the requirements of the EU 2014 EIA Directive, Planning and Development Acts 2000 (as amended) as well as the Planning and Development Regulations, 2001, as amended (in particular by the European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018.

1.8 FORMAT AND STRUCTURE OF THIS EIAR

The structure of the EIAR is laid out in the preface of each volume for clarity. It consists of three volumes as follows:

- **Volume I: Non-Technical Summary**

This is a non-technical summary of the information contained within Volume II.

- **Volume II: Environmental Impact Assessment Report.**

This is the main volume of the EIAR. It provides information on the location and scale of the proposed development, details on design and impacts on the environment (both positive and negative) as a result of the proposed development.

Each of the environmental aspects as listed below are examined in terms of the existing or baseline environment, identification of potential construction and operational stage impacts and where necessary proposed mitigation measures are identified. The interaction of the environmental aspects with each other is also examined. Each chapter below includes an assessment of potential cumulative impacts with other existing and planned developments, where relevant. Environmental aspects considered include:

Chapter 3 Population and Human Health;
Chapter 4 Biodiversity;
Chapter 5 Land and Soils;
Chapter 6 Water;
Chapter 7 Air Quality and Climate;
Chapter 8 Noise and Vibration;
Chapter 9 Landscape & Visual;
Chapter 10 Material Assets – Traffic;
Chapter 11 Material Assets - Waste Management;
Chapter 12 Material Assets – Utilities;
Chapter 13 Cultural Heritage – Local History, Archaeology;
Chapter 15 Risk Management for Major Accidents and or Disasters;
Chapter 16 Interactions of the Foregoing and Cumulative Impacts;
Chapter 17 Summary of EIA Mitigation and Monitoring Measures;

- **Volume III: Technical Appendices**

Volume III contains specialists' technical data and other related reports.

1.8.1 EIAR Volume II Structure

The preparation of an EIAR document requires the assimilation, co-ordination, and presentation of a wide range of relevant information in order to allow for the overall assessment of a proposed development. For clarity and to allow for ease of presentation and consistency when considering the various elements of the proposed development, a systematic structure is used for the main body of this EIAR document.

The structure used in this EIAR document is a Grouped Format structure. This structure examines each environmental topic[2] in a separate chapter of this EIAR document. The structure of the EIAR document is set out below.

[2] In some instances similar environmental topics are grouped.

Table 1.2 – Structure of this EIAR

Chapter	Title	Content
1	Introduction and Methodology	Sets out the purpose, methodology and scope of the document.
2	Project Description and Alternatives Examined	Sets out the description of the site, design and scale of development, considers all relevant phases from construction through to existence and operation together with a description and evaluation of the reasonable alternatives studied by the developer including alternative locations, designs and processes considered; and a justification for the option chosen taking into account the effects of the project on the environment.
3	Population and Human Health	Describes the demographic and socio-economic profile of the receiving environment and potential impact of the proposed development on population, i.e. human beings, and human health.
4	Biodiversity	Describes the existing ecology on site and in the surrounding catchment and assesses the potential impact of the proposed development and mitigation measures incorporated into the design of the scheme and includes mitigation measures.
5	Land and Soils	Provides an overview of the baseline position, the potential impact of the proposed development on the site's soil and geology and impacts in relation to land take and includes mitigation measures.
6	Water	Provides an overview of the baseline position, the potential impact of the proposed development on water quality and quantity and includes mitigation measures.
7	Air Quality and Climate	Provides an overview of the baseline air quality and climatic environment, the potential impact of the proposed development, the vulnerability of the project to climate change, and includes mitigation measures.
8	Noise and Vibration	Provides an overview of the baseline noise environment, the potential impact of the proposed development and includes mitigation measures.
9	Landscape & Visual Impact	Provides an overview of the baseline position, the potential impact of the proposed development on the landscape appearance and character and visual environment and includes mitigation measures.
10-12	Material Assets	Describes the existing traffic, waste management and services and infrastructural requirements of the proposed development and the likely impact of the proposed development on material assets and includes mitigation measures.
13-14	Archaeology and Architectural and Cultural Heritage	Provides an assessment of the site and considers the potential impact of the proposed development on the local archaeology, architectural and cultural heritage; and includes mitigation measures.
15	Risk Management	Provides a review of the potential vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned
16	Interactions of the Foregoing and Cumulative Impacts	Describes the potential interactions and interrelationships between the various environmental factors. A description of the potential cumulative impacts is included in each of the relevant chapters and is referenced in this Chapter.
17	Summary of Mitigation and Monitoring Measures	Sets out the key mitigation and monitoring measures included in the EIAR Document for ease of reference.

1.9 EIAR PROJECT TEAM

1.9.1 EIAR Project Management

The preparation of this EIAR was project managed, co-ordinated and produced by John Spain Associates. John Spain Associates role was to liaise between the design team and various environmental specialist consultants. John Spain Associates were also responsible for editing the EIAR document to ensure that it is cohesive and not a disjointed collection of disparate reports by various environmental specialists. John Spain Associates does not accept responsibility for the input of the competent specialist consultants or the design team.

1.9.2 EIAR Competent Experts/Environmental Specialists

Environmental specialist consultants were also commissioned for the various technical chapters of the EIAR. The amended EIA Directive (Directive 2014/52/EU) states the following in relation to the persons responsible for preparing the environmental impact assessment reports:

'Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality'.

The relevant specialist consultants who contributed to the EIAR and their inputs are set out below.

Table 1.3: EIAR List of Competent Experts

Organisation	EIAR Specialist Topics / Inputs
John Spain Associates, Planning & Development Consultants, 39 Fitzwilliam Place, Dublin 2, D02 ND61 T: 01 662 5803 Rory Kunz, BA (MOD), MScERM, MAT&CP, Dip EIA Mgmt	Introduction and Methodology Project Description and Alternatives Examined Population and Human Health Interactions of the Foregoing Principal Mitigation and Monitoring Measures Non-Technical Summary
Shannen O'Brien has a B.A. in Zoology from Trinity College Dublin and a M.Sc. Hons. in Wildlife Conservation and Management from University College Dublin. Brian McCloskey is an experienced Ornithologist with a BSc in Planning and Environmental management from the Technological University of Dublin (TUD) and 12 years of bird survey experience, including three years of professional Ornithology work	Biodiversity
Patrick McStay BEng MSc CEng MIEI MIStructE is a Chartered Consulting Civil & Structural Engineer with 30 years' experience in the design of civic/cultural, commercial, education, healthcare, hotel,	Land and Soils/ Population and Human Health

Organisation	EIAR Specialist Topics / Inputs
leisure, retail, and residential developments and	
Patrick McStay BEng MSc CEng MIEI MIStructE is a Chartered Consulting Civil & Structural Engineer with 30 years' experience in the design of civic/cultural, commercial, education, healthcare, hotel, leisure, retail, and residential developments and Richard Langford has a degree in geology from Trinity College Dublin and MSc Applied Hydrogeology from Newcastle-upon-Tyne. Richard is a hydrogeologist with 23 years' experience working as a geologist / hydrogeologist in environmental and groundwater consultancy.	Water and Hydrogeology
Ian Byrne MSc. Environmental Protection, Dip Environmental & Planning Law, Member of the Institute of Acoustics, is the Principal Environmental Consultant of Byrne Environmental Consulting Ltd	Air Quality and Climate (Population and Human Health)
Ian Byrne MSc. Environmental Protection, Dip Environmental & Planning Law, Member of the Institute of Acoustics, is the Principal Environmental Consultant of Byrne Environmental Consulting Ltd	Noise and Vibration (Population and Human Health)
Declan O'Leary holds B.Agr Sc. Land. Hort., Dip LA., CLI, MILI., Declan has over 30 years' experience in the design and analysis of landscape and the impacts of change, and the preparation of assessments for inclusion in assessment reports. Prithvi Gowda holds B.Arch., MScUD&P. Prithvi Gowda has over 5 years working in a multi-disciplinary role within landscape and planning teams.	Landscape and Visual Impacts
Julian Keenan whose primary degree (BE hons) is held in Civil Engineering from University College Galway. A Director of Trafficwise Ltd., a member of the Institution of Engineers of Ireland and the Chartered Institution of Highways and Transportation, Julian Keenan has over 30yrs engineering experience with 25yrs specialising in Roads Design and Transportation Planning	Material Assets-Traffic
Ian Byrne MSc. Environmental Protection, Dip Environmental & Planning Law, Member of the Institute of Acoustics, is the Principal Environmental Consultant of Byrne Environmental Consulting Ltd	Material Assets (Waste Management)
Patrick McStay BEng MSc CEng MIEI MIStructE. Pat is a Chartered Consulting Civil & Structural	Material Assets (Utilities)

Organisation	EIAR Specialist Topics / Inputs
Engineer with 30 years experience in the design of civic/cultural, commercial, education, healthcare, hotel, leisure, retail, and residential developments. Daniel Lynch of Metec, who has a degree in Building Services Engineering from DIT Bolton Street (BEng (hons). BEng (Tech), CIBSE, MIEI.) and has over 15 years' experience	
Patrick McStay BEng MSc CEng MIEI MIStructE. Pat is a Chartered Consulting Civil & Structural Engineer with 30 years experience in the design of civic/cultural, commercial, education, healthcare, hotel, leisure, retail, and residential developments.	Risk Management
Magda Lyne (MA, MIAI) and Donald Murphy (MA, MIAI) of Archaeological Consultancy Services Unit Ltd.	Archaeology, Architectural and Cultural Heritage

1.10 AVAILABILITY OF EIAR DOC

A copy of this EIAR document and Non-Technical Summary of the EIAR document is available for purchase at the offices of Meath County Council (Planning Authority) at a fee not exceeding the reasonable cost of reproducing the document. It can also be viewed on the LRD website: https://boynevillagelrd.ie set up by the applicant.

1.11 IMPARTIALITY

This EIAR document has been prepared with reference to a standardised methodology which is universally accepted and acknowledged. Recognised and experienced environmental specialists have been used throughout the EIA process to ensure the EIAR document produced is robust, impartial, and objective.

1.12 STATEMENT OF DIFFICULTIES ENCOUNTERED

No particular difficulties, such as technical deficiencies or lack of knowledge, were encountered in compiling any of the specified information contained in this statement, such that that the prediction of impacts has not been possible. Where any specific difficulties were encountered these are outlined in the relevant chapter of the EIAR.

1.13 ERRORS

While every effort has been made to ensure that the content of this EIAR document is error free and consistent there may be instances in this document where typographical errors and/or minor inconsistencies do occur. These typographical errors and/or minor inconsistencies are unlikely to have any material impact on the overall findings and assessment contained in this EIAR.

2.0 DESCRIPTION OF THE PROJECT AND ALTERNATIVES EXAMINED

2.1 DESCRIPTION OF THE LOCATION OF THE PROJECT

The proposed development is located on lands to the east of Navan town centre. The subject lands amount to a section of a larger 135 hectares site, which is the subject of a masterplan development proposal.

The lands are located to the north of R153, Navan-Kentstown Road, approximately 1.5km east of Navan town centre (Market Square). The site exists currently as greenfield land and is surrounded by residential properties to the west.

Figure 2.1: Subject Lands – Location of Project

Source: CSR – Note Red line approximate – refer to Wilson Hill Site Location Map.

The reservation for the Drogheda-Navan railway line is to the north of the Masterplan lands and there are agricultural lands to the east. In addition, road LDR6, a LIHAF funded road is complete to the north of the site by Meath County Council.

2.2 DESCRIPTION OF THE PHYSICAL CHARACTERISTICS OF THE WHOLE PROPOSED DEVELOPMENT

2.2.1 Demolition

There is no demolition of habitable or any other structures relating to the proposed development.

2.2.2 Main Characteristics of the Operational phase of the project

Figure 2.2: Site Layout

Source: WHA

The (Phase 1B) development will consist of the construction of a mixed-use development comprising 322 no. dwellings, a Community Centre and Sports Hall, a Neighbourhood Centre, and a district public park as follows:

A) 212 no. houses consisting of 177 no. 3-bedroom houses and 35 no. 4-bedroom houses (all houses 2-storeys except House Types F1, F2, F3 [corner], E1, E2, and E3 [corner] – (with variations to finishes);

B) 26 no. duplex units comprising 13 no. 2-bedroom units and 13 no. 3-bedroom units (in 2 no. 3-storey blocks [with 8 no. duplex units abutting Apartment Block 2 in a 3-storey configuration];
C) 84 no. apartments across 3 no. apartment buildings (Block 2 [5-storeys] comprises 24 no. apartments consisting of 12 no. 1-bedroom apartments and 12 no. 2-bedroom apartments), Block 3 [5-storeys above neighbourhood centre – 6-storeys in total] comprising 36 no. apartments consisting of 14 no. 1- bedroom apartments and 22 no. 2-bedroom apartments and Block 4 [4-storeys above community centre – 5-storeys in total] comprising 24 no. apartments consisting of 9 no. 1-bedroom apartments and 15 no. 2-bedroom apartments (all apartments with balconies).
D) Series of landscaped/Public Open Space areas of c.3.72 hectares including playground areas and a Public Park of c.1.65 ha of open space as well as additional communal open space for the apartments and duplex apartments;
E) Provision of a c. 512 sq. m creche at ground floor of Block 2 as well as a 1,778 sq.m. Community Centre and Sports Hall (including a c.837 sqm sports hall [double height] ancillary changing rooms, 4 no. community rooms and ancillary administration/office space rooms/ESB Substation);
F) Provision of a convenience anchor retail unit (net floor space 1,000 sq. m [GFA 1,390 sq. m.]), takeaway, c. 82 sq. m, café, c. 210 sq. m, pharmacy c. 88 sq. m and General Practice Surgery c. 232 sq. m) as well as ESB substation and bins, all accommodated within the ground floor level of the neighbourhood centre to the north-west of the site;
G) 693 no. car parking spaces, 289 no. bicycle parking spaces throughout the development;
H) Provision of a temporary foul water pumping station (and associated storage) located within the district public park to service the scheme;
I) Provision of surface water attenuation measures as well as all ancillary site development works (reprofiling of site and field drain diversions as required) as well as connection to the public water supply and drainage services (including culvert along the Old Road frontage);
J) Hard and soft landscaped areas, public lighting, bin stores, all ancillary landscape works including planting and boundary treatments and the provision of cycle paths, and all ancillary site development works.

The proposal comprises the second phase (phase 1B) of a 2-phase development (first phase [phase 1A] under planning reg. ref. 211046 (ABP-312746-22) comprises 98 no. dwellings and ancillary infrastructure.

In summary, the 2 phase development comprises 420 no. residential units, a Community Centre & Sports Hall, creche, as well as a Neighbourhood Centre of c.2,002 sq. m (including an anchor retail unit 1,000 sq. m net, GP Surgery, Café, Pharmacy and Takeaway), access, infrastructure, car parking, open space, boundary treatments and all associated site development works.

Table 2.1: Summary of Key Site Statistics

Key Site Statistic	Detail
Site Area	13.26 ha (Gross)
Land Use Zoning	A2 – New Residential C1 – Mixed Use F1 - Open Space E1 / E3 – Strategic Employment Zones A2 Phasing -Residential Land Post 2027 (proposals relate to surface water connection only)
No. of Dwellings	322 dwellings (212 no. houses & 110 no. duplex apartments/apartments) 177 no. 3-bedroom houses 35 no. 4-bedroom houses and 26 no. apartments/duplex apartments (13 no. 2-bedroom apartments and 13 no. 3-bedroom duplex apartments) 35 no. 1-bedroom apartments and 49 no. 2-bedroom apartments.
Community Centre	1,778 sq. m. (Sports Hall c.837 sq. m.) & 4 no. community rooms c.432 sq. m.
Neighbourhood Centre	Convenience Retail unit (net floor space 1,000 sq. m [GFA 1,390 sq. m.]), takeaway, c. 82 sq. m, café, c. 210 sq. m, pharmacy c. 88 sq. m and General Practice Surgery c. 232 sq. m)
Creche	512 sq.m creche at ground floor of Block 2
Open Space	3.72 ha comprising: 1.65 ha. District Public Park, 1.62 open space and 0.45 landscaped public spaces 743 sq. m communal open space (518 sq. m required) 17.2% of A2 Zoned lands Phase 1B 28% of Gross Phase 1B site (including F1 zoned lands)
Building Heights	2 and 3-storeys (houses and duplexes) 5 and 6-storeys (Apartments over Neighbourhood Centre and Community Centre)
Dual Aspect	73.8% (including duplex apartments units)
Car Parking	693
Bicycle Parking	289
Vehicular Access	New LDR6 Roadway.
Floorspace	37,089 sq. m.

2.3 DEMOLITION

There is no demolition of habitable or any other structures relating to the proposed development.

2.4 RESIDENTIAL DEVELOPMENT

The 212 no. houses are designed as two and three-storey family dwellings, in a wide mix of units comprising 177 no. 3-bedroom houses and 35 no. 4-bedroom houses in detached, semi-detached, or terraced configurations (in 14 no. house types).

All houses are either two or three-storey with private amenity space in the form of a rear garden. Dwellings are provided as detached, semi-detached and terraced units. Individual plot layouts provide good separation to ensure privacy and minimise overlooking.

Table 2.2: Overall Mix of Units

	1-bed	2-bed	3-bed	4-bed	Overall
Houses			177	35	212
Duplex Apartments		13	13		26
Apartments	35	49			84
Total	35	62	190	35	322
Overall Mix %	**10.9%**	**19.2%**	**59%**	**10.9%**	**100%**

Source: Wilson Hill Architects

Figure 2.3: CGI Neighbourhood Park

Source: 3-D Design Bureau.

2.5 DUPLEX / APARTMENT UNITS

It is proposed to provide 26 no. duplex units (13 no. 2-bedroom and 13 no. 3-bedroom duplex units) contained in 3 no. separate 3-storey duplex buildings located to the south of the main roundabout entrance and close to the neighbourhood centre. 743 sq.m of Communal Open Space is provided to serve the 26 no. duplex units and exceeds the minimum requirement as per the Meath County Development Plan requirements (518 sq.m).

2.5.1 Apartments

The proposed development will provide for 84 no. apartment units across 3 no. apartment buildings. Block 2 comprises 24 no. apartments consisting of 12 no. 1-bedroom and 12 no. 2-bedroom apartments and will be 5-storeys in height. Block 3 comprises of 36 no. apartment units consisting of 14 no. 1-bedroom and

22 no. 2-bedroom units. Block 3, located above the neighbourhood centre will be 5-storeys (6-storeys in total). Block 4 will comprise of 24 no. apartment units and consist of 9 no. 1-bedroom units and 15 no. 2-bedroom units. Block 4, which is located above the community centre, will be 4 storeys in height (5-storeys in total when the community centre is taken into consideration). All apartment units proposed as part of this development are provided with private open space in the form of balconies. 743sq.m of Communal Amenity Space is also provided for residents of the apartments.

Table 2.3: Overall Mix of Units

	1-bed	2-bed	3-bed	Overall
Duplex Apartments		13	13	26
Apartments	35	49		84
Total	**35**	**62**	**13**	**110**

2.5.2 Creche

A new 512 sq.m Childcare Facility is proposed as part of the development. The proposed creche is located adjacent to the main entrance to the site and the access road and will be capable of accommodating up to 105 no. children (based on c. 4-5 sq. m per child).

2.6 SPORTS HALL AND COMMUNITY BUILDING (BLOCK 4)

Figure 2.4: Ground Floor Community Building

Source: Wilson Hill Architects

The proposed development includes a substantial community building which comprises 1,778 sq. m community centre including a c.837 sq. m. sports hall, ancillary changing rooms, 4 no. community rooms (c.432 sq.m) and ancillary administration/office space rooms.

The Community Building (Block 4) also includes 24 no. apartments at first floor as well as communal open space.

2.7 NEIGHBOURHOOD CENTRE (BLOCK 3)

The Neighbourhood centre will comprise a convenience anchor retail unit (net floor space 1,000 sq. m [GFA 1,390 sq. m.]), takeaway, c. 82 sq. m, café, c. 210 sq. m, pharmacy c. 88 sq. m and General Practice Surgery c. 232 sq. m) as well as ESB substation and bins, all accommodated within the ground floor level.

In addition, the Neighbourhood Centre will include 36 no. apartment units above ground floor rising to 6-storeys at the corner of the main entrance roundabout fronting onto the LDR6 road.

Figure 2.5: CGI Neighbourhood Centre looking east.

Source: 3-D Design Bureau

2.8 LANDSCAPING STRATEGY

2.8.1 Key Elements of Landscaping Strategy

As set out in the Cunnane Stratton Reynolds Landscape Design Statement included with the LRD application, the proposed scheme is set within an open agricultural landscape on the eastern edge of Navan. The existing rural context on the edge of a growing town provides an ideal setting for a new residential area with a large district park and a series of connected green spaces.

The new urban park will be a valuable resource for future neighbouring residents as well as the wider community. Once all phases are completed, the park is intended to be a new destination for Navan and will perform a range of functions from amenity to drainage, to ecosystem service.

Figure 2.6: District Park

Source: Cunnane Stratton Reynolds

Figure 2.7: Neighbourhood Park

Source: Cunnane Stratton Reynolds

Figure 2.8: Public Open Space Areas

Public open space Areas	
Central Park	4,753
Green Link East	1,464
Green Link West	691
Old Athlumney Road Park	9,326
Total Public Open Space	**16,234**

Additional High Quality Public Realm	
Landscaped Public Spaces	4,513

West Park area	
West (District) Park	16,521

Source: WHA

The proposed development will also provide for a connected series of public open spaces and amenity Green Infrastructure areas measuring c.3.72 hectares (on F1, and A2 zoned lands), which is c. 28% of the gross site area (of 13.26 ha).

The proposed open space on A2 zoned lands comprises 16,234 sq. m resulting in 17.2% open space on the gross A2 zoned lands for Phase 1A which exceeds the open space requirements as set out in the County Development Plan (15%) as it relates to the A2 zoned land. Taking the combined permitted Phase 1A and Phase 1B LRD developments, the open space is 16.7% of the net site area of A2 zoned lands (as allowed for in the Compact Settlement Guidelines).

The gross Phase 1 site (phases 1A and 1B equates to c. 14.42 hectares which would result in an overall open space of 25% across the 2 phases (including the F1 zoned area).

2.9 ACCESS

The site will be accessible from 2 no. entrances from the LIHAF (LDR6) Road.

2.10 PARKING

Reference has been made to Meath County Development Plan 2021-2027, Chapter 11, Section 9 ‘Parking Standards’ in which Table 11.2 ‘Car Parking’ outlines car parking standards.

Table 2.4: Car and Bicycle Parking

1.6C Totals for Carparking / Bike storage	
Residential Spaces for dwelling houses (units A-F incl.)	422
Off Street Spaces for duplexes	34
Off Street Spaces for Apartments (Block 2)	32
Off Street Spaces for Creche and Visitors	14
Residential Spaces at the Neighbourhood centre (Blocks 3 & 4)	75
Off Street Spaces (for retails and community centre)	116
Total Carparking Spaces	**693**
Bike storages for Retails, Community Centre & Creche	80
Bike storages for apartments & duplexes (apartments & visitors)	209
Total Bicycle Spaces	**289**

Source: Wilson Hill Architects SOA

As set out in the Traffic Report and Mobility Management Plan prepared by TrafficWise, reference has been made to Meath County Development Plan 2021-2027, Chapter 11, Section 9 'Parking Standards' in which Table 11.4 'Cycle Parking Standards' outlines cycle parking standards.

2.11 SURFACE WATER DRAINAGE

All field drains and water courses within the area currently flow to the River Boyne. The River Boyne will remain the eventual recipient of excess surface water. The development on the Athlumney lands will discharge to the Millrace that runs through these lands and connects to the River Boyne. Existing field drains on the lands will generally be maintained or diverted to the Millrace. The proposal will entail the provision of a range of SUDS and attenuation measures to ensure that there is no impact to adjacent lands.

2.12 FOUL SEWER

There is existing spare capacity in the foul and water supply system to cater for both Phase 1A & Phase 1B of the Boyne Village development. Later phases of the Boyne Village development may demand an upgrading of both the distributor network and wastewater treatment plant at Farganstown. The Foul gravity system has been designed to cater for the foul discharge from the overall Masterplan Phase 1 development (Phases 1A & 1B) and also the discharge from the future development of the lands to the east of Phase 1, up to the LDR 6.

It is noted there is a current planning application (PRR 2460066), lodged by Irish Water with Meath County Council on the 30th of January 2024, for a new wastewater pumping station, which is subject to a further information request.

2.13 WATER SUPPLY AND DISTRIBUTION

Existing water mains in the area of the development include a 150 mm diameter main in the Kentstown Road and a 100mm diameter mains in the old Athlumney Road and a 150mm main in the Boyne Road. Water supply for the development will comply with all the Irish Water details and specifications. Irish Water have issued a Confirmation of Feasibility and a Statement of Design Acceptance for the proposed development.

2.14 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE CONSTRUCTION PHASE

2.14.1 Introduction

The development of the lands will occur for up to 7 years having regard to the nature of the project and the need for flexibility to respond to market demand. A Construction Environmental Management Plan has been prepared by HR Consulting Engineers and is included with the LRD application (see appendix D of Volume III of the EIAR and as a standalone document). The OCEMP will be developed and submitted to Meath County Council prior to commencement of development and will include the mitigation measures set out in this EIAR.

This EIAR presents proposed mitigation measures to ensure that the planned development of the lands does not generate significant adverse impacts for residential and working communities in the vicinity of the site. The proposed development, as described, is detailed on the planning application drawings and particulars which accompany the application.

2.14.2 Liaison with Neighbouring Properties

A monitoring regime will be put in place to protect neighbours & neighbouring properties with a full and detailed vibration, noise, dust and groundwater monitoring regime put in place for the duration of the works.

The Contractor will appoint a competent person to be referred to as the Surveying, Instrumentation and Monitoring Subcontractor (MSC) who will implement the monitoring measures during the construction phase described in this EIAR.

The MSC will be responsible for preparing or organising the preparation of condition surveys of surrounding buildings, walls, hardstanding area etc. prior to the carrying out of any works on site. Extent of surveys to be agreed. The condition surveys will be carried out to a level of detail, suitable to the nature and extent of conditions encountered in order to obtain an understanding of the general structural condition of the property/structure and/or external environments.

It is proposed that vibration monitoring will be conducted at properties adjacent to or within 50m of the site as required using calibrated vibration monitors and geophones capable of transmitting live text and email alerts to ensure that if vibration levels approach or exceed specified warning and limit values.

2.14.3 Construction Traffic Management Plan

2.14.3.1 Traffic Management & Construction Access

The works associated with the new development will result in additional traffic on the road network with the vehicles for the importation of earthworks fill material and the delivery of new materials for construction – concrete, concrete blocks, pipes, timber, roof tiles, glazing, road surfacing materials etc. Construction traffic access to the site will be via the LDR6 (with some minor construction traffic related to the construction of the residential cell at the Old Road. It is proposed that unloading bays should be provided for deliveries to the site within the hoarding perimeter. Appropriately demarcated storage zones will be used to separate and segregate materials. All deliveries to site will be scheduled to ensure their timely arrival and avoid the need for storing large quantities of materials on site. The storage area is to be located at least 50m from the site access to allow for the possibility of traffic queueing inside the site without any interference with the public road.

A Construction Traffic Management Plan (CTMP) will be developed by the main contractor and agreed with the Planning Authority and An Garda Siochana prior to commencement of development in the event of a grant of permission. The CTMP will implement the mitigation measures contained in this EIAR (including CEMP).

The mitigation will include the following matters:

- The contractor shall be responsible for and make good any damage to existing roads or footpaths caused by his own contractor's or suppliers transport to and from the site.
- The contractor shall at all times keep all public and private roads, footpaths entirely free of excavated materials, debris, rubbish, provide vehicle wheel wash and thoroughly clean all wheels and arches of all vehicles as they leave the site.
- The contractor shall confine his activities to the area of the site occupied by the works and the builders' compound, as far as practicably possible, during any particular phase of the development.
- Properly designed and designated entrance and egress points to the construction site for construction traffic will be used to minimize impact on external traffic.
- Flagmen shall be used to control the exit of construction vehicles from the site onto the public road, if required.
- Existing fire hydrants are to remain accessible as required.

2.14.4 Reinstatement / Road Cleaning

Prior to the works commencing, detailed photographic surveys (condition schedules) of adjoining walls, roads, footpaths, fences etc. is to be prepared. Copies of the relevant parts are to be made available to adjoining owners and MCC. This record will form the basis of assessing repairs to adjoining areas in the future should a dispute arise as to their cause. Roadways are to be kept clean of muck and other debris. A road sweeping truck is to be provided as necessary, to ensure that this is so.

2.14.5 Construction Phasing

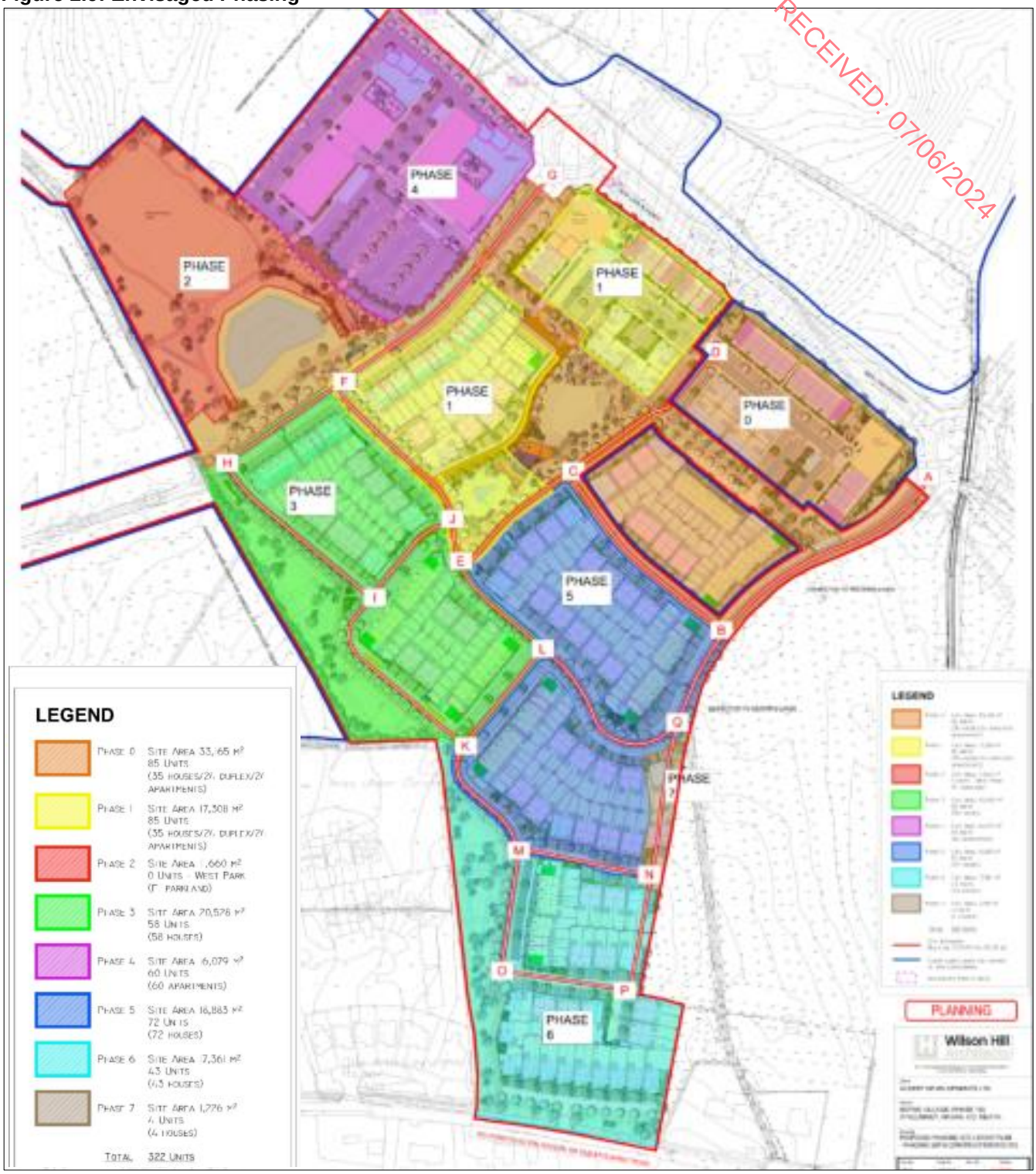
As set out in the public notices and having regard to the scale of the proposed development, the proposed phasing, the fact that the application is subject to an EIAR, a seven-year permission is sought for this development having regard to the provisions of Section 41 of the Planning and Development Act 2000, as amended.

It is noted the timing and sequency of the phases may be subject to change, but it is not considered that there would be any material impact on the assessment contained in the EIAR.

In summary the construction of the development will involve the following:

- Site strip. Earthworks associated with the construction of the houses, duplex units, creche and roads in the development.
- Construction of new buildings - houses, duplex units & creche, including ancillary buildings such as bike stores, bins stores and an ESB substation.
- Construction of roads, footpaths & hard/soft landscaping.
- Buried site services installation.

Figure 2.9: Envisaged Phasing



Source: WHA Drawing no. P1068 – note to be agreed with MCC prior to commencement of development

2.15 EMISSIONS AND WASTE

2.15.1 Effluents

Effluent arising from foul drainage from the proposed development will be discharged through piped systems to the local authority sewers. Operation of the development will involve the discharge of uncontaminated surface water from the impermeable areas to a proposed network all linking into the established public system in the environs. Details of the impacts and mitigation measures for surface water and foul drainage are recorded at Chapter 6 of this Environmental Impact Assessment Report. Mitigation measures include measures designed to avoid, reduce, remedy, or offset impacts.

The envisaged foul flow calculations are some 200 cubic metres per day whereas the average day peak week water supply demand is 178,480 litres per day (178 cubic metres per day).

2.16 DIRECT AND INDIRECT EFFECTS RESULTING FROM USE OF NATURAL RESOURCES

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

2.17 DIRECT AND INDIRECT EFFECTS RESULTING FROM EMISSION OF POLLUTANTS, CREATION OF NUISANCES AND ELIMINATION OF WASTE

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

2.18 FORECASTING METHODS USED FOR ENVIRONMENTAL EFFECTS

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

Where specific methodologies are employed for various sections, they are referred to in the Receiving Environment (Baseline Scenario) sections in the EIAR. Some of the more detailed/specialised information sources and methodologies for a number of the environmental assessments are outlined hereunder.

2.19 TRANSBOUNDARY IMPACTS

Large-scale transboundary projects[3] are defined as projects which are implemented in at least two Member States or having at least two Parties of Origin, and which are likely to cause significant effects on the environment or significant adverse transboundary impact.

2.20 ALTERNATIVES EXAMINED

The EIA Directive (2014/52/EU) requires that Environmental Impact Assessment Reports include:

"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

[3] The definition is based on Articles 2(1) and 4 of the EIA Directive and Article 2(3) and (5) of the Espoo Convention, respectively. http://ec.europa.eu/environment/eia/pdf/Transboundry%20EIA%20Guide.pdf

characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

Chapter 2 of the EIAR (Volume II of the EIAR) also includes a summary of alternatives which were considered for the proposed development of the subject lands. These options were considered as the scheme progressed and the key considerations and amendments to the design having regard to the key environmental issues pertaining to the lands are summarised in this section of the EIAR.

Alternatives may be described at three levels:

- Alternative Locations.
- Alternative Designs.
- Alternative Processes.

2.20.1 Alternative Locations

The application site is zoned for residential development under the Meath County Development Plan 2021-2027 within the ownership of Albert Developments Ltd., and the proposed uses are permitted in principle with the land use zoning objectives pertaining to the project site.

2.20.2 Alternative Uses

The subject site is zoned for residential and supporting uses as referenced above. The subject site is well served by existing social and community infrastructure with a wide mix and variety of uses in the surrounding area. In addition to residential use, there are other land uses which are permitted in principle on these lands such as garden centre, industry-light, shop local, shop neighbourhood. Furthermore, it is noted there is a supermarket (SuperValu) to the east as well as a substantial business park located at Greenouge. Including a supermarket on the subject lands would not be in compliance with the sequential test contained in the Retail Planning Guidelines 2012, as there are available, viable sites closer located to the town centre.

2.20.3 Description of Alternative Processes

The relevance of alternative processes and technologies is limited in the case of this EIAR having regard to the nature of the proposed development, which is primarily for a residential development. The Energy Statement and Climate Action Plan prepared by Waterman Moylan Consulting Engineers identifies the energy standards with which the proposed development will have to comply and also sets out the overall strategy that will be adopted to achieve these energy efficiency targets. The dwellings will be required to minimise overall energy use and to incorporate an adequate proportion of renewable energy in accordance with Building Regulations Part L 2022, Conservation of Energy & Fuel.

The building fabric has been selected to meet the requirements of Part L building Regulations. The incorporation of these elements and technologies into the scheme will ensure higher performance and improved building sustainability when compared to alternative out-dated, less energy efficient materials and technologies.

2.20.4 Alternative Designs and Layouts

The proposed residential development has been prepared in accordance with the requirements of the National Planning Framework, the Regional Spatial and Economic Strategy for the Mid-East area as well as the relevant Section 28 Guidelines including those relating to Urban Development and Building Height Guidelines (2018), Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities December 2023 and the Sustainable Residential Development in Urban Areas (2009) as well as, where relevant, the Meath County Development Plan 2021-2027 and has been the subject of a pre-application meeting with the Planning Authority, prior to lodgement of the LRD application with MCC.

2.20.5 Proposed Preferred Alternative - Main reasons for the option chosen, including a comparison of the environmental effects

2.20.5.1 Summary

With reference to the 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.

The proposed development provides for new residential development on lands zoned for residential use under the Meath County Development Plan 2021-2027 which was 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.

Based on a comparison of the environmental effects, as described for each Iteration above, together with the regulatory requirements of the Development Plan, it is considered the proposed development has been selected for the following reasons:

With reference to the 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.

The proposed development provides for new residential development on lands zoned for residential use under the Meath County Development Plan which was 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.

Based on a comparison of the environmental effects, as described for each Iteration above, together with the regulatory requirements of the Development Plan, it is considered the proposed development has been selected for the following reasons:

- Includes additional SUDs features (and exclusion of underground attenuation tanks) within the scheme which is positive from a water/biodiversity perspective.
- The proposed development results in a high degree of permeability, resulting in a highly connected neighbourhood with strong connections which will have positive impacts on population and human health.
- Avoids significant environmental impacts on the receiving environment.

In summary, the overall design of the proposed development considers all environmental effects and provides for a sustainable development that has been optimised to emphasise positive environmental effects whilst reducing negative environmental impacts wherever possible. The preferred alternative is not considered to give rise to any significant adverse environmental impacts following the mitigation measures to be implemented at the construction and operational phases. The final proposed scheme also responds to the characteristics and constraints of the subject site vis a vis the previous iterations of the scheme and the alternative layouts considered.

2.21 DESCRIPTION OF THE OPERATION STAGE OF THE PROJECT

Pursuant to the EIA Directive an EIAR document is required to set out a description of the project processes, activities, materials, and natural resources utilised; and the activities, materials and natural resources and the effects, residues and emissions anticipated by the operation of the project.

The proposed development is a residential development including associated infrastructural works, creche areas of open space. The primary direct significant environmental effects will arise during the construction stage. As a result, post-construction, the operation of the proposed development is therefore relatively benign and not likely to give rise to any significant additional impacts in terms of activities, materials or natural resources used or effects, residues or emissions which are likely to have a significant impact on population and human health, biodiversity, soils, water, air, climate, or landscape.

2.21.1 Risks of Major Accidents and/or Disasters

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

2.22 RELATED DEVELOPMENT AND CUMULATIVE IMPACTS

The proposed development also has the potential for cumulative, secondary, and indirect impacts particularly with respect to such topics as traffic which in many instances are often difficult to quantify due to complex inter-relationships. However, all cumulative, secondary, and indirect impacts are unlikely to be significant and, where appropriate, have been addressed in the content of this EIAR document.

Each Chapter of the EIAR includes a cumulative impact assessment of the proposed development with other permitted projects in the immediate area. Chapter 1 of Volume II of the EIAR provides a list of relevant applications. The potential cumulative impacts primarily relate to traffic, dust, noise and other nuisances from the construction of the development, with other planned which are in the course of construction, and each of the following EIAR chapters has regard to these in the assessment and mitigation measures proposes.

3.0 NON-TECHNICAL SUMMARY OF EIAR CHAPTERS

3.1 POPULATION AND HUMAN HEALTH

It should be noted that there are numerous inter-related environmental topics described throughout this EIAR document which are also of relevance to Population and Human Health. Issues such as the potential likely and significant impacts of the proposed development on landscape and visual impact, biodiversity, archaeology, architectural and cultural heritage, air quality and climate, noise and vibration, water, land and soils, material assets including traffic and transport impacts, residential amenity etc. are of intrinsic direct and indirect consequence to human health. The specific chapters of the EIAR (4-15) assess the environmental topics outlined in the EIA Directive.

It is anticipated that subject to the careful implementation of the remedial and mitigation measures proposed throughout this EIAR document, and as controlled through the Outline Construction Environmental Management Plan, any adverse likely and significant environmental impacts will be avoided. The overall predicted likely impact of the construction phase will be short-term not significant, and neutral. A CEMP (with the mitigation contained in this EIAR and OCEMP contained in Appendix D Volume III) will be prepared by the contractor and submitted to the Local Authority.

Imperceptible, positive short-term impacts are likely to arise due to an increase in employment and economic activity associated with the construction of the proposed development.

3.1.1 Operational Phase

The project will comprise the development of an undeveloped site in terms of the provision of residential units to serve the growing residential population of the area. The proposed development will result in a positive alteration to the existing underutilised site in terms of the provision of residential units and community facilities to serve the growing population of the area in accordance with national and regional planning policy.

The proposed development will result in a generally positive alteration to the existing undeveloped site in terms of the provision of residential units, a creche, Sports Hall and Community Centre, and neighbourhood centre to serve the growing residential and working population of the area in accordance with the objectives of the Meath County Development Plan.

The implementation of the range of remedial and mitigation measures included throughout this EIAR document is likely to have the impact of limiting any adverse significant and likely environmental impacts of the operational phase of the proposed development on population and human health (as set out in relevant chapters land and soils, water and hydrology, air quality and climate, noise and vibration, traffic, and risk management).

The operational phase of the proposed development will result in the provision of 322 no. dwellings, a Community Centre & Sports Hall, creche, as well as a Neighbourhood Centre of c.2,020 sq. m (including an anchor retail unit 1,000 sq. m net, GP Surgery, Café, Pharmacy and Takeaway), access, infrastructure, car parking, open space, boundary treatments and all associated site development works. Based on the mix and potential occupancy the proposal could potentially result in a population of c. 995 when fully built and occupied (based on 1.5 persons per 1-bedroom unit, 2.5 persons per 2-bedroom unit and 3.5 persons per 3-bedroom unit +). This increase in occupancy in the area will enhance local spending power and will assist with the delivery of a critical mass of population which will support a wide range of additional local businesses, services, transport infrastructure and employment opportunities, which will accrue as the development of the Planning Scheme progresses. The proposal will provide much needed residential accommodation and accords with National Policy on delivering Sustainable Residential Communities and is considered a positive permanent slight impact.

With reference to employment during the operational phase, it is estimated that the proposed development could generate c. 145 no. Full Time Equivalent positions[4].

3.2 BIODIVERSITY

Habitats have been evaluated for their conservation importance, based on the NRA evaluation scheme (NRA, 2009b). Those selected as KERs are those which are evaluated to be of at least local importance (higher value).

Fauna that has the potential to utilise the Site and immediate area of the Proposed Development, or for which records exist in the wider area, have been evaluated for their conservation importance. This evaluation follows the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009b).

The predominant habitat on site is Improved Agricultural Grassland (GA1) with dock dandelion, nettle clover Trosebay willowherb, buttercup and cocksfoot observed throughout this habitat.

A field Arable Crop (BC1) habitat was recorded within the central and west areas of the Site. The arable field is separated from the south and north grasslands by mature Treeline (WL2) habitat comprised of ash, elder, sweet briar, and bramble, with ivy cover throughout. The remaining fields are separated and bordered by Hedgerow (WL1) habitat, primarily consisting of hawthorn, along with the shrub and tree species observed within the treeline.

[4] Employment Densities Guide 3rd Edition

A Drainage Ditch (FW4) was recorded beneath the hedgerow along the south of the Site and the hedgerow extending north from the arable crop field, with dry ditches present beneath most of the linear vegetation on site. Buildings and Artificial Surfaces (BL3) habitat was recorded on site in the form of the newly constructed roundabout on the LDR 6 road to the north of the Site. Spoil and Bare Ground Habitat (ED2) was present within the southeast of the Site as an access pathway extending southwards.

Residual impacts are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated. Table 4.17 of the Biodiversity chapter (Volume II) provides a summary of the impact assessment for the identified KERs and details the nature of the impacts identified, the mitigation measures proposed, and the classification of any residual impacts.

Both standard Construction Phase control measures, and specific mitigation measures, have been outlined to ensure that the Proposed Development does not impact on any species, habitats, or designated sites of conservation importance. It is essential that these measures are complied with, in order to ensure that the Proposed Development complies with National conservation legislation.

Provided all recommended measures are implemented in full and remain effective throughout the lifetime of the Proposed Development, no significant negative residual impacts on the local ecology, or on any designated nature conservation sites, will occur as a result of the Proposed Development.

3.3 LAND AND SOILS

The project site, of approximately 13.26 hectares, is located on lands to the east of Navan town centre. The subject lands amount to a section of a larger 135 hectares landbank, which is the subject of a masterplan development proposal.

The project lands are located to the north of R153, Navan-Kentstown Road, approximately 1.5km east of Navan town centre (Market Square). The site currently exists as greenfield land and is surrounded by residential properties to the west.

The topography of the site slopes gently from east to west towards the River Boyne, which is located c. 450m to the west northwest of the site. The site is located between 50m and 40m above mean sea level contours.

Information taken from the ground investigation report indicates that cohesive deposits were encountered beneath the topsoil and were described typically as brown sandy gravelly CLAY with many cobbles and occasional boulders overlying a brownish grey sandy gravelly CLAY. Bedrock was not encountered during these investigations and there was no contamination identified in the site investigation report.

The site is located within the catchment of the river Boyne. Several small ditches drain the site and feed into the Millrace / Farganstown Stream to the south which discharges into the river Boyne.

The proposed development will alter the current land use from agricultural to residential development, community, retail, and associated public open space and landscape areas.

Implementation of the mitigation measures outlined in Section 5.6 of volume II of the EIAR will ensure that the potential impacts of the development on soils and the geological environment are minimised during the construction phase and that any residual impacts will be short term.

Residual Impacts such as loss of agricultural land / earthworks haulage & the risk of contamination of groundwater are deemed to be of minor risk, as the proposal for residential accommodation would not be seen as a potential high-risk development post construction.

Land use change from agricultural to landscaped open space operational phase will be a permanent change. Effects negligible to the topsoil condition.

Landscaping for the developments will reduce the initial impact from the construction phase and will protect the soils again from weathering and erosion. The effects on the underlying bedrock geology arising from the construction phase will be imperceptible. The greatest effect will relate to the soils from the construction activity as soil levels will be altered throughout. However final landscaping should reduce and address these effects. It is anticipated that the effects on soils arising from the construction phase will be short term and not significant.

The effects on the underlying bedrock geology arising from the construction phase will be imperceptible.

3.4 WATER HYDROGEOLOGY AND HYDROLOGY

The subject site, of approximately 13.26 hectares is located on lands to the east of Navan town centre. The subject lands amount to a section of a larger 135 hectares site, which is the subject of a masterplan development proposal.

Met Eireann records show that the average annual rainfall for the period 1981-2010 in the area is of the order 881.4 mm/year. The Navan rain gauge is located c. 3km southwest of the site.

While the subject lands have no formal watercourses traversing them, there are local drainage ditches which have served the subject lands. These land drains ultimately discharge to the mill race c. 200m west southwest of the subject site. It is along this drainage ditch that attenuated storm water will discharge to the mill race.

The nearest surface water body is a small stream (referred to as the Ferganstown and Ballymacon stream with EPA Code 07F17) which flows in a westerly direction along the third class road that forms the southernmost boundary of the subject site (known also as the Old Road, Athlumney). This stream continues along the third class road for c. 225m before flowing in a north to northwesterly direction, where it forms a mill race, before discharging to the River Boyne c. 430m northwest of the subject site.

The Farganstown and Ballymacon stream discharges into the River Boyne c. 430 m northwest and downstream of the proposed site. The River Boyne has no assigned status downstream of the site (it has good chemical surface water status but no assigned ecological status; hence no status has been assigned).

Historically, the Farganstown and Ballymacon stream has reportedly over spilled onto the Old Athlumney Road, after heavy rain. The reported flooding is upstream of the subject site and will not be affected by development works on site.

As no construction will take place below the groundwater table, there is no requirement to lower the groundwater table by pumping, and no discharge of dewatering effluent to surface water is proposed from site. Discharge of storm water run-off to the surface drainage network will be attenuated to green field runoff rates and pre-treated to allow settlement of suspended solids and retention of hydrocarbons. Therefore, the risk of impacting the surface water drainage network is low.

Mitigation measures associated with the proposed development should ensure that the underlying groundwater will continue to be of a high quality and will therefore not impact on the quality of downgradient surface water bodies, where it provides groundwater baseflow.

Residual Impacts such as loss of agricultural land / earthworks haulage & the risk of contamination of surface water are deemed to be of minor risk, as the proposal for apartment type residential accommodation and housing would not be seen as a potential high-risk development, post construction.

The predicted residual effects of the construction and operation activities following implementation of the mitigation measures above is provided below.

- As surface water drainage design has been carried out in accordance with the GDSDS, and SUDS methodologies are being implemented as part of a water quality treatment train approach (run-off from the development's impermeable areas is designed to be collected via a new stormwater network which incorporates on-line attenuation storage systems and SuDS features such as permeable paving, bio-retention areas, swales and tree pits to improve water quality in accordance with the principles of SuDS design. Which are all designed to improve water quality), with imperceptible effects on the water and hydrogeological environment arising from the operational phase.

- Implementation of the measures outlined in Section 6.6 will ensure that the potential effects of the development on soils and the geological environment are minimised during the construction phase and that any residual effects will be short term and imperceptible.

- Residual effects from earthworks haulage and the risk of contamination of groundwater are deemed to be of minor risk following implementation of the measures outlined in Section 6.6 of Volume II of the EIAR. The residual effects for a residential development, and open space are deemed to be imperceptible post construction (during the operational phase).

3.5 AIR QUALITY AND CLIMATE

The existing ambient air quality in the vicinity of the site has been characterised from published air quality information contained in the EPA's Air Quality in Ireland 2022 (EPA 2023). The air quality in Navan may be characterised as good, with concentrations below their associated limit values. The *EPA's Air Quality in Ireland 2022 (EPA 2003)* report suggests that the burning of fossil fuels and road traffic are the principal sources of air pollution in Ireland.

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 350m of a construction site, the majority of the deposition occurs within the first 50m.

Traffic movements associated with the development have been evaluated and assessed as part of the Traffic & Transport Assessment by *Trafficwise Ltd.* The development will not result in an increase in traffic by 1,000 AADT or 200 HDV AADT thus local road links will not be adversely impacted by the operation of the development.

In order to minimise dust and construction vehicle emissions during the construction phase, a series of best practice mitigation measures have been developed which will be implemented from the outset of construction activities to ensure that air quality standards are not exceeded.

When the mitigation measures detailed in Section 7.8.1 of the EIAR Volume II are implemented, the impact of the proposed development on local air quality will have a **negative, not significant and short-term effect.**

Emissions from vehicle movements associated with the development will not exceed air quality standards., The predicted operational phase impact to air quality with mitigation as a result of increased traffic will result in a **negative, not significant and long-term effect.**

Emissions of air pollutants during the operational phase are predicted to be significantly below the ambient air quality standards limit values which are based on the protection of human health. The predicted impacts on human health with mitigation will result in a **neutral, not significant and long-term effect.**

Best practice mitigation measures will be implemented for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient

air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction air emissions on human health will result in a neutral, imperceptible, and short-term effect.

Operational phase traffic emissions and building emissions as a result of the proposed development are compliant with all National and EU ambient air quality limit values which are designed for the protection of human health. The impact of operational phase air emissions on human health will result in a neutral, imperceptible, and long-term effect.

3.6 NOISE AND VIBRATION

The baseline noise environment in the vicinity of the proposed development site has been defined by field surveys conducted during April 2024 at site boundaries adjacent to existing residential development. Sound level measurements were conducted in favourable weather conditions when there was no precipitation and when mean windspeeds were <5m/sec.

Baseline noise measurements were conducted at two locations relating to the proposed Neighbourhood Centre (N1) Apartments at northern site boundary and the southern site boundary adjacent existing residential development (N2).

Based on the recorded baseline noise surveys conducted in the vicinity of the proposed development site it may be concluded that the existing ambient noise levels are low at the closest existing and proposed residential receptors.

Local road traffic noise has a negligible impact at location N1 and a slight impact at N2. Measured noise data demonstrates that existing road traffic and minimal daily rail traffic (6 train movements per day)at the development will not have an adverse impact on the daytime or nightime noise climate at the closest proposed residential units at the development.

Construction phase noise and vibration emissions will be temporary and transient and will be managed so as to minimise impact to population and human health by complying with all relevant guidance, as such the impact will be short-term and have a slight impact overall.

Operational phase noise will also be managed to achieve relevant noise limit values and is predicted to meet all such requirements. No operational phase vibration impacts are predicted. Therefore, the operational phase noise impacts will be neutral for the life of the development.

The noise impact with mitigation in place on local residents adjacent the development will result in a negative, slight, and short-term effect.

The noise impact generated by additional traffic movements associated with the development is predicted to be of an imperceptible impact on existing ambient noise levels at receptors along the local road network.

The inward noise impact with mitigation in place on residents of the operational development will result in a negative, slight, and long-term effect.

3.7 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

The site is located approximately 1km from the Navan Town Centre. The site lies east/south-east to the town centre and to the south and east of the Boyne Valley. The site lies immediately to the east and south of the Navan to Drogheda railway line and the River Boyne. The site lies to the north of Athlumney Wood and Kentstown Road. The site is bounded by Old Road to the south, residential development to the west and arable agricultural farmlands to the north and east.

The subject site is situated within a wider masterplan area. The site boundaries were derived through a master planning process and are defined by residential parcels rather than by site specific landscape features such as hedgerows and tree line.

The Development Plan outlines the importance of landscape on a European and National Level. At a County Level, Meath has embedded landscape within policy and has undertaken a Landscape Character Assessment that has identified landscape character areas, its sensitivity, and the capacity for change. The Meath Landscape Character Assessment (MCLA) classifies the area in which the development site lies, to the east of Navan, as LCA 6 - 'Central Lowlands' and covers a substantial area of central Meath.

The potential capacity of the LCA is described as:

"Medium potential capacity to accommodate multi-house residential developments because they are already a feature on the outskirts of towns and the strong landscape structure of small fields with well-defined boundaries and woodland are capable of accommodating carefully planned developments."

The subject site lies at an elevation, however, offers limited views to the town and the valley.

The landscape around the site is predominantly flat with mature trees and hedgerows defining the field boundaries. The effect of this is that views are generally foreshortened and limited. The thick and tall hedgerows along the Old Road and along the residential developments shortens the visibility of the site from the immediate surroundings.

The proposed development is part of the wider expansion of Navan town in keeping with MP12. Cumulatively this is the transformation of this rural landscape in accordance with local policy for development. Permitted but not yet built development is set out in Section 9.3.4, of Volume II of the EIAR, coupled with the lands also zoned for development, this will see major cumulative change at the site and environs.

During construction there will be a change to the landscape and there will be negative visual impacts for residents and visitors to the areas adjacent to the site associated with construction activity.

The remedial measures proposed revolve around the implementation of appropriate site management procedures – such as the control of site lighting, storage of materials, placement of compounds, delivery of materials, car parking, etc. Visual impact during the construction phase will be mitigated somewhat through appropriate site management measures and work practices to ensure the site is kept tidy, dust is kept to a minimum, and that public areas are kept free from building material and site rubbish.

The scheme design incorporates significant consideration and mitigation in respect of potential impacts.

The architectural layout aims to address visual impacts by proposing variety in scale and massing of buildings.

The extensive planting of additional trees and shrubs throughout the site where possible will reduce the visual mass of the buildings, soften, and partially screens the development over time from various viewpoints, as identified in the assessment, thereby minimising the visual impacts.

Landscape works are proposed to reduce and offset of any impacts generated due to the proposed development, where possible. The planting of substantial numbers of new trees and other planting in the open spaces, the site boundaries, and internal roads, both native and ornamental varieties, will enhance the overall appearance of the new development and compensate for the removal of hedgerows and trees where needed for the construction works and increase the overall landscape capacity of the site to accommodate development.

Native and appropriate planting for biodiversity has been incorporated into the scheme in accordance with the advice of the Project Ecologist.

The subject sites falls within 'Central Lowlands Landscape Character Area' which is categorised to have 'High' Landscape Value, 'Moderate' Sensitivity and of 'regional Importance as per the Landscape Character Assessment.

The subject sites is situated close to the 'Boyne Valley Landscape Character Area' which is categorised to have 'Very High' Landscape Value, 'High' Sensitivity and of 'International' Importance as per the Landscape Character Assessment.

The subject lands contain some valued elements, features or characteristics, and local hedgerows and trees on site. The subject site and their receiving environment are mixed, i.e., in existing urban / semi-urban areas and in the fringes of the town. This is typical of the immediate surrounding landscape.

The site's zoning is supportive of development on this site. The lands falls within MP12 Master Plan Boundary. The Master Plan 12 lands has a mix of land uses; that is residential development, community uses, business/enterprise and open space. The Distributor Road is partly built and other lands in the MP12 boundary are either under planning process or granted planning permission. Therefore, the area is under rapid transition and is reflective of the zoning of the lands.

Therefore, the landscape sensitivity of the receiving environment (reflecting its zoning within the wider LCA) is classified as **'Medium**' – *Areas where the landscape has certain valued elements, features or characteristics but where the character is mixed or not particularly strong. The character of the landscape is such that there is some capacity for change in the form of development. These areas may be recognised in landscape policy at local or county level and the principal management objective may be to consolidate landscape character or facilitate appropriate, necessary change*

The following table summarises the results of the assessment of the effects of the proposed development on the visual resource.

Table 3.1: Summary of Visual Effects

VP No.	Location	Sensitivity	Degree of Change	Significance and Term			Cumulative
				Short	Medium	Long	
1	Looking east/south-east from the Level Crossing, Boyne Road	Low	Medium	Slight and Adverse	Slight & Neutral		No Effect
2	Looking east from Ballis Manor, abutting western boundary	Medium	Negligible	Not Significant and Neutral			No Effect
3	Looking north-east from Tubberclaire Meadows, abutting the south-western boundary	High	Low	Slight and Neutral			Slight
4	Looking east from Tubberclaire Meadows, abutting the south-western boundary	High	Medium	Slight-Moderate and Neutral			Slight

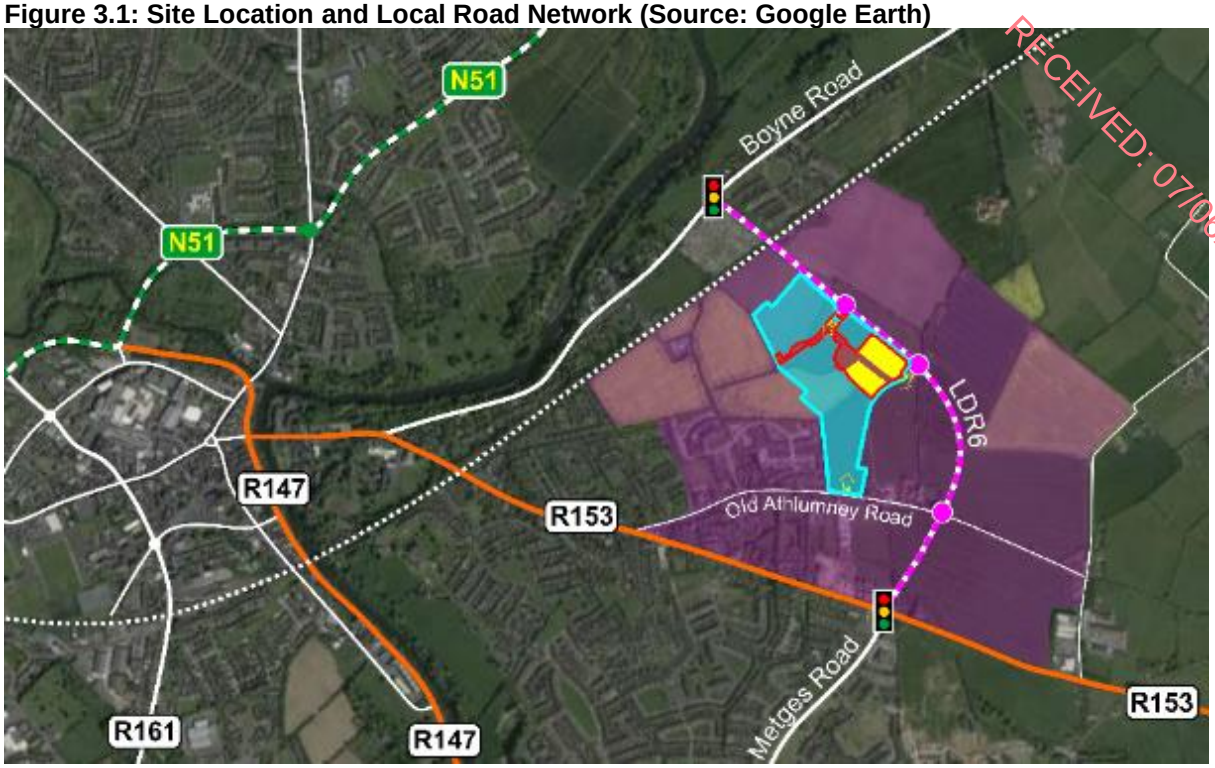
VP No.	Location	Sensitivity	Degree of Change	Significance and Term			Cumulative
				Short	Medium	Long	
5	Looking north-east from Old Road, southern boundary	Medium	Low	Slight and Neutral			No Effect
6	Looking north-west from Old Road, in front two detached houses	Medium	Medium	Moderate and Neutral			No Effect
7	Junction of R153 and Metges Rd	Low	Negligible	Imperceptible and Neutral			No Effect
8	One-off Housing, looking west from the farm lane	Medium	Low	Slight and Neutral			No Effect
9	Eastern corner of the application site boundary	Low	Medium	Slight and Neutral			High & Beneficial
10	Northern corner of the application site boundary	Low	Very High	Moderate and Beneficial			No Effect
11	View from Glenveigh Residential Neighbourhood	High	Negligible	Slight and Neutral			No Effect
12	St Mary's Cemetery, north west of railway line	Negligible	Low	Slight/Not Significant and Neutral			No Effect

The proposed development is expected to have a temporary adverse effect on the visual resource during construction. Upon operation and into the future, the development is expected to have a neutral and in places beneficial long term / permanent effect on the visual resource.

3.8 TRAFFIC AND TRANSPORTATION

The application site is located within Meath County Council Masterplan 12 lands located to the east of Navan town. It is largely rural in character consisting of fields in agricultural use, bounded by field hedgerows. To the north-west is the Navan to Drogheda commercial rail line which is crossed by one level crossing and beyond it, low density residential development as well as a graveyard.

Figure 3.1: Site Location and Local Road Network (Source: Google Earth)



Navan enjoys excellent national road network connectivity and is located at the core of an arterial network of national and regional roads. To the northeast the N51 provides access to the N2 via Slane and the M1 further east on the outskirts of Drogheda. To the southwest the N51 provides access to the M3 Motorway, Athboy and Delvin. Significant road links in Navan include the N51 Athboy/Delvin Road, the R153 Kentstown Road, the R161 Trim Road, R147 Kells/Dunshaughlin/Dublin Road and the R162 Monaghan Road.

Local Distributor Road LDR6: The figure above shows the alignment of LDR6 which has undergone the Part 8 Local Government Planning and Development Regulations process. LDR6 is funded by the Local Infrastructure Housing Activation Fund.

Construction on LDR6 has recently been completed from a new signal-controlled junction at the R153 Kentstown Road located at the northern end of Metges Road. LDR6 currently stops short of the Navan railway but is designed to connect to the Boyne Road to the northwest. The current construction has not included the underpass of the existing Navan-Drogheda rail line which will be completed as part of a further construction phase.

All construction activities will be governed by a Construction Traffic Management Plan (CTMP), the details of which will be agreed with the local road's authority prior to the commencement of construction activities on site. The contractor will decide the construction programme to be implemented and will be required to finalise a Construction Management Plan with the Planning Authority.

The likely impact of the construction works will be short-term in nature. The number of staff on site will fluctuate over the implementation of the subject scheme.

Depending upon the stage of construction, what elements are being constructed and the time of year the number of site staff will fluctuate over the construction period of the scheme. Based upon projects of a similar size and composition a development of this type and scale is expected to require approximately 80 – 120 staff on site at any one time. Given the traditional construction start and finish time, construction staff is generally not travelling during the traditional morning and evening commuter peak hours.

It is considered unlikely that the proposed development would generate more than 20 to 40 two -way vehicle trips during either the morning or evening peak hours and the impact on the operation of the greater travel network serving Navan will not likely be significant. Save for periods of more intensive activity like concrete pours the vast majority of material deliveries to the site will occur at a relatively steady rate during the course of the day. The number of deliveries per day depends on the stage of construction and time of year and cannot be accurately estimated until such time as a contractor puts together a detailed construction works programme. Based upon built schemes it is conservatively estimated that the site may generate 2-4 deliveries per hour. It is likely that there would be a concentration of deliveries in the morning and early afternoon with a drop off in the late afternoon. It is not expected that the total number of deliveries would exceed 50 vehicles per day.

The proposed development connects directly to LDR6 which is built expressly for the purposes of accommodating the traffic arising from the proposed development and the development of Masterplan 12. The capacity assessments of Section 10.6 of Volume II of the EIAR, show that the connecting roundabouts on LDR6 will operate well within capacity when subject to traffic arising from the proposed development. The roundabouts are shown to operate satisfactorily when the Masterplan 12 lands are fully developed.

The results of the traffic modelling analysis undertaken for the key internal junctions and the signal junction on the Boyne Road and Kentstown Road show that all junctions will operate well within capacity for the morning and evening peak hours for all scenario years assessed with no significant queueing or delay.

The implementation and performance of mobility management planning initiatives including any ongoing revisions or new initiatives will be monitored and evaluated throughout the Operational Phase. As part of the MMP process, post occupancy surveys are to be carried out in order to determine the success of the measures and initiatives as set out in the proposed MMP document. The information obtained from the monitoring surveys will be used to identify ways in which the MMP measures and initiatives should be taken forward in order to maintain and further encourage sustainable travel characteristics.

3.9 MATERIAL ASSETS – WASTE MANAGEMENT

The baseline environment is characterised by the nature of the existing site and the local and regional waste management infrastructure that serves the Navan, Co. Meath area in which the site is located. The Zone of Influence (ZOI) associated with waste generated by the construction and operational phases of the development relate to the impact that the site will have on Regional licenced and permitted facilities that will accept waste for recycling, re-use and disposal.

The development of the subject site will require ground preparation works prior to the commencement of construction activities which will generate a range of waste types.

Construction wastes if not managed and segregated on-site will have the potential to be difficult to separate into different waste streams to allow for further processing, recovery, re-use or to be recycled.

The volume of waste that will be generated during the full occupancy of the development have been calculated with regard to *British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice.*

The likely significant effects associated with operational waste will be negative, not significant, and long-term.

The site-specific Resource and Construction Waste Management Plan (RWMP) includes specific details on how construction phase wastes and resources shall be controlled, managed, and monitored throughout the construction phase as detailed in Section 11.6.2 and also contained in Appendix E, Volume III of the EIAR.

The site-specific Operational Waste Management Plan (OWMP) includes specific details on how operational phase wastes shall be controlled, managed, and monitored throughout the lifetime of the development as detailed in Section 11.6.3 and also contained in Appendix E, Volume III of the EIAR.

Construction phase wastes will be managed through design, management and waste reduction and recycling initiatives at the proposed development, it is predicted that the impact of the construction phase of the development is not likely to have a significant effect will not have a significant adverse impact on the receiving environment, or on local and regional waste management services or infrastructure and the development shall be managed shall to comply with Local Authority objectives for construction waste management.

The development shall be designed to provide adequate domestic waste infrastructure and storage areas for all apartments. This will promote the appropriate segregation at source of domestic generated waste from all residential units at the development and thus reduce the potential for the generation of mixed un-recyclable waste streams. The operational phase of the development is not likely to have a significant effect on regional waste infrastructure and the operation of the development shall be managed to comply with Local Authority objectives for domestic waste management.

3.10 MATERIAL ASSETS - UTILITIES

Public storm water infrastructure in Navan is under the administrative control of Meath County Council. A review of the publicly available records confirms that there are no public surface water sewers in the area. The area, which consists of undeveloped agricultural land (greenfield), is drained by small field drains which flow to the Millrace / Farganstown Stream.

All field drains and water courses within the area currently flow to the river Boyne. These field drains will generally be maintained and used to convey attenuated stormwater from the development to the river Boyne which will remain the eventual recipient of excess surface water.

All public foul sewage infrastructure is under the administrative control of Irish Water. A review of their records confirms that there are no active foul sewers in the immediate vicinity of the subject lands.

Irish Water records indicate an existing 600mm wastewater sewer located to the southeast of the subject lands on the Kentstown Road. This sewer drains to the northwest into an existing Irish Water wastewater pumping station before ultimate treatment at the regional Wastewater treatment plant in Navan. Irish Water has confirmed that there is adequate capacity in existing infrastructure to cater for the proposed development.

Potable water services are also under the administrative control of Irish Water. Records from Irish Water show existing 180mm watermains (O/D) in the Kentstown Road and the Boyne Road. The new LDR6 has been serviced with potable water infrastructure including a 180mm watermain and a 500mm watermain

The existing ESB network maps indicate an existing 10 kV Medium Voltage overhead electricity line traversing the proposed site.

EIR infrastructure to the surrounding area is sufficient to service the development subject to final agreement with EIR.

Implementation of the measures outlined in Section 12.6 of Volume II of the EIAR will ensure that the potential effects of the proposed development on the site's material assets do not occur during the construction phase and that any residual effects will be short term.

The volume of potable water for treatment and use will increase due to the development of the lands. Please refer to ESR report prepared by HRA Consulting Engineers for details.

The demand on power supply and telecommunications supply will all increase due to the development of the lands. The total increase in the capacity of the local electrical infrastructure as a result of the proposed development will be approximately 2.8MW. The infrastructure of both networks in the in the immediate vicinity of the site is adequate to meet these anticipated demands and there will be no adverse effect on the ability of the respective network to meet the existing demands in the areas surrounding the site. The development of the lands will be constructed in phases, with the final phase being due for completion circa 2029.

3.11 CULTURAL HERITAGE – ARCHAEOLOGY

The National Inventory of Architectural Heritage for County Meath was consulted to determine if any architectural heritage sites were present within the proposed development site. In addition to the desktop study, a site inspection was conducted.

The site contains no recorded monuments. There are four recorded monuments located within c. 1 km of the site. The nearest monument to the site is an enclosure ME025-053 - located c. 0.6 km to the northwest of the site. The study area is also located c. 1.8 km east- of the zone of archaeological potential for Navan town ME025-044.

The wider landscape is also rich in recorded monuments, ranging in date from the prehistoric period to post-medieval times.

The first known historical references to the townland of Ferganstown & Ballymacon is from The Down Survey map of County Meath (1654-56)

Geophysical survey is a non-invasive method of an archaeological assessment that aims to establish the presence of any archaeological features within the site, it is used to inform a program of test trenching and the planning process.

The site was subject to geophysical survey and the survey was carried out by Donald Murphy and Robert Breen of Archaeological Consultancy Services Unit Ltd. (ACSU) between 16th – 30th June 2020 under licence 20R0115 issued by the Department of Housing, Local Government and Heritage. Following the completion of the survey a report was submitted to the Department of Housing, Local Government and Heritage. The full survey is contained in Appendix A (Volume III) of this document.

The site was subject to test trenching on two occasions in 2024, in January by Ida La Fratta under licence 23E1013 carried out in response to An Bord Pleanála Order (ABP-312746-22) and Planning Ref. No. 21/1046 of Meath County Council and, most recently, in May by Linda Clarke under licence 23E0553 carried out at the request of the client at the pre-planning stage.

Test trenches targeted archaeological anomalies identified during the geophysical survey (20R0115). Archaeological features were identified. These included two burnt mounds and a pit (Trenches 7 and 9) as well as two possible kilns or pits (Trench 8).

> In May 2024 a second phase of test trenching was carried out by Linda Clarke of Archaeological Consultancy Services Unit on the remaining part of the site. Some small isolated features of archaeological significance were exposed comprising an oval pit, a sub-circular pit and a cereal dying kiln.

As preservation in situ (avoidance) is not possible, preservation by record is recommended.

Construction stage impacts identified on the archaeological resource shall be mitigated by the measures outlined in Section 13.7.1.

No residual impacts on architectural heritage resources are expected.

No residual impacts on architectural heritage resources are expected.

No cumulative effects (from surrounding permitted or proposed developments) are predicted upon the archaeological or cultural heritage resource during the construction or operational phase as all archaeological remains will be preserved by record.

3.12 RISK MANAGEMENT

Through the implementation of mitigation measures, there are no identified incidents or examples of major accidents and or natural disasters that present a sufficient combination of risk and consequence that would be likely to lead to significant residual impacts or environmental effects.

The cumulative interactions with Population and Human Health, Land, Soils, Geology and Hydrogeology, Surface Water, Noise, Climate and Air, Material Assets, Traffic and Transport, Landscape and Visual, and Cultural Heritage. However, subject to implementation of mitigation measures, good working practices and codes, the interactions between these areas have been sufficiently considered in relation to risk management.

4.0 CUMULATIVE IMPACTS

The EIAR where relevant the EIAR also takes account of other development within the area. These impacts have been addressed in the relevant chapters of the EIAR.

To determine traffic impacts in Chapter 10 the traffic generated by the proposed development is combined with the baseline traffic generated by the traffic on the road network in the area. The potential traffic impacts from other developments were also considered in the assessment.

Other projects in the wider area comprise:

Meath County Council Reg. Ref. 211046 (ABP Ref. 312746-22) – 98 no. residential units Phase 1A Boyne Village.

Meath County Council Reg. Ref. 22/1703 – Phase 1 of the Boyne Village Enterprise Park, and comprise construction of: 3 no. commercial high-bay warehouse units

Meath County Council Reg. Ref. 21/21 (ABP-311673-21) - 95 no. residential units.

ABP Reg. Ref. JP17.309332 (L.A. Dev. - AA Application) 84-no. unit development

Meath County Council Reg. Ref. ABP-315806-23 - 93 no. residential units.

Uisce Eireann Planning Reg. Ref. 2460066 – Pumping Station.

For the noise impact assessment in Chapter 8 the potential noise emissions arising from the proposed development during construction and operation are combined (using cumulative AADT figures from Traffic chapter) with background noise levels (predominantly road traffic) were assessed.

Each of the relevant specialists has considered the potential for cumulative impact in preparing their assessments. While there is the potential for negative impacts to occur during the construction stage of the scheme, with the implementation of the appropriate mitigation outlined in the EIAR, the residual cumulative impact is not considered to be significant.

There will be some short-term impacts during the construction phase as the pipes are laid, particularly in respect of traffic management with regards to sensitive receptors. This may cause local short-term inconvenience and disturbance to residents and business in the vicinity of the works. However the works would normally be undertaken in sections on a phased/rolling programme so that the number of persons experiencing local inconveniences at any one time is kept to a minimum.

5.0 INTERACTIONS BETWEEN ENVIRONMENTAL FACTORS

Chapter 15 of the EIAR (Volume II) provides detail on the interaction and interdependencies in the existing environment. John Spain Associates in preparing and co-ordinating this EIAR ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development during the preparation of the proposals for the subject site and this ensures that mitigation measures are incorporated into the design process. This approach is considered to meet with the requirements of Part X of the Planning and Development Act 2000, as amended, and Part 10, and schedules 5, 6 and 7 of the Planning and Development Regulations 2001-2023. The detail in relation to interactions between environmental factors is covered in each chapter of the EIAR.

In addition to the individual assessments of impacts on human beings, fauna and flora, soil, water, air, climate factors, the landscape and material assets, including architectural, archaeological, and cultural heritage, the inter-relationships between these factors was also considered as part of the EIAR scoping and impact assessment. Where the potential exists for interaction between two or more environmental topics, the relevant specialists have taken these potential interactions into account when making their assessment and, where possible, complementary mitigation measures have been proposed. These are set out in Chapter 15 of the EIAR (Volume II).

The relevant consultants liaised with each other and the project architects, engineers, and landscape architects where necessary to review the proposed scheme and incorporate suitable mitigation measures where necessary. As demonstrated throughout this EIAR, most inter-relationships are neutral in impact when the mitigation measures proposed are incorporated into the design, construction, or operation of the proposed development.

Table 5.1: Matrix of Summary of interactions between the environmental factors

Interaction	Population & Human Health	Biodiversity	Land and Soils	Water	Air Quality/Climate	Noise/Vibration	Landscape and Visual	MA-Traffic	MA-Waste/Utilities	Cultural Heritage	Risk Mgmt
Population & Human Health		✗	✗	✗	✓	✓	✓	✗	✓	✗	✓
Biodiversity	✗		✓	✓	✗	✗	✗	✗	✓	✗	✗
Land and Soils	✗	✓		✓	✓	✗	✗	✗	✓	✓	✗
Water	✓	✗	✓		✗	✗	✗	✗	✓	✗	✗
Air Quality/Climate	✓	✓	✗	✓		✗	✗	✓	✗	✗	✗
Noise/Vibration	✓	✓	✗	✗	✗		✗	✓	✗	✗	✗
Landscape and Visual	✓	✓	✗	✗	✗	✓		✗	✗	✗	✗
MA-Traffic	✓	✗	✓	✗	✓	✓	✗		✗	✗	✓
MA-Waste/Utilities	✓	✓	✓	✓	✓	✓	✗	✓		✗	✗
Cultural Heritage	✗	✗	✗	✗	✗	✗	✗	✗	✗		✗
Risk Mgmt	✓	✗	✓	✓	✓	✓	✗	✓	✗	✗	

6.0 SUMMARY OF EIA MITIGATION AND MONITORING MEASURES

Chapter 16 of the EIAR (Volume II) provides a summary of all the mitigation and monitoring measures proposed throughout the EIAR document for ease of reference for Meath County Council and all other interested parties.