Masterplan
Lands at Milltown, Ashbourne

2022

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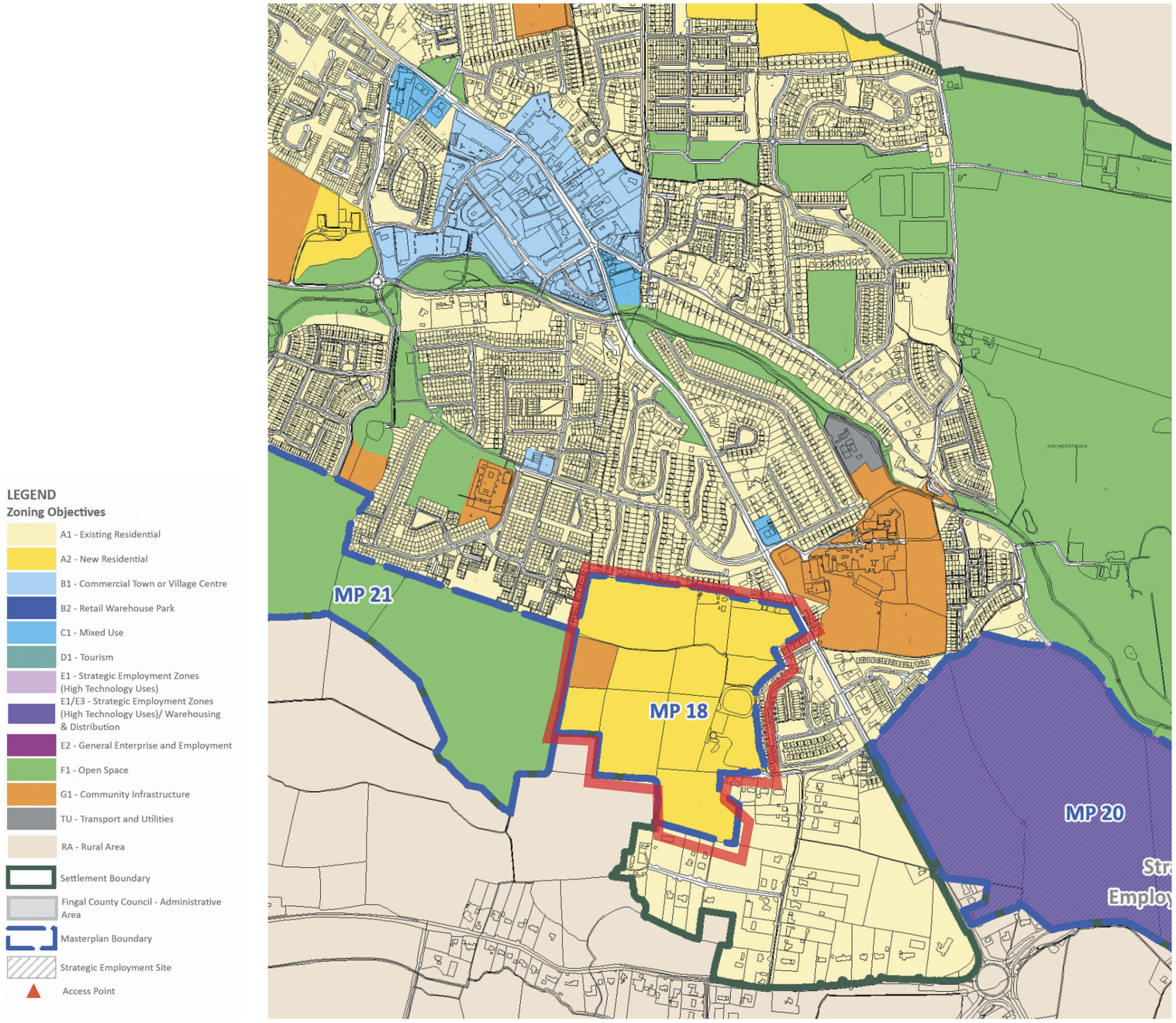
01 Overview

This Masterplan relates to c.19.9 hectares of land at Millstown to the south of Ashbourne, which are identified as Master Plan 18 in the Meath County Development Plan 2021-2027. This document sets out the main organising principles for the site to guide the future development of the lands.

Meath County Council propose that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Master Plan.



02 Context

The subject site is on the suburban edge of Ashbourne town off the Dublin Road. It is currently in use as agriculture land and is defined by its grid of mature hedgerows and trees, some of which denote Townland boundaries of the area.

Access to the site is from Cherry Lane on the northeast corner, which has good width and is a short distance from the main public road.

A second access exists from Hickey's Lane to the southeast, which is a rural lane that serves a number of individual dwellings.

Potential pedestrian connections could be provided into the existing Alderbrook and Tara Close housing develop- ments to the North and West respectively.

The site is approximately 1.5km South of the town centre which represents a 15 minute walk or 5 minute cycle.

03 Organising Principles

a) Create an integrated, high quality residential development with a strong sense of place that includes a local neighbourhood centre, playing pitches and primary school.

b) Provide an interconnected network of open spaces across the site that retains existing trees and hedgerows as much as possible and delivers high quality public amenity spaces for the area.

c) Create a segregated pedestrian & bicycle green link from the Dublin Road, westwards to the adjoining “F1 Open Space” lands, which will also serve the proposed primary school, playing pitch and local neighbourhood centre


Castle Farm Residential Development, Dunboyne


Green link reference


Reference project

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03 Organising Principles

a) Create an integrated, high quality residential development with a strong sense of place that includes a local neighbourhood centre, playing pitch and primary school.

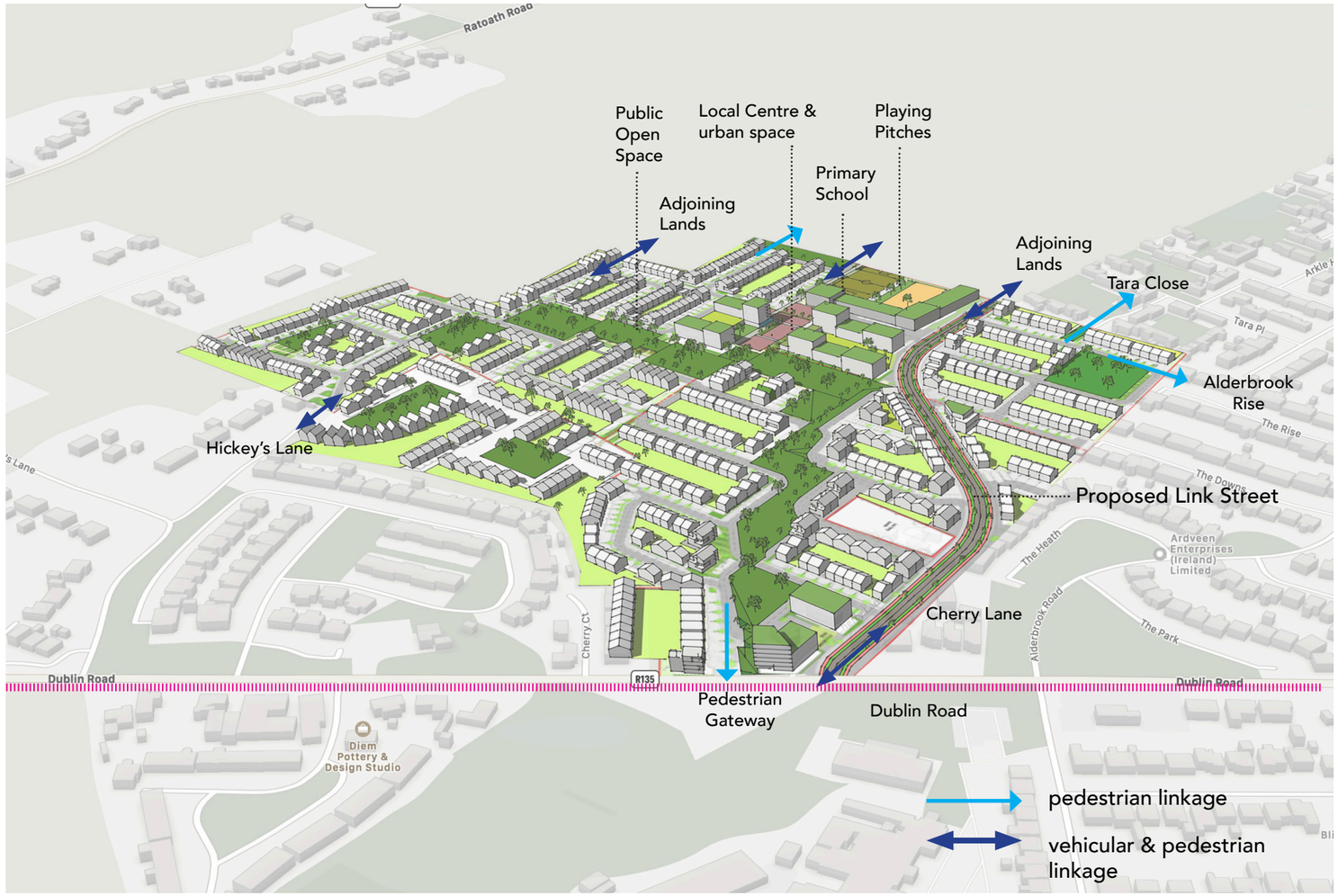
Linkages into surrounding streets and spaces are proposed in Easterly, Northerly and Westerly directions, ensuring the proposed development will be highly permeable and well-integrated with its surroundings.

As well as serving the Masterplan lands, the proposed east-west link road will connect the lands to the west with the existing roads network; thus, future proofing the development potential of these adjoining lands.

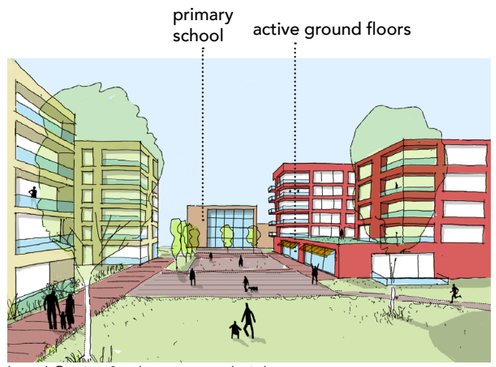
The proposed local neighbourhood centre, which includes an urban space, creche and retail units, is located at the heart of the development where it addresses the open space to the east as well as the primary school and playing pitch to the west.

With its active ground floor uses addressing the urban space and variety of building heights, the Local Centre will become a focal point in the neighbourhood which will enrich and contribute to the placemaking of the area.

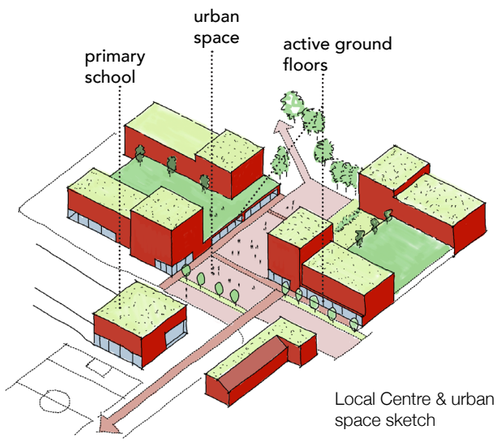
It is intended that the G1 lands will accommodate a primary school and playing pitch, which forms the western edge of the Local Centre, and these facilities will play an important role in the community both during and outside school hours. Circa 1Ha of land will be reserved as a potential future school site, the layout of which will be determined via consultation with the Department of Education at a future date. It is considered that the layout of the future school site should be determined prior to the installation of a playing pitch as a playing pitch may impede the optimum layout for a school building on these lands. Consideration will also need to be given to how the lands reserved for the school and playing pitch will integrate with the adjoining F1 Open Space and future Masterplan 21 for same.




Urban Space reference, Herbert Park



Local Centre & urban space sketch



Local Centre & urban space sketch

03 Organising Principles

b) Provide an interconnected network of open spaces across the site that retains existing trees and hedgerows as much as possible and delivers high quality public amenity spaces for the area.

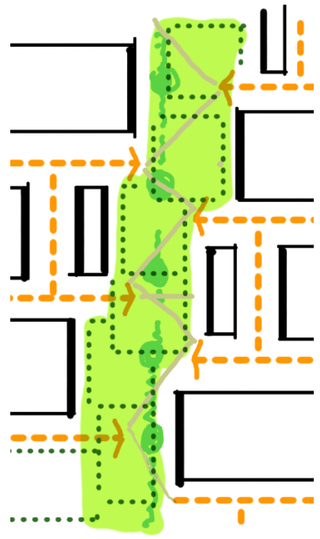
The design and layout of green infrastructure is a key organising principle in the overall masterplan. This network of open spaces forms the ‘green spine’ of the development from which all other streets and spaces are organised and interconnected.

The open space has been shaped to retain existing mature trees and hedgerows, preventing the loss of existing flora and fauna habitats and also retaining the legibility of townland boundaries of the area. Vehicular activity traversing the open space has been minimised to create a high-quality and safe environment for residents.

The open space will include Sustainable Urban Drainage Systems (SUDS) that will enhance the public open space and promote biodiversity in the area.

This Masterplan proposes that the open space is addressed with a strong urban edge made up of 3-4 storey buildings, ensuring high levels of passive surveillance.

Isometric sketch view



Open space and street pattern sketch

Reference Project

Tree and hedgerow retention

Open space sketch

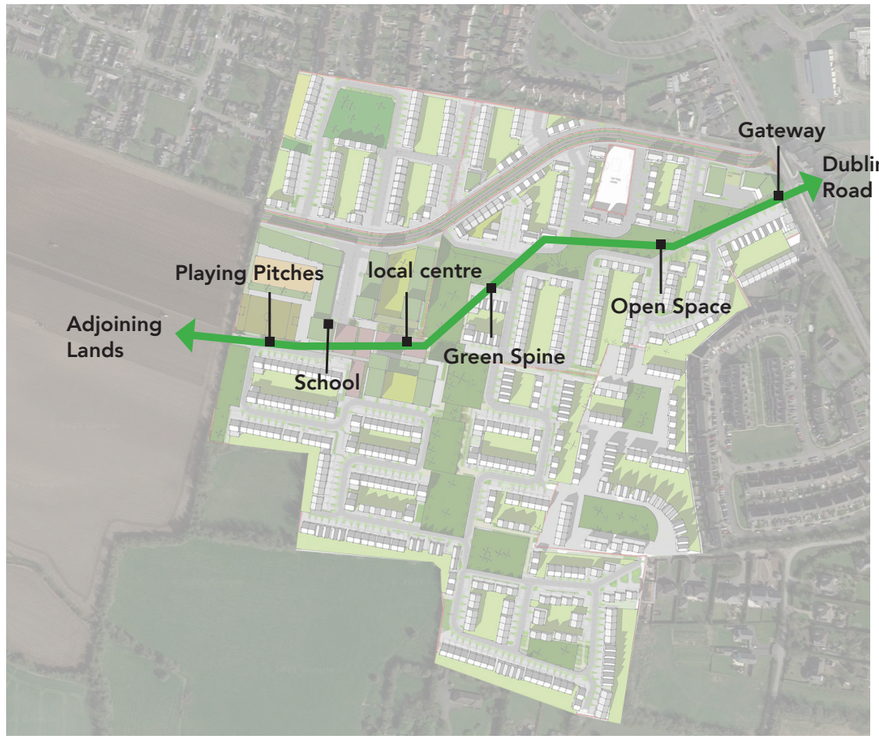
03 Organising Principles

c) Create a segregated pedestrian & bicycle green link from the Dublin Road to the lands to the west, which serves the proposed primary school, playing pitches and local centre.

This principle works in tandem with the interconnected ‘green spine’ concept. The proposed 4m wide green link weaves through the site from East to West, connecting the Dublin Road with the main green spine, local centre, school, playing pitches and into the adjoining lands to the west.

The provision of a safe and attractive green link through the site will encourage cycling and walking to school and should reduce traffic congestion at drop-off and collection times. Such a piece of infrastructure would have far-reaching benefits for the community, which include environmental, increased childhood mobility, road safety, increased sense of place etc.

The route will be passively overlooked by houses and apartments and will be publicly lit at night.




Green link reference


Green link reference


Green link reference


Reference Project


Reference Project

04 Building Height & Density

The prevailing height across the site will be 2-3 storey. This Masterplan identifies a number of key locations which can accommodate greater heights of up to approximately 6 stories in places. These locations will form focal points in the neighbourhood that will facilitate in the way-finding and place making of the area.

The three locations identified are as follows:

1. Dublin Road Gateway:
The masterplan identifies the potential for a gateway type building to articulate the entrance into the development and address the Dublin Road. We propose a building height of approximately 3-6 storeys in this location.

2. Local Centre: The Local Centre will form a focal point at the heart of the development and will include an urban space, creche, school and collection of retail units. The proposed building height within the Local Centre is 4-6 storeys.

3. Buildings addressing open spaces and link street: this plan suggests that the interconnected green spaces and Link Street should be addressed with a strong urban edge of 2-4 storeys.

Density - proposed net density will be 35-40 units per hectare.

05 Phasing:

The proposal is to develop the site from the centre of the town outwards or in a north to south direction.

Each phase of the development will deliver the appropriate amount of open space, physical and social infrastructure commensurate to the number of units and quantum of land being developed.

The delivery of apartments has been split between three phases to facilitate financing of the development and also to ensure that an appropriate mix of units are delivered at each phase.

Phase 1 - Northern Parcel (c. 190 units)
This phase includes the northern edge of the development and the interface with the Dublin Road. It will also include the delivery the first section of the green link and the northern edge of the green spine and the east-west link road through the northern part of the lands. Phase 1 may also include non-residential uses at the interface with the Dublin Road.

Phase 2- Central and Western Parcel (c. 290 units)
This phase, which covers the central and western extents of the lands, will deliver circa 290 units. It includes the completion of the green linkage, the construction of apartments and non residential units facing the local centre and the 2-3 storey housing to the southwest of the site. The G1 lands accommodating the future school and pitch will be included in Phase 2.

Phase 3 - South-east Parcel (c. 280 units)
This phase will deliver the apartments to the south of the local centre and the lower density housing to the south- east of the site. This will include connection into Hickeys Lane to the East.

06 Street Hierarchy

link street

local street

shared surface

green link (pedestrian & bicycle)

New pedestrian / cyclist / vehicular accesses into the site are proposed from the R135 Dublin Road, via Cherry Lane & Hickey's Lane, with a new internal east-west street traversing the northern part of the lands, which will provide access to the adjoining lands to the west in the future. Pedestrian / cyclist connections to adjoining residential estates to the north and west may be facilitated also.

The site is within a reasonable walking distance of local shops and services within the centre of Ashbourne. Pedestrian & cyclist permeability through the site is promoted in the residential layout enabling future residents to access the development.

07 Character Areas

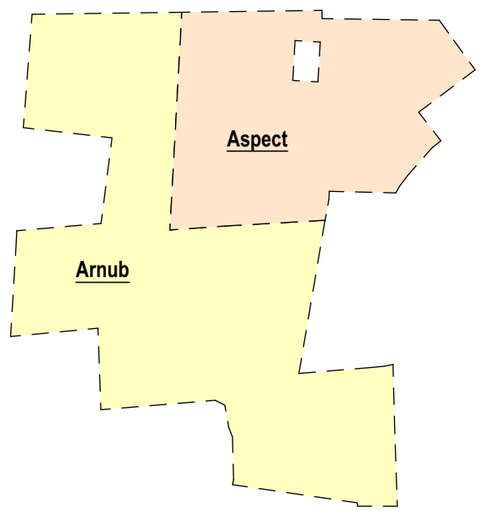
The development can be divided into five distinct character areas which are influenced by the unit design and layout, scale, location and relationship with surroundings.

The site benefits from having two independent developers, Aspect and Arnub, which automatically brings a variety of unit typology preferences and construction approaches to the development.

The interconnected open space, green link and link street are other strong characterizing elements which provide common strands through many of these character areas and will facilitate in way-finding through the development.

The landscape design will further enhance the unique character of each area.

Character Area Map



Developer landholding map

Contiguous Elevation showing variety of character areas and unit typologies.

07 Character Areas

Character Area 1: Dublin Road Gateway & North Eastern Quarter.

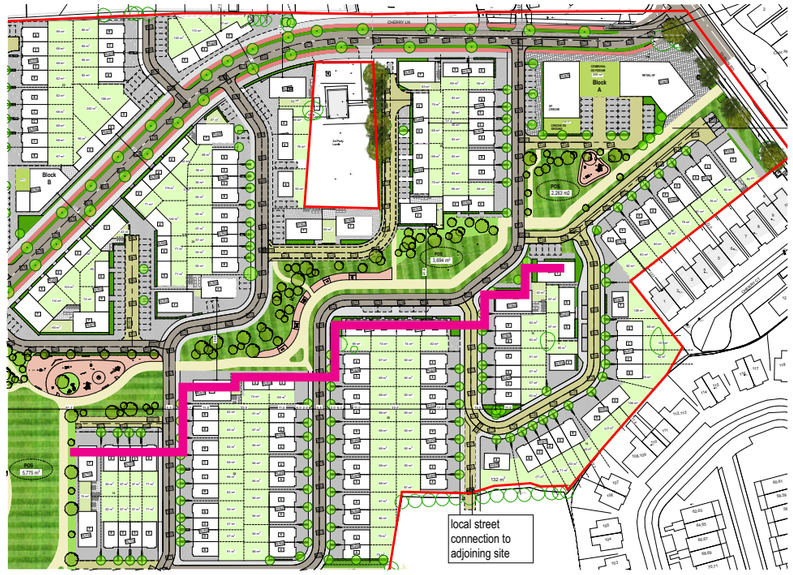
This area encompasses Aspect's development area and will form the interface with the Dublin Road.
A 4-5 storey apartment building forms a strong urban anchor point at the junction with the Dublin Road and turns the corner along Cherry Lane to address the proposed new link road into the development.

Further south along the Dublin Road, a gateway, formed between apartment buildings, introduces the green link into the development and sets up strong visual connections along the interconnected open space.

This linear open space is typically addressed with a 3 storey apartments or wide frontage units (E type). These units are staggered at the end of each urban block to create a distinct stepping movement which invites pedestrians and cyclists further into the development and gives a distinct shape to the open spaces.

Streets branch off the irregular open space on a strict north/south axes, providing east/west orientation to the houses. Houses within this area are typically 2-3 storey with contemporary zinc dormers, which provide a unique character and identity to the street scene.

Visual showing stepping movement of the blocks in 3D with views into development along green link.



Plan highlighting distinct stepping pattern

Elevation showing variety of house types within Aspect's landholding

Dublin Road Elevation

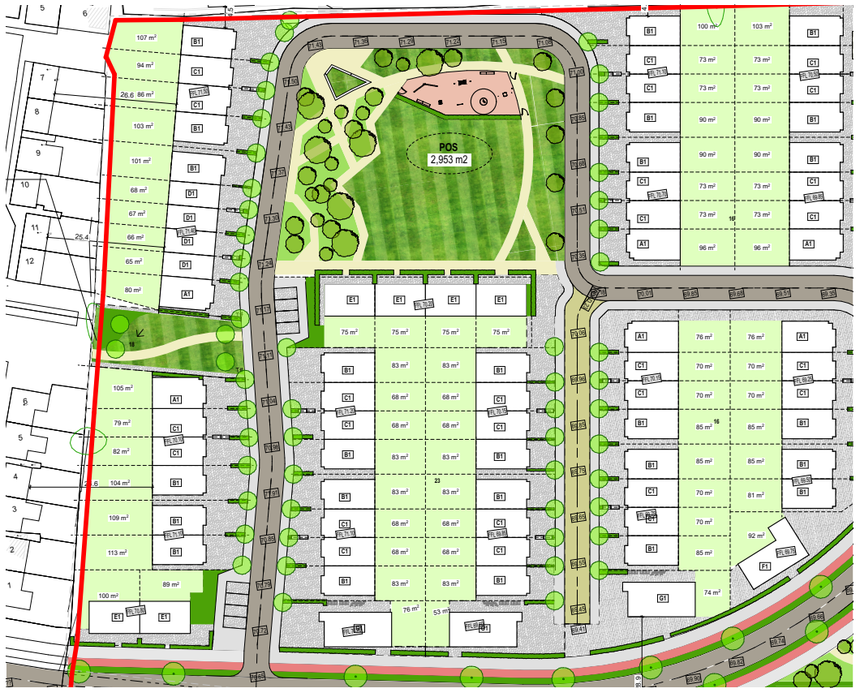
07 Character Areas

Character Area 2: North West Quarter

This area, which is in Arnub's landholding, forms the northern edge of the Link Street and will have a strong relationship to the existing developments to the north and west to which it connects with new pedestrian linkages.

The area will be further characterized by it's distinct square-shaped landscaped open space and associated play area, which is overlooked on three sides by a variety of house types. Dual aspect duplex units or wide frontage gabled units provide frontage to the Link Soad to the south.

This area will have contrasting unit typologies and material finishes to those within Character Area 1.



Example of duplex units addressing Link Road

Typical Street Elevation, with full gabled forms creating interest at the ends of terraces

07 Character Areas

Character Area 3A: Local Centre and School Quarter

This area will form the focal point of the neighbourhood with a distinct change in the scale and grain of development from the surrounding residential units.

It is intended that the Local Centre will serve the community's everyday grocery, medical, childcare and caffeine related needs. These active ground floor uses, coupled with the varying building height (4-6 stories), variety of finishes and forms and high-quality landscaping, will create a unique and attractive space with a strong sense of place.

The plaza area, which forms part of the greenlink, will make a secure and safe place for children to congregate before and after school.

Plan showing change in the grain of development from houses to apartments & school.


View from Linear Open Space looking towards Local Centre


Visual of Plaza from South with Block B1 in foreground and A1 in background

View from Plaza looking West with School forming backdrop

07 Character Areas

Character Area 3B: Southwest Quarter

This area sits to the south of the Local Centre where it enjoys a strong connection to the main open space to the east and the open space along the western boundary and OS zoned lands beyond. Streets typically run east to west connecting these two areas of open space. A small pocket park is located at the centre allowing pedestrian permeability from north to south.

This area contains a large number of existing trees which are to be retained, giving the area a mature and leafy character - the central open space will include a line of native Ash trees and the western and southern boundaries will retain as much of their greenery as possible.

Typical street elevation with Duplexes forming a ‘bookend’ to the street

Typical open space elevation within this character area with strong edge created from Duplex buildings (G1types)

07 Character Areas

Character Area 4: Southeast Quarter

This area links into Hickeys lane and can be classified as a quieter, low-rise section of the development, predominantly made up of 2 storey, single occupancy houses which are aggregated in a variety of ways. This area permits a higher proportion of homezone type streets which will create a strong sense of pedestrian priority in the area.

Streets to the north will enjoy framed views of the linear open space, Local Centre and line of mature Ash trees to the west

The area to the south includes more intimate open spaces which are addressed with wide frontage double gabled houses.

Wide frontage double gabled house types

Open space addressed by wide frontage double gabled units

Master Plan 18 – Milltown Masterplan, Ashbourne, Co. Meath

Appendix I -

Strategic Environmental Assessment (SEA) Screening

Prepared by:

ARMSTRONG FENTON ASSOCIATES

Planning & Development Consultants

Strategic Environmental Assessment (SEA) Screening of the Milltown Master Plan 18 (MP 18), Ashbourne, as identified in the Meath County Development Plan, 2021-2027

1.0 Introduction

1.1 Background

This is the Strategic Environmental Assessment (SEA) Screening Report, prepared in relation to lands located in the townlands of Milltown & Baltrasna, located to the south of Ashbourne town centre, which are identified as Master Plan 18 (MP 18) in the Meath County Development Plan, 2021-2027 (hereafter "Development Plan"). The purpose of a Master Plan is to ensure an integrated approach is taken to the phasing, management, and development of lands within the Master Plan Area, with the Master Plan document setting out the main organising principles for the MP18 lands to guide the future development of same.

The Master Plan is a non-statutory plan, which has nonetheless been framed within the context of EU, national, regional and local development plan policies.

1.2 Proposed Master Plan

The Meath County Development Plan 2021-2027 states that *"Master Plan 18 relates to the lands at Milltown to the south of Ashbourne and has an area of c.19.9 hectares. It is intended that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Master Plan".*

This is a non-statutory Master Plan for the Master Plan 18 lands at Milltown and Baltrasna. The area is conveniently located in terms of connections to Ashbourne town centre (c.1.5km away), and west/south-west of the Dublin Road (R135). The MP 18 lands are zoned for a combination of:

i. Land use zoning objective A2 – New Residential: *"To provide for new residential communities with ancillary community facilities and employment uses as considered appropriate for the status of the centre in the Settlement Hierarchy".* Circa 19 Ha is zoned A2.

ii. Land use zoning objective G1 - Community Infrastructure: *"To provide for necessary community, social, and educational facilities".* Circa 1 Ha is zoned G1.

No change to the land-use zoning to the lands is to result from the proposed Master Plan.

1.3 Site Location and Description

The MP18 Master Plan lands are located to the south-east of Ashbourne town centre, west/south-west of the Dublin Road (R135), at the edge of the existing urban environs of Ashbourne, in the townlands of Milltown and Baltrasna.

The lands are bounded to the north-east by the Dublin Road, to the east/south-east by The Briars residential estate and other existing dwellings accessed off Hickey's Lane, to the south by the rears of existing dwellings and greenfield lands, to the west by open space lands/residential dwellings of Tara Close/Tara Place, and to the north by existing residential dwellings of Alderbrook Rise, Downs and Heath.

The lands are predominantly in greenfield condition with hedgerows, with five no. dwellings and associated outbuildings on the lands. The lands can be accessed off Cherry Lane, to the north-east and Hickey's Lane to the south-east, both of which are conveniently connected to the Dublin Road (R135).

2.0 Strategic Environmental Assessment (SEA)

2.1 Introduction

Directive 2001/42/EC1[1] ('SEA Directive') of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment requires Member States of the EU to assess the '*likely significant environmental effects'* of plans and programmes prior to their adoption. This provides for the assessment of strategic environmental considerations at an early stage in the decision-making process.

Article 1 of the SEA Directive states that:

"The objective of this directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment."

The SEA Directive was transposed into Irish law through:

- Statutory Instrument (S.I.) No. 435 of 2004 The European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011; and

- S.I. No. 436 of 2004 Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2004, as amended by S.I. No. 201 of 2011 Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011.

The former regulations, (S.I. No. 435 of 2004 as amended by S.I. No. 200 of 2011), relate to SEA as it applies to plans or programmes prepared for *"agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism and town and country planning or land use*".[2]

The latter regulations (S.I. No. 436 of 2004 as amended by S.I. No. 201 of 2011) relate to SEA as it applies to plans or programmes where the context requires, *"a development plan, a variation of a development plan, a local area plan (or an amendment thereto), regional planning guidelines or a planning scheme".*[3]
As a non-statutory land use masterplan, the MP18 Master Plan was screened for the requirement for SEA under the requirements of S.I. No. 435 of 2004 as amended by S.I. No. 200 of 2011.

[1] SEA Directive: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0042&from=EN
[2] See Section 9(1)(a)
[3] Section 5(c)

2.2 Determination for the need for SEA

Article 3(4) of Directive 2001/42/EC requires that "*Member States shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects.*" This process for deciding whether a particular plan, other than those for which SEA is mandatory, would be *likely to have significant environmental effects*, and therefore, would require SEA is known as 'Screening'.

The criteria for determining (or Screening) whether a particular plan is *likely to have significant environmental effects* are set out in Annex II of the SEA Directive. These criteria are reproduced in Schedule 1 of S.I. No. 435 of 2004, as amended by S.I. No. 200 of 2011, and again in Schedule 2A of the Planning and Development Regulations 2001, as amended.

The Screening criteria are set out under two principal headings, each of which have a number of sub-criteria (refer to Section 5 of this Report):

- characteristics of a Plan; and
- characteristics of the effects and of the area likely to be affected.

2.3 The Masterplan and Screening for Requirement for SEA

The Masterplan is a non-statutory land use plan and is being screened for the requirement for SEA in accordance with the requirements of:

- Directive 2001/42/EC (SEA Directive) and particularly Articles 3(3), 3(4) & 3(5) relate to 'Screening' for the requirement for SEA.

- S.I. No. 435 of 2004 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 – European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011.

- Schedule 2A of the Planning and Development Regulations 2001, as amended, which sets out the "*Criteria for determining whether a plan or programme is likely to have significant effects on the environment*".

This report constitutes the Screening of the Plan for the requirement for SEA in accordance with the above legislation. The report has been prepared following consultation with the Environmental Authorities (EA) specified in Paragraph 9(5) of S.I. No. 435 of 2004, as amended by S.I. No. 200 of 2011. The specified Environmental Authorities are listed in Section 2.5 of this Report.

2.4 Appropriate Assessment (AA) and relationship to Screening for SEA

The EU Habitats Directive (92/43/EEC) requires an 'Appropriate Assessment' (AA) to be carried out where a plan or project is *likely to have a significant impact* on a Natura 2000 site. Natura 2000 sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Stage 1 is to establish whether AA is required for the particular plan or project. Stage 1 is referred to as Screening for the requirement for AA and the purpose is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site's conservation objectives.

As set out in Department Circular Letter SEA 1/08 & NPWS 1/084[4] (15th February 2008), Screening for AA is of relevance to screening for SEA in that "*where following screening, it is found that the draft plan or amendment may have an impact on the conservation status of a Natura 2000 site or that such an impact cannot be ruled out, adopting the precautionary approach:*

- an AA of the plan must be carried out, and
- in any case where a SEA would not otherwise be required, it must also be carried out."

Hence, where the plan *requires AA* it shall *also require a SEA*.

2.5 Consultation with Environmental Authorities

As part of the making of the Meath County Development Plan 2021-2027, three formal opportunities were integrated into the plan-making process for consultation with the Environmental Authorities on SEA:

- Scoping Stage (pre-draft);
- Draft Plan Stage; and
- Proposed Material Alterations to the Draft Plan Stage.

There were also opportunities for public consultation. Observations and submissions made at each of these stages have been integrated into the preparation of the Development Plan and the SEA process as set out in Section 3 of the Development Plan's SEA Statement, which provides information on the decision-making process; documents how environmental considerations, the views of statutory consultees and other submissions and recommendations of the SEA Environmental Report have been integrated into Development Plan; the reasons for choosing the Development Plan in light of other reasonable alternatives; and measures for monitoring significant environmental effects.

A list of consultees is set out in the SEA Environmental Report of the Development Plan (Table 3.2: List of Consultees for the SEA Scoping Stage) including:

- Environmental Protection Agency (EPA);
- Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (formerly the Department of Culture, Heritage and the Gaeltacht);
- Department of the Environment, Climate and Communications (formerly the Department of Communications, Climate Action and Environment);
- Department of Agriculture, Food and the Marine;
- Department of Housing, Local Government and Heritage (formerly the Department of Housing, Planning and Local Government);
- Louth County Council;
- Monaghan County Council;
- Cavan County Council;
- Westmeath County Council;

[4] NPWS SEA letter: https://www.npws.ie/sites/default/files/general/circular-sea-01-08.pdf

- Offaly County Council;
- Kildare County Council;
- Fingal County Council.

As the Development Plan has been adopted and come into effect, having identified the subject lands as requiring a Master Plan, it is considered that the consultation carried out as part of the preparation of the Development Plan is adequate for the purposes of this SEA.

3.0 Planning Context for the Masterplan

3.1 Meath County Development Plan 2021-2027

The majority of the Master Plan lands are zoned objective A2 – New Residential: *"To provide for new residential communities with ancillary community facilities, neighbourhood facilities as considered appropriate".*

A portion of c.1Ha is zoned objective G1 - Community Infrastructure: *"To provide for necessary community, social, and educational facilities".*

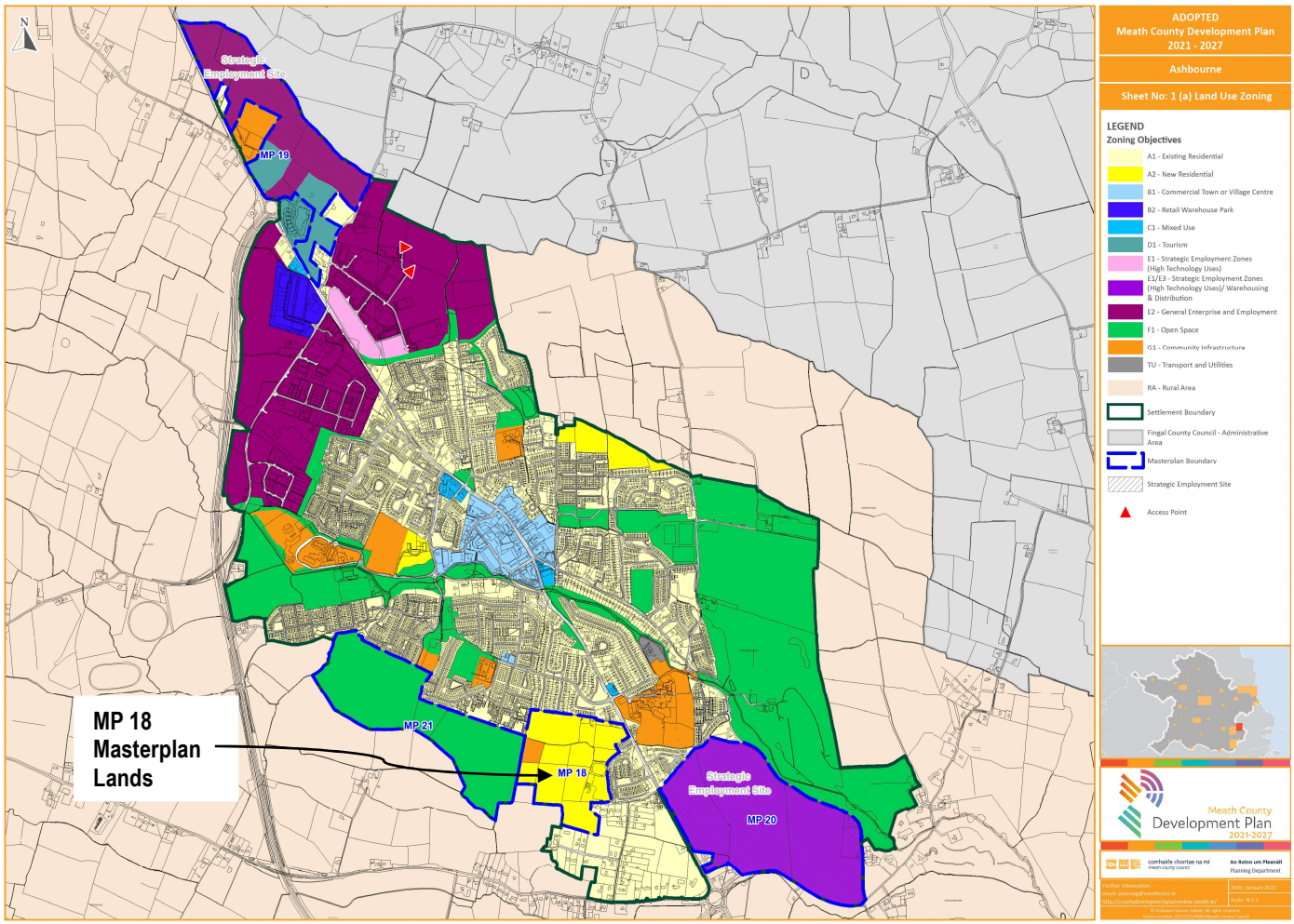


Fig. 1 – Copy of Meath County Development Plan Land Use Zoning Map for Ashbourne

Chapter 11 (Section 14) of the Development Plan sets out the general land use and zoning policies and objectives of this Plan. The zoning strategy for the County is based upon a number of principles, including *inter alia:*

- To ensure that sufficient lands are zoned to allow the aims of the Core Strategy to be realised;
- To support the intensification of development in centres in the upper tiers of the settlement hierarchy adjacent or close to public transport nodes and corridors to maximise the use of public transport, minimise trip generation and distribution and to promote sustainable development;
- To support the creation of compact settlements by following the sequential approach in the identification of lands for development.

The MP18 Master Plan lands are zoned objectives A2 and G1 under the Meath CDP 2021-2027.

The A2 land use objective is: *"To provide for new residential communities with ancillary community facilities, neighbourhood facilities as considered appropriate".*

The Development Plan's guidance for the A2 land use zoning states that *"this is the primary zone to accommodate new residential development. Whilst residential zoned lands are primarily intended for residential accommodation, these lands may also include other uses that would support the establishment of residential communities. This could include community, recreational and local shopping facilities. These facilities must be at an appropriate scale and cannot interfere with the primary residential use of the land. The detail of ancillary uses to be provided as part of a residential development shall form part of pre-application discussions in respect of any planning proposal unless otherwise indicated in Volume 2 of the Development Plan. Individual convenience stores in neighbourhood centres on A2 zoned lands should generally not exceed 1,000m² net retail floorspace unless otherwise identified in a Local Area Plan".*

The G1 land use objective is: *"To provide for necessary community, social, and educational facilities".* On the G1 zoned part of the MP18 Master Plan lands, which is c.1Ha in area, it is proposed to provide for a playing pitch and a school site for the development of a future school, dependent on confirmation from the Department of Education and Skills.

Chapter 2 of the Development Plan sets out the Core Strategy for the County, the vision of which is: *"To continue to support the creation of socio-economically progressive vibrant, dynamic, and healthy communities throughout the County and ensure that future growth is based on the principles of sustainable development that delivers a high-quality living and working environment that meets the needs of all residents, in accordance with National and Regional Guidance".*

Ashbourne is identified as being within the Settlement Typology of "Self-Sustaining Growth Towns" which are described as: *"Towns with a moderate level of jobs and services – includes sub-county market towns and commuter towns with good transport links and capacity for continued commensurate growth to become more Self-Sustaining".*

Section 2.10.2 of Core Strategy states: *"In the Self-Sustaining Growth Towns of Ashbourne, Kells, Trim, Dunboyne and Dunshaughlin there will be a focus on consolidation and the provision of employment opportunities in tandem with population growth in order to allow these centres to become more self sufficient. The availability of infrastructural services and community infrastructure will also be an important factor in determining the quantum of new housing and population growth that these settlements could absorb".*

Table 2.12 "Core Strategy Table, Population and Household distribution to 2027" identifies that Ashbourne has a proposed household allocation of 1,349 no. units over the lifetime of the Development Plan.

Volume 2 of the Meath County Development Plan 2021-2027 sets out the Written Statement for Ashbourne and in this regard the following sections are relevant:

Section 2.0 – Town Context / Character

Ashbourne is the second largest town in Meath and had a population of almost 13,000 in 2016. It is strategically located along the southern boundary of the County adjacent to Fingal with excellent transport links to Dublin Airport and City Centre. The town also benefits from local connectivity with Ratoath, Dunboyne and Dunshaughlin via the regional road network.

Ashbourne is an important centre for retail, services and employment providing jobs and services to a wide catchment population in the south of the County. Employment is concentrated in the northern part of the town where there is a cluster of Business and Industrial Parks that host a broad range of businesses including manufacturing, engineering, construction, and wholesale retail operations. The town centre is also an important location for employment, providing jobs in the retail and professional services sectors.

In addition to its function as an employment and service centre, Ashbourne is also a commuter settlement for the Dublin Region.

In response to the strong population growth additional services and facilities including a new Town Centre and Education Campus have been developed. It is recognised that additional community and recreational facilities are required.

Notwithstanding Ashbourne's key assets, the settlement is not multi-modal. This continues to inhibit the town's ability to realise its potential as a fully sustainable growth town transitioning to Metropolitan status.

Section 3.0 – Vision

The vision for Ashbourne is *"For Ashbourne to develop as a vibrant, modern and integrated town around a strong employment and service centre, where future growth builds upon the town's expansion and investment to support a sustainable, diverse and attractive settlement".*

Section 5.0 – Land Use Strategy

Section 5.1 - Settlement and Housing

Ashbourne is an attractive settlement that has experienced significant growth over the past decade due to its proximity to Dublin Airport and City Centre. There are a broad mix of house types and residential developments in the town that meet the needs of the growing population. Whilst in the past residential development has preceded community facilities, there has been recent investment in social and community facilities in the town including a new school campus and public library which has assisted in creating a more balanced and sustainable community. As the population grows further expansion of facilities will be required.

Residential growth in the town remains strong, with a number of large development sites in the town recently completed or close to completion. These include Churchfields, Archerstown Demesne, Crenigans Banog, and Milltown Meadows. Alongside the development of these greenfield sites, there has also been an emphasis on compact growth with development recently completed on a number of infill sites including The Oaks and Walfre Lodge.

The Development Plan states that *"at the time of writing there were c.200 unbuilt extant units in Ashbourne. It is anticipated that these will be completed within the lifetime of this Plan".*

The growth of Ashbourne will continue to be based around principles of compact, sustainable neighbourhoods that include a suitable mix of housing that meets the needs of people of all ages in locations within walking distance of services and facilities.

Section 5.6 - Movement

The successful integration of land use and transport is essential for the sustainable growth of the town. As part of the strategy of supporting the integration of land use and transport planning the RSES requires the preparation of a Local Transport Plan for Ashbourne. This Plan is to be prepared in conjunction with the National Transport Authority and will assist in the identification of measures to reduce the need to travel, improve the efficiency of public transport, promote walking and cycling, and reduce dependence on the private car as the primary mode of transport.

The attractive urban form and compact nature of Ashbourne has helped to foster a strong walking and cycling mode share which is further supplemented by a number of frequent bus services offering good connections to Dublin and neighbouring towns. The town also benefits from its close proximity to the M2 transport corridor.

Building upon the strong active mode share in Ashbourne, opportunities exist to improve permeability within the town centre and introduce pedestrian and cycle upgrades on key corridors linking residential lands to the town centre.

In addition to improving access to bus services, consideration must also be given to the possibility of providing a rail link to Ashbourne in the long term. As part of the reappraisal of Phase II of the Navan Rail Project it is considered that there is an opportunity to examine the potential of including a spur from this rail line to Ashbourne (via Ratoath). It is an objective of this Plan to engage with Irish Rail and the National Transport Authority to examine the feasibility of providing this rail link.

Section 5.8 - Green Infrastructure and Open Space

Green Infrastructure is the network of green spaces, habitats, and ecosystems that intersperse towns and villages. It includes open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage, and the open countryside. The purpose of identifying green infrastructure is to ensure a co-ordinated approach is taken to the management of this infrastructure that would be mutually beneficial to people and local ecosystems and habitats.

This Plan provides an opportunity to enhance the provision of green infrastructure in Ashbourne through the progression of the Linear Park. The first phase of the Linear Park, which included the delivery of a new play space, construction of an amphitheatre, and the installation of a pedestrian footbridge which provides a direct link to the town centre, was completed in 2019. The future public park, to the south east of the town centre easily accessible for the population which will be advanced during this Plan, will supplement the open spaces in the Linear Park and will provide further facilities and recreational areas for residents.

Section 5.9 - Social Infrastructure

The completion of the Education Campus has been a considerable success and will ensure that residents of the town can avail of high-quality and accessible educational facilities. There is an opportunity to improve connectivity from the residential lands to the east to the campus along the Linear Park.

The town is well-served by sports clubs and other community facilities however is lacking a public park that is accessible to the entire community. In order to strengthen the community in Ashbourne and to make the town a more attractive place to live it is an objective of this Plan to prepare a Master Plan for the delivery of a public park. This space would be a gathering place for families and various groups and organisations, and would be an important resource in promoting an active and healthy lifestyle. A F1 Open Space zoning has been included to the southwest of the town centre to provide for a public park.

Section 6.0 – Masterplans

There are 4 Master Plan areas identified in Ashbourne. The purpose of a Master Plan is to ensure an integrated approach is taken to the phasing, management, and development of lands within the Master Plan Area. A planning application will not be considered in the absence of the Master Plan being agreed in writing with the Executive of the Planning Authority.

Master Plan	Description	Status
Master Plan 18	Master Plan 18 relates to the lands at Milltown to the south of Ashbourne and has an area of c.19.9 hectares. It is intended that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Master Plan.	Awaiting Preparation

Section 7.0 – Town Development Policies and Objectives

The following CDP policies and objectives are specific to Ashbourne:

ASH POL 1	To support the consolidation of development of Ashbourne which facilitates the provision of residential development and employment, retail, community, and recreational facilities in order to create a more compact and self-sufficient settlement.

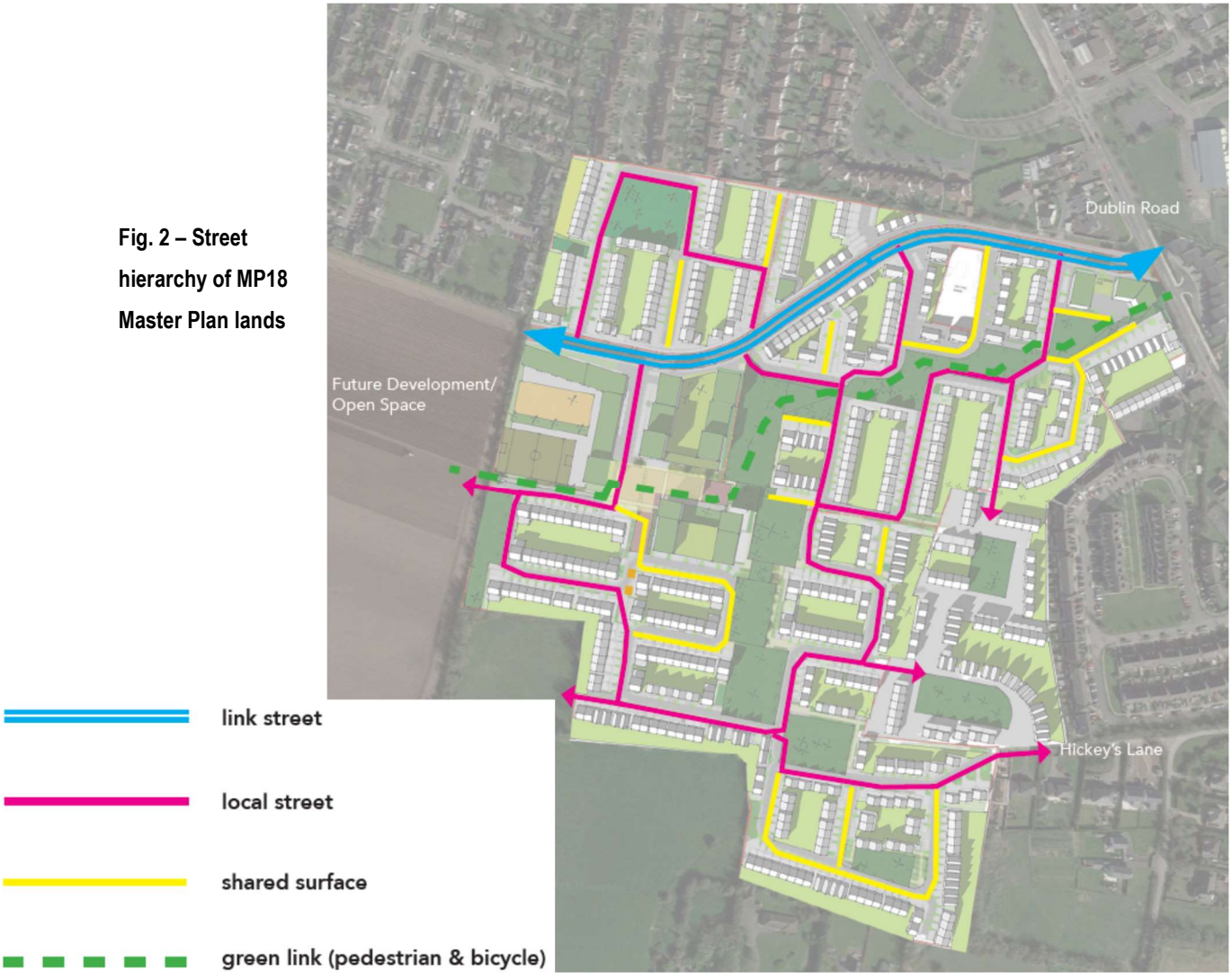
Settlement and Housing

ASH OBJ 1	To secure the implementation of the Core Strategy of the County Development Plan, in so far as is practicable, by ensuring the household allocation for Ashbourne as set out in Table 2.12 of the Core Strategy is not exceeded.

Movement

ASH OBJ 13	To examine the feasibility of a new junction on the R135 that could serve development lands on Hickeys Lane and facilitate a new access to Ashbourne Community College, in consultation with all relevant stakeholders.
ASH OBJ 19	To ensure that access to all zoned lands are provided for and that no zoned land becomes landlocked.

Fig. 2 – Street hierarchy of MP18 Master Plan lands



Social Infrastructure

ASH OBJ 21	To facilitate the development of a primary school, in association with the department of Education, on suitably located lands that would meet the educational requirements of the future population of Ashbourne.

Urban Design and Public Realm

ASH OBJ 24	To support the utilisation of sustainable principles in the design, planning and development of residential schemes throughout the town.

Ashbourne is the second largest town in County Meath and the MP18 Master Plan lands are predominantly zoned for new residential land use, along with community infrastructure use. The MP18 Master Plan lands will cater for an increase in housing stock in line with the Core Strategy figures for Ashbourne.

The Master Plan provides for new / improved access connections off the R135, catering for vehicular, pedestrian and cyclist connections onto same. An internal east-west access road will open up the large tract of land to lands future west which will create opportunities in the future for increased connectivity and permeability and will prevent land-locking.

The G1 zoned lands will accommodate a school site and playing pitch in the western part of the site, adjacent to lands zoned open space and to Master Plan 21, which is considered to supplement the neighbouring open space land use to the west, and provide further facilities and recreational areas for residents.

In summary, and notwithstanding the requirement for a Masterplan, the subject lands have been zoned for residential and community infrastructure uses in the Meath County Development Plan. The lands are not otherwise identified as being of specific natural significance.

4.0 MP18 Master Plan

4.1 Vision

As outlined above, there are 4 Master Plan areas identified in Ashbourne. The purpose of a Master Plan is to ensure an integrated approach is taken to the phasing, management, and development of lands within the Master Plan Area. A planning application will not be considered in the absence of the Master Plan being agreed in writing with the Executive of the Planning Authority.

The subject lands are identified as being subject to Master Plan 18, whereby it is intended that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Master Plan.

The main organising principles for the future development of the MP18 Master Plan lands are:

a) Create an integrated, high quality residential development with a strong sense of place that includes a local neighbourhood centre, playing pitches and primary school.

b) Provide an interconnected network of open spaces across the site that retains existing trees and hedgerows as much as possible and delivers high quality public amenity spaces for the area.

c) Create a segregated pedestrian & bicycle green link from the Dublin Road, westwards to the adjoining “F1 Open Space” lands, which will also serve the proposed primary school, playing pitch and local neighbourhood centre.

4.2 Nature and Extent of Proposed Development within MP18 Master Plan

The MP18 Master Plan lands will provide for the following indicative aspects:

- Circa 750no, up to a maximum of 800 no. new residential units;
- a net density of greater than 35 units per hectare (in accordance with DM OBJ 14 of the Development Plan and DoE Guidance);
- c. 15% open space provision, in accordance with DM OBJ 26 of the Development Plan;
- delivery of the east-west link road that will provide access from the Dublin Road (R135) through the Master Plan lands to adjoin the F1 zoned lands to the west;
- a site for a new school and playing pitch.

The Master Plan provides for the phasing of the required social and physical infrastructure, with each phase of the development of the lands to deliver the appropriate amount of open space, physical and social infrastructure commensurate to the number of units and quantum of land being developed.

The full development of the MP18 Master Plan lands will likely occur over a period of c. 10 years.

4.3 Preliminary Review of the requirement for Appropriate Assessment (AA)

The Master Plan does not overlap with any European sites. The nearest European sites are Malahide Estuary SAC and Malahide Estuary SPA, located c.12.6km and c.12.7km east of the Master Plan lands, respectively. The nearest surface water feature to the site, the Fairyhouse Stream is located c.300m south of the Master Plan lands. This stream flows c.3.2km downstream in a south-easterly direction, where it joins with the Broadmeadow River. The Broadmeadow River flows for a further 11.3km downstream where it ultimately discharges into the Malahide Estuary, and subsequently, the European sites therein i.e., Malahide Estuary SAC and Malahide Estuary SPA.

Rogerstown Estuary SAC and Rogerstown Estuary SPA are the only other European sites within c.15km of the Masterplan site, located c.13.1km and c.14km east of the Master Plan lands.

Foul waters from the Master Plan lands will join the public sewer and will be treated at the Ringsend WWTP prior to subsequent discharge to Dublin Bay. Therefore, there is an indirect hydrological link between the Master Plan lands and Dublin Bay, and the European sites within, i.e., South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA. These European sites are considered to be within the potential zone of influence of the Master Plan lands, as all of these sites are located downstream of the Master Plan lands within Dublin Bay.

There are no other European sites in the vicinity of the Master Plan lands, or hydrological pathways to any other European sites, with all other European sites over 15km away.

All of the European sites present in the vicinity of the Master Plan lands are shown on Figure 3 overleaf.

Despite the number of European sites within 15km of the Master Plan lands, the Screening for AA has demonstrated that the potential impacts associated with the Masterplan do not have the potential to affect the receiving environment and, consequently, do not have the potential to affect the conservation objectives supporting the Qualifying Interest/Special Conservation Interests (QIs/SCIs) of any European sites. Therefore, the Masterplan is not likely to have significant effects on any European sites.

As the Master Plan itself will not have any effects on the QIs/SCIs or conservation objectives of any European sites and taking into account the policies and objectives of the statutory Plans referred to within the accompanying the AA Screening Report, the AA Screening concludes that there is no potential for any other plan or project to act in combination with it to result in significant effects on any European sites.

Following an examination, analysis and evaluation of the best available information, and applying the precautionary principle, the accompanying AA Screening Report asserts that it can be concluded that the possibility of any significant effects on any European sites, whether arising from the project alone or in combination with other plans and projects, can be excluded (for the reasons set out in Section 3.3 of the accompanying AA Screening Report). In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.

Therefore, a SEA is not required for the Plan because of a requirement for Appropriate Assessment (AA).

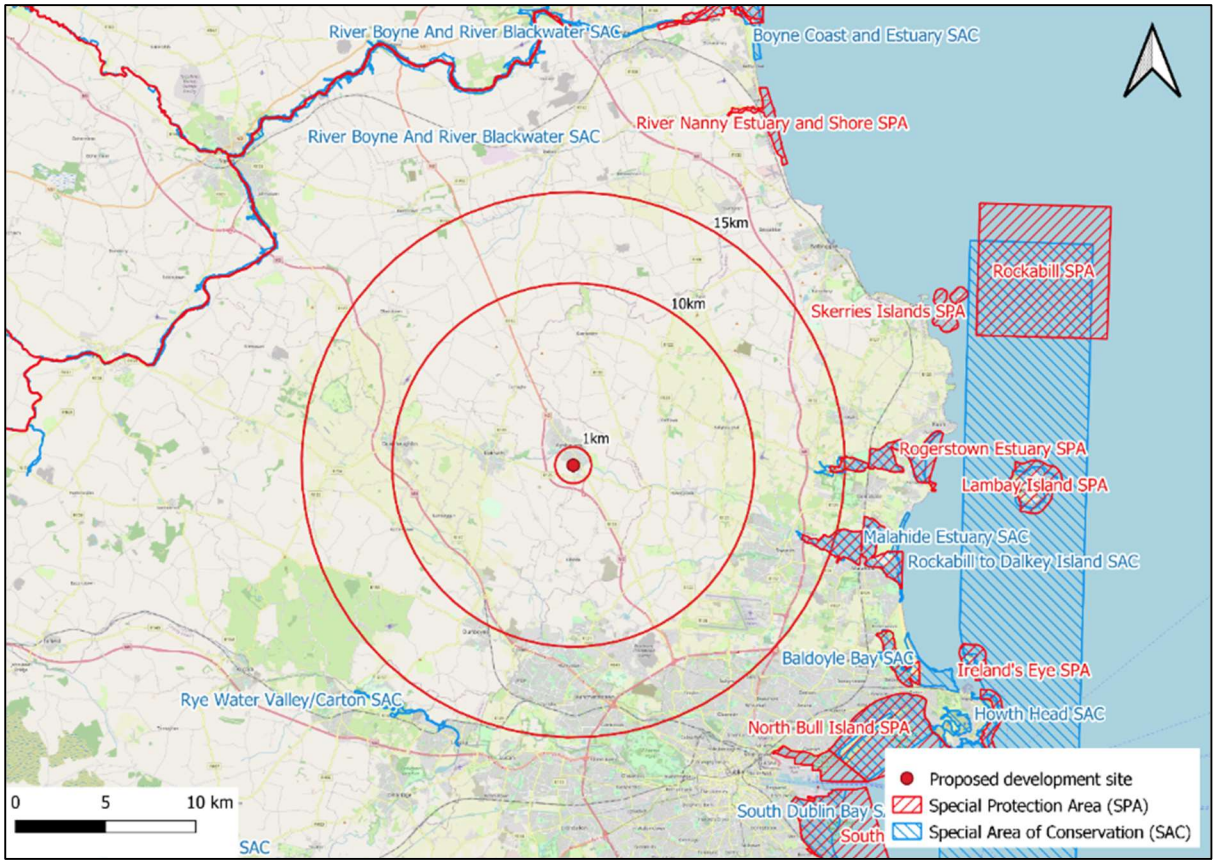


Fig. 3 - European sites in the vicinity of the Master Plan lands

4.4 Strategic Flood Risk Assessment (SFRA)

There are no watercourses in the immediate vicinity of the lands and the site is located approximately 19km west of the Irish Sea (air distance). The nearest EPA designated watercourse is the Broadmeadows located approx. 720m of the site's eastern boundary (air distance).

The Eastern CFRAM Study indicates that the subject site is located within Flood Zone C i.e. is outside the 0.1%AEP (Annual Exceedance Probability). Therefore, the future development of the lands for residential and community uses is appropriate for the subject lands.

The Strategic Flood Risk Assessment (SFRA) undertaken for the Meath County Development Plan 2021-2027 contains "Settlement Zoning Review" (under section 5) which:

- Considered the land use zoning objectives utilised within County Meath as a whole and assessed their potential vulnerability to flooding.
- Based on the associated vulnerability of the particular use, a clarification on the requirement of the application of the Justification Test is provided.
- The consideration of the specific land use zoning objectives and flood risk will be presented for the settlements. Comment is provided on the use of the sequential approach and Justification Test. Conclusions have been drawn on how flood risk is proposed to be managed in the settlement.

The SFRA reviewed the land use zoning objectives for each settlement in County Meath, including Ashbourne, within the Plan and provides a comprehensive summary of flood risk and justification where necessary. Section 5.2 of the Development Plan's SFRA provides details on Ashbourne, which does not identify the MP18 Master Plan lands as being at risk of flooding. It also concludes that *"the Ashbourne Flood Relief scheme will be completed at the end of 2020 and the scheme will offer protection to a significant amount of existing development. Manage flood risk and development in line with the policies of the MCDP. Development should be subject to an appropriately detailed FRA at development management stage. This will ensure that FFLs and ground levels are set appropriately and that the risk of surface water flooding is managed".*

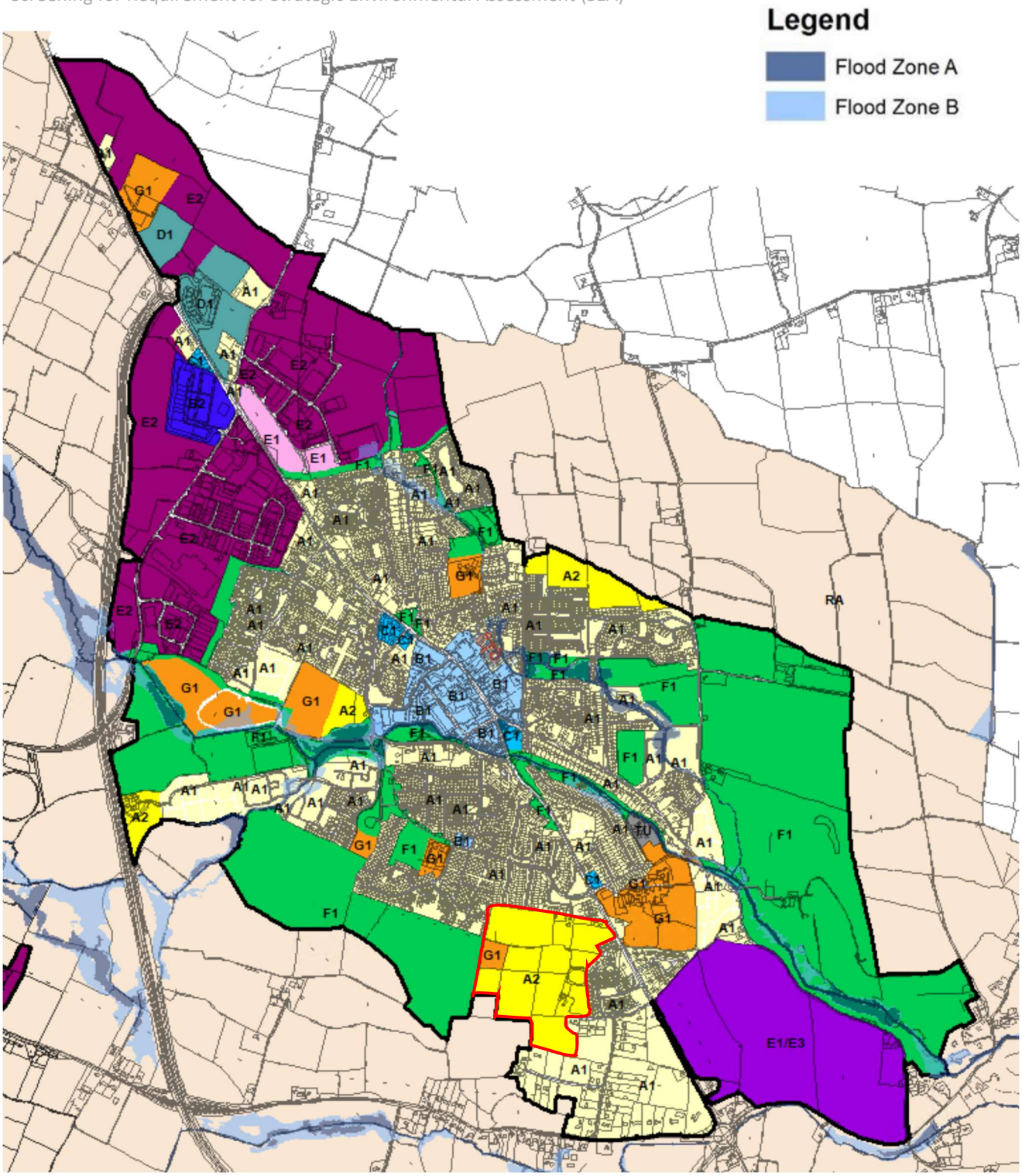


Fig. 4 – Extract from SFRA of Meath County Development Plan 2021-2027 – Flood Map for Ashbourne (MP18 Master Plan lands outlined in red)

4.5 Cultural Heritage – Archaeology

The boundary of the MP18 Master Plan lands comprises a collection of elevation fields (12 no.) of farmland, altogether forming a sub-rectangular footprint.

A geophysical survey was carried out which indicated the presence of at least five circular features (6–7m in diameter) of archaeological potential, possibly representing small sub-circular enclosures or barrows. Two larger sub-circular features (11.5m and 15m in diameter) were also indicated by geophysical responses, possibly representing enclosure sites. An irregular response likely to correspond to a ditched feature with burnt material was registered, whilst elsewhere the presence of smaller pit-like features was suggested by responses.

An archaeological test-trenching programme was carried out over ten days in August 2022. The test-trenching programme was informed by the geophysical survey data, with targeted test trenches placed in areas of suggested archaeological significance.

The test-trenching programme conducted confirmed the presence of significant archaeological features within six of the fields, with the archaeology contained within three of those six fields noted to be quite contained. Four other fields were found to contain less substantial archaeology, with another field containing no archaeology.

Planning application(s) on the MP18 Master Plan lands should be subject to archaeological impact assessment and it is recommended, subject to approval from the National Monuments Service that identified archaeological features be subject to archaeological excavation in advance of construction under licence to the Department of Culture, Heritage and the Gaeltacht (DCHG) in consultation with the National Museum of Ireland (NMI). It is further recommended that the topsoil stripping of the remainder of the wider Master Plan lands be subject to archaeological monitoring licensed under the National Monuments Acts.

5.0 Screening for Requirement for Strategic Environmental Assessment (SEA)

The Screening for the requirement for SEA has been conducted in accordance with the criteria set out in Schedule 1 of S.I. No. 435 of 2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 – European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011.

The criteria are set out under two principal headings, and each is addressed in turn in Tables 5.1 and Table 5.2 below respectively:

- characteristics of a Plan; and
- characteristics of the effects and of the area likely to be affected.

Table 5.1: The Characteristics of the Plan, having regard in particular to:

5.1.1 The degree to which the plan sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions, or by allocating resources:
It is proposed to develop the subject lands with the MP18 Master Plan ensuring that an integrated approach is taken to the phasing, management, and development of lands within the Master Plan Area. The rationale for the proposed Master Plan 18 is that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the MP18 Master Plan. The Meath County Development Plan 2021-2027 (Development Plan) establishes the strategic planning policy framework for all projects and development in the County. All planning proposals are assessed against this strategic framework and all lower plans must be consistent with this. It is considered that this proposed MP18 Master Plan is consistent with the Development Plan. The MP18 Master Plan outlines potential future arrangements for the MP18 lands in a manner which is consistent with the established land use zoning objectives for the lands. The content of the Development Plan has been informed by Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) undertaken as parallel processes in tandem with each stage of Plan process, thereby ensuring full integration and consideration of environmental issues. It is not considered that the proposed Master Plan will result in significant effects on the environment over and above any identified (and mitigated against) as part of the SEA of the Development Plan.

5.1.2 The degree to which the plan influences other plans, including those in a hierarchy.

The MP18 Master Plan will be a non-statutory plan that responds directly to a specific objective requiring its preparation as set out in the Meath County Development Plan 2021-2027. The primary purpose of the Plan is to provide further detail and clarity with regard to the intentions of the Planning Authority to give effect to the objectives for the lands. The Masterplan will have no influence on other plans either above or below in a hierarchy.

The Development Plan sits at the Local Government level of the Spatial Planning Hierarchy in Ireland and below the Regional Assembly and Government levels. The Development Plan sits at the top of the Local Government Level Spatial Planning Hierarchy and it influences Local Area Plans.

Therefore, the MP18 Master Plan outlines potential future arrangements for the Milltown lands in a manner which is consistent with the land use zoning objectives for the lands as established in the Meath County Development Plan 2021-2027. The Meath County Development Plan 2021-2027 was subject to a full SEA.

5.1.3 The relevance of the plan for the integration of environmental considerations, in particular with a view to promoting sustainable development.

The Meath County Development Plan 2021-2027 sets out the overall strategy for the proper planning and sustainable development of the County and includes a written statement for Ashbourne, stating that *"this written statement will provide a brief description and development strategy for Ashbourne. A detailed Local Area Plan for the town will be prepared during the life of this Plan".* (**Note:** at the time of writing no new statutory Local Area Plan for Ashbourne has been prepared and/or adopted).

The Development Plan was subject to full SEA, as required under the Planning and Development (Strategic Environmental Assessment) Regulations 2004. SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before the decision is made to adopt the plan or programme. The SEA process seeks to *"provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation of plans and programmes with a view to promoting sustainable development"* [5]. The results of the SEA process have been fully incorporated into the preparation and making of the Development Plan and the resulting Environmental Report has been published as a separate document in conjunction with the development Plan and is included in Volume 4 of same.

The Development Plan was prepared in accordance with the requirements of the Planning and Development Act 2000 (as amended) and fully complies with the mandatory requirements for preparation of a Development Plan. These consist of, *inter alia,* objectives for the zoning of land, the provision of infrastructure, the conservation and protection of the environment, and the integration of the planning and sustainable development with the social, community and cultural requirements of the area and its population.

[5] European Directive 2001/42/EC

The content of the Development Plan has been informed by Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) undertaken as parallel processes in tandem with each state of the development plan, thereby ensuring full integration and consideration of environmental issues.

The MP18 Master Plan will be a non-statutory plan that provides detail and clarity with regard to the existing land use objectives for the lands. The sustainability principles at the core of the Master Plan are informed by the existing policy and key objectives in the current Meath County Development Plan. Therefore, future development will continue to accord with the objectives and policies, including the environmental requirements of the Development Plan.

This Master Plan is compatible with and complementary to the strategies, policies and objectives of the Development Plan relating to lands identified to accommodate a primary school site, lands for recreational uses, including playing fields, and lands for residential development.

5.1.4 Environmental problems relevant to the plan.

The content of the Development Plan has been informed by Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA).

Chapter 5 of the SEA Environmental Report (Volume 2) 'Environmental Baseline', evaluates the sensitivity of the environment (environmental problems) relevant to the development plan as they relate to Population and Human Health, Biodiversity (including Flora and Fauna), Lands, Soils and Geology, Air, Noise and Climate, Cultural Heritage, Landscape, Water Quality, Material Assets etc.

On foot of the SEA of the Development Plan, the policies and objectives of the Development Plan contain measures to prevent, reduce and offset any potential significant adverse environmental effects of the Development Plan strategy, policies and objectives.

The MP18 Master Plan is concerned with the redevelopment of zoned land within the settlement boundary of Ashbourne. It is not considered that the proposed MP18 Master Plan will result in significant effects on the environment over and above any identified (and mitigated against) as part of the SEA of the Development Plan.

5.1.5 The relevance of the plan for the implementation of European Union legislation on the environment (e.g. plans linked to waste management or water protection).
The Development Plan is relevant for the implementation of European Union legislation on the environment. The development plan must include, inter-alia, the following objectives: ▪ The conservation and protection of the environment including objectives related to the Habitats Directive, ▪ The promotion of compliance with environmental standards and objectives established for bodies of surface water and groundwater, which standards and objectives are included in river basin management plans (European Communities Regulations 2003/9/10). The MP18 Master Plan will be a non-statutory plan which outlines potential development arrangements for the subject lands at Milltown, Ashbourne in a manner which is entirely consistent with the land use zoning objectives for the lands as established in the Meath County Development Plan 2021-2027. Therefore, the Master Plan includes for the implementation of European environmental legislation as already set out in the Meath County Development Plan 2021-2027. The proposed MP18 Master Plan does not directly relate to policies/objectives which are directly concerned with the implementation of European Union legislation on the environment.

Table 5.2: Characteristics of the effects and of the area likely to be affected, having regard, in particular, to:

5.2.1 The probability, duration, frequency and reversibility of the effects.
Typical effects in keeping with the development of the subject lands for primarily residential use, as well as community uses, zoned in the Meath County Development Plan 2021-2027, are likely to arise. These are likely to be short duration and recurring with each phase of proposed development. As typical for residential and associated development of lands, effects will be permanent, but equally not likely to be significant or adverse in nature. The MP18 Master Plan will provide for c. 15% open space, as well as a playing pitch, and a maximum of c.800 residential units at c. 35-45 units per hectare. Other uses include a school, small-scale retail opportunities, childcare facilities etc. The lands are zoned for the proposed uses in the Meath County Development Plan 2021-2027 and similar uses are located on lands to the east, north and south of the lands.

5.2.2 The cumulative nature of the effects

The MP18 Master Plan forms part of the overall balanced development strategy of Meath County Council as set out in the Meath County Development Plan 2021-2027. The Meath County Development Plan, which included the land use objectives for the lands, was subject to SEA and the MP18 Master Plan is consistent with the policies and objectives of the overarching county-wide policy.

The MP18 Master Plan is compatible with and complementary to, the policies and objectives of the Meath County Development Plan relating to *inter alia,* compact residential development, provision of open spaces, reservation of land for the provision of a school site and playing pitch and environmental protection.

The lands subject to the MP18 Master Plan are underutilised in nature but are zoned and located within the existing settlement boundary of Ashbourne, and adjacent to existing and proposed public transport services, and within walking distance of the town centre. The preparation of the MP18 Master Plan, as well as the A2 and G1 land use zoning objectives attached to the subject lands, demonstrates their significant potential to deliver housing, improved amenities and infrastructure thus providing for a better relationship with neighbouring lands.

The proposed redevelopment of the lands will be done in accordance with the operational policies, objectives and standards of the Development Plan which already safeguard against activities which may give rise to significant effects on the environment. The Development Plan includes the necessary policies, objectives and standards to ensure that no adverse impact will arise, singularly or in a cumulative manner.

It is not considered that the proposed masterplan will result in significant effects on the environment over and above any identified (and mitigated against) as part of the SEA of the Development Plan.

Given the location of the MP18 Master Plan lands adjoining the developed southern edge of Ashbourne, and the land use objectives as established from the Meath County Development Plan, the MP18 Master Plan will not give rise to significant cumulative effects on the environment.

5.2.3 The transboundary nature of the effects.

The proposed MP18 Master Plan will have no international, national, regional or inter-county transboundary effects, over and above the effects from the strategy, policies and objectives of the Development Plan.

5.2.4 The risks to human health or the environment (e.g. due to accidents).

The Masterplan lands are zoned for residential and community infrastructure uses in the Meath County Development Plan 2021-2027, and the MP18 Master Plan outlines potential development arrangements for the lands in a manner which is consistent with the Meath County Development Plan.

Proposed uses are primarily residential, with associated small-scale retail opportunities, provision for a school site, and provision of areas of open space for recreation and amenity. No unusual or particular risks that may not be appropriately mitigated by standard planning and development provisions (*e.g.* planning conditions) have been
identified.

No significant risks to human health or to the environment due to accidents or other considerations in the implementation of the MP18 Master Plan have been identified.

5.2.5 The magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)

The MP18 Master Plan lands will provide for c. 15% open space as well as a maximum of c.800 no. residential units at c. 35-45 units per hectare. Other uses include a childcare facilities, small-scale retail opportunities and provision for a primary school site and playing pitch. The lands are zoned for the proposed uses in the Meath County Development Plan 2021-2027 and similar uses are located on lands to the east, north and south of the lands.

The Masterplan Site, which extends to circa 20 hectares is small in the geographical context of Ashbourne town and being located on the southern edge of the existing town, the population likely to be affected is also small.

5.2.6 The value and vulnerability of the area likely to be affected due to:

(a) special natural characteristics or cultural heritage

The MP18 Master Plan lands are zoned for residential and community infrastructure uses in the Meath County Development Plan 2021-2027.

While the Master Plan lands have a greenfield (agricultural) landscape setting with traditional field hedgerows, they do not hold special natural characteristics of cultural heritage so as to be considered valuable or vulnerable.

A programme of archaeological testing identified five (5 no.) circular features and two (2 no.) larger sub-circular features, possibly representing enclosure sites. The identified features will subject to full archaeological excavation in advance of construction under licence to the Department of Culture, Heritage and the Gaeltacht (DCHG) in consultation with the National Museum of Ireland (NMI). It is proposed that topsoil stripping of the remainder of the wider site will also be subject to archaeological monitoring licensed under the National Monuments Acts.

The Master Plan lands do not overlap with any European sites. The nearest European sites are Malahide Estuary SAC and Malahide Estuary SPA, located c.12.6km and c.12.7km east of the Master Plan lands, respectively. A Screening for the requirement for AA concluded that there is no possibility that the implementation of the Plan could result in any likely significant effects on European Sites either on its own or in combination with other plans and programmes.
(b) exceeded environmental quality standards or limit values
It is not anticipated that any environmental quality standards or limit values will be exceeded.
(c) intensive land-use
The MP18 Master Plan lands are already zoned for residential and community infrastructure uses in the Meath County Development Plan 2021-2027, and the Master Plan outlines potential development arrangements for the lands in a manner which is both consistent with the Meath County Development Plan and with the established land use of adjoining residential areas to the north and south, and open space zoned lands to the west. At c. 35-45 units per hectare, the proposed uses are not considered to be within anticipated intensities and proposed residential and residential-related development is to be delivered over a number of manageable phases.

5.2.7 The effects on areas or landscapes which have a recognised national, European Union or international protection status
There are no protected landscapes of a recognised national, European or international status on or adjoining the MP18 Master Plan lands and the Master Plan will not have an adverse impact on protected landscapes. The nearest European sites are Malahide Estuary SAC and Malahide Estuary SPA, located c.12.6km and c.12.7km east of the Master Plan lands, respectively. A Screening for the requirement for AA concluded that there is no possibility that the implementation of the Plan could result in any likely significant effects on European Sites either on its own or in combination with other plans and programmes. Ashbourne is located within a lowland landscape as identified in the Meath County Development Plan and the Master Plan will not have an adverse impact on the designation.

6.0 Recommendation on requirement for SEA

Following assessment, it is considered that the MP18 Master Plan will not result in *significant adverse environmental* effects and therefore, does not require further assessment of the likely effect on the environment of the implementation of the Master Plan through SEA.

This assessment is derived from consideration of the following factors:

- the Masterplan is a non-statutory plan, which lies below the Meath County Development Plan in hierarchy;
- the lands are already zoned for the residential and community infrastructure use in the Meath County Development Plan 2021-2027 and the Development Plan was subject to full SEA;
- the existing protective objectives and policies of the Meath County Development Plan 2021-2027;
- the Master Plan does not require AA;
- the minimal nature of *any likely adverse environmental* effects arising from the Master Plan.

It is considered that the proposed MP18 Master Plan is not likely to have significant effects on the environment.

Having regard to the above, it is considered that a Strategic Environmental Assessment is not required in respect of the Proposed Masterplan for MP18 lands at Milltown, Ashbourne.

References

European

- European Parliament and Council Directive 2001/42/EC of 27 June 2001 on the *Assessment of the Effects of Certain Plans and Programmes on the Environment.*
- Council Directive Habitats Directive 92/43/EEC of 21 May 1992 on the *Conservation of Natural Habitats and of Wild Fauna and Flor*a.

National and Regional

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435/2004).
- Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I.436/2004).
- European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (S.I. No. 200/2011).
- Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2004 (S.I. 201/2011).
- Planning and Development Act 2000, as amended.
- Planning and Development Regulations 2001, as amended.
- Project Ireland 2040 National Planning Framework*, Department of Housing, Planning and Local Government, 2018.*
- Regional Spatial and Economic Strategy for the Eastern and Midland Region*, Eastern & Midland Regional Assembly, 2019.*

County

- *Meath County Development Plan 2021-2027*. Meath County Council, 2021.
- S*trategic Environmental Assessment SEA Statement for the County Development Plan 2021-2027*. Meath County Council, 2021.
- *Strategic Flood Risk Assessment for the Meath County Development Plan 2021-2027*. Meath County Council, 2021.

Guidelines

- Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities*. Environmental Protection Agency, 2004.*
- Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment*. Environment Directorate-General of the European Commission, 2003.*
- *Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes - Practitioner's Manual*. Environmental Protection Agency (EPA), 2013.

- *Ireland's Environment - An Assessment 2016,* EPA, 2020.
- *SEA Pack*. EPA, 2020.
- *SEA of Local Authority Land Use Plans (V1.12) - EPA Recommendations and Resources*. EPA
- 2021.
- *SEA Process Checklist - Consultation Draft*. EPA, 2008.
- *SEA Spatial Information Sources Inventory, EPA,* 2021.
- *SEA Resource Manual for Local and Regional Planning Authorities*. Environmental Protection Agency, 2015.
- *Synthesis Report on Developing a Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland*. Environmental Protection Agency, 2003.
- *The Planning System and Flood Risk Management Guidelines for Planning Authorities*. Department of Environment, Heritage and Local Government, 2009.

APPENDIX II

Appropriate Assessment Screening Report

For

Master Plan 18 – Milltown Masterplan,

Ashbourne, Co. Meath

Scott Cawley, College House, 71 – 73 Rock Road, Blackrock, Co. Dublin, A94 F9X9, Ireland

Tel+353(1)676-9815 Fax +353(1)676-9816

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Table of Contents

1 Introduction

1 This report, which contains information required for the competent authority (in this instance Meath County Council) to undertake a screening for Appropriate Assessment (AA) in respect of the Masterplan (prepared by Davey Smith Architects (December 2021) of lands at Milltown, Ashbourne (Figure 1), has been prepared by Scott Cawley Ltd. It provides information on, and assesses the potential for, the Masterplan to impact on the Natura 2000 network (hereafter referred to as European sites)[1].

2 The Masterplan relates to *c*.19.9 hectares of lands at Milltown to the south of Ashbourne, which are identified as Master Plan 18 in the Meath County Development Plan 2021 – 2027 (Meath County Council, 2021). Meath County Council propose that these lands shall provide a primary school site, lands for recreational uses including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Masterplan.

3 An AA is required if significant effects on European sites arising from a Masterplan cannot be ruled out at the screening stage, either alone or in combination with other plans or projects. It is the responsibility of the competent authority to make a decision as to whether or not the Masterplan is likely to have significant effects on European sites, either individually or in combination with other plans or projects.

[1] The Natura 2000 network is a European network of important ecological sites, as defined under Article 3 of the Habitats Directive 92/43/EEC, which comprises both special areas of conservation and special protection areas. Special conservation areas are sites hosting the natural habitat types listed in Annex I, and habitats of the species listed in Annex II, of the Habitats Directive, and are established under the Habitats Directive itself. Special protection areas are established under Article 4 of the Birds Directive 2009/147/EC for the protection of endangered species of wild birds. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats.

In Ireland these sites are designed as European sites - defined under the Planning Acts and/or the Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Figure 1 Masterplan of lands at Milltown, Ashbourne[2]

For the reasons set out in detail in this AA Screening Report, a Stage Two **Appropriate Assessment of the Masterplan is not required in this instance** as it can be concluded, on the basis of objective information, that the Masterplan, either individually or in combination with other plans or projects, will not have a significant effect on any European sites.

2 Methodology

2.1 Guidance

4 This Appropriate Assessment Screening Report has been prepared with regard to the following guidance documents, as relevant:

- *OPR Practice Note PN01. Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator, 2021)

[2] Davey Smith Architects (December 2021). *Masterplan, Lands at Milltown, Ashbourne*.

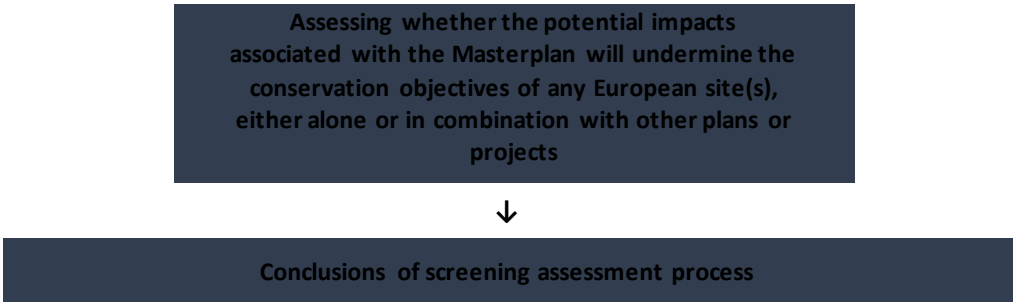
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10
- *Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021)
- *Communication from the Commission on the precautionary principle* (European Commission, 2000), and
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019).

2.2 Assessment Methodology

5 The above referenced guidance sets out a staged process for carrying out Appropriate Assessment. To determine if an Appropriate Assessment is required, documented screening is required. Screening identifies the potential for effects on the conservation objectives of European sites, if any, which would arise from a proposed plan or project, either alone or in combination with other plans and projects (i.e. likely significant effects).

6 Significant effects on a European site are those that would undermine the conservation objectives supporting the favourable conservation condition of the Qualifying Interest (QI) habitats and/or the QI/Special Conservation Interest (SCI) species of a European site(s).

7 Screening for Appropriate Assessment involves the following steps:



8 Screening for Appropriate Assessment must also identify if a plan or project is directly connected with or necessary to the management of a European sites. As the Masterplan is a non-statutory plan , it is required to be subject to Appropriate Assessment (as well as Strategic Environmental Assessment and Strategic Flood Risk Assessment – prepared separately and not the focus of this assessment).

9 If the conclusions at the end of Appropriate Assessment screening are that there is no likelihood of significant effects occurring on any European sites as a result of the proposed plan or project, either alone or in combination with other plans and projects, then there is no requirement to undertake a Stage Two Appropriate Assessment.

10 In establishing which European sites are potentially at risk (in the absence of mitigation) from the Masterplan, a source-pathway-receptor approach was applied. In order for an impact to occur, there must be a risk enabled by having a source (e.g. water abstraction or construction works), a receptor (e.g. a European site or its QI(s) or SCI(s)[3]), and a pathway between the source and the receptor (e.g. pathway by air for airborne pollution, or a pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

11 The identification of source-pathway-receptor connection(s) between the Masterplan and European sites essentially is the process of identifying which European sites are within the Zone of Influence (ZoI) of the Masterplan, and therefore potentially at risk of significant effects. The ZoI is the area over which the Masterplan could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives[4].

12 The identification of a source-pathway-receptor link does not automatically mean that significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. extent and duration of construction works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for airborne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs/SCIs).

13 The 'likely significant effects' test is based on the precautionary principle[5]. The precautionary principle means that, based on the most reliable available information, where there is uncertainty or doubt as to

[3] The term qualifying interest is used when referring to the habitats or species for which an SAC is designated; the term special conservation interest is used when referring to the bird species (or wetland habitats) for which an SPA is designated.

[4] As defined in the *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2018)

[5] The precautionary principle is a guiding principle that derives from Article 191 of the Treaty on the Functioning of the European Union and has been developed in the case law of the European Court of Justice (e.g. ECJ case C-127/02 – Waddenzee, Netherlands).

the absence of significant effects, the project cannot be screened out and an appropriate assessment must be carried out.

2.3 Desktop Data Review

14 The desktop data sources used to inform the assessment presented in this report are as follows (accessed in August 2022):

- Online data available on European sites and protected habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie[6], including conservation objectives documents
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on groundwater resources and groundwater quality in the area available from www.epa.ie and www.gsi.ie
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Information on the location, nature and design of the Masterplan supplied by the applicant's design team
- *Meath County Development Plan 2021 - 2027* (Meath County Council, 2021)
- Hydrological & Hydrogeological Qualitative Risk Assessment for Proposed Masterplan and SHD in Lands at Milltown, Ashbourne, Co. Meath (AWN, 2022).

2.4 Baseline Surveys

15 This section describes the ecological surveys carried out to inform the assessment of likely significant effects on European sites.

2.4.1 Habitats and Flora Survey

A habitat survey was undertaken of the Masterplan site on the 31st August 2020 by Alexis Fitzgerald B.Sc. M.Sc. of Scott Cawley Ltd., and on the 18th June 2021 and 20th April 2022 by Síofra Quigley B.Sc. (Hons) M.Sc. also of Scott Cawley Ltd. following the methodology described in *Best Practice Guidance for Habitat Survey and Mapping*[7]. All habitat types were classified using the *Guide to Habitats in Ireland*[8], recording the indicator species and abundance using the DAFOR scale[9] and recording any species of conservation interest. Vascular and bryophyte plant nomenclature generally follow that of *The National Vegetation*

The guidance document *Communication from the Commission on the Precautionary Principle* (European Commission, 2000) notes that the precautionary principle "*covers those specific circumstances where scientific evidence is insufficient, inconclusive or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection*"..

[6] The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC_ITM_2022_08 and SPA_ITM_2021_10.

[7] Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

[8] Fossitt, J.A. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

[9] The DAFOR scale is an ordinal or semi-quantitative scale for recording the relative abundance of plant species. The name DAFOR is an acronym for the abundance levels recorded: Dominant, Abundant, Frequent, Occasional and Rare.

Database[10], having regard to more recent taxonomic changes to species names after the *New Flora of the British Isles*[11] and the British Bryological Society's *Mosses and Liverworts of Britain and Ireland: A Field Guide*[12].

2.4.2 Fauna Surveys

2.4.2.1 Terrestrial Mammals (excluding Bats)

16 Terrestrial fauna surveys (excluding bats) was undertaken on the 31st August 2020 by Alexis Fitzgerald, and resurveyed on the 18th June 2021 and 20th April 2022 by Síofra Quigley. The presence/absence of terrestrial fauna species were surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings, as well as by direct observation. The habitats on site were assessed for signs of usage by protected/red-listed fauna species, and their potential to support these species. Surveys to check for the presence of badger setts within the study area, and to record any evidence of use, were also undertaken.

2.4.2.2 Breeding Birds

17 Several breeding bird surveys were undertaken on the following dates: 23rd April 2021 by Síofra Quigley and Cathal O'Brien B.Sc. (Hons), 1st June 2021 by Wayne Daly B.Sc. (Hons), on the 11th June 2021, and on the 20th April 2022 by Síofra Quigley, using a methodology adapted from the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species* [13]. Lands within the study area were slowly walked in a manner allowing the surveyor to come within 50m of all habitat features. Birds were identified by sight and song, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes. The barns and sheds within the Masterplan site were also checked for nesting suitability and evidence of barn swallows, house martins, and barn owls.

2.4.2.3 Wintering Birds

18 Wintering bird surveys were undertaken on the 16th February 2021 by Laura Higgins B.Sc. (Hons), on the 3rd March 2021 by Lorna Gill B.Sc. (Hons), on the 25th March 2022 by Wayne Daly B. Sc. (Hons), using a modified methodology[14] based on the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species*. Lands were surveyed by a walkover of the area to identify birds which may be using the fields for foraging and identifying evidence of usage by wildfowl such as swans or geese (e.g. droppings). Birds were identified by sight and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes.

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[10] Weekes, L.C. & FitzPatrick, Ú. (2010) The National Vegetation Database: Guidelines and Standards for the Collection and Storage of Vegetation Data in Ireland. Version 1.0. Irish Wildlife Manuals, No. 49. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

[11] Stace, C. (2019) *New Flora of the British Isles*. *4th Edition*. C&M Floristics.

[12] Atherton, I., Bosanquet, S. & Lawley, M. (2010) *Mosses and Liverworts of Britain and Ireland: A Field Guide*. Latimer Trend & Co., Plymouth.

[13] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) *Bird Monitoring Methods - A Manual of Techniques for Key UK Species*. RSPB: Sandy

[14] Wintering bird surveys were carried out during February and March 2021 and 2022. Whilst this is considered late in the season and deviates from the methodology of 1 survey a month during winter for 2 year (Gilbert et al., 1998), the habitats within the Masterplan are comprised of agricultural grassland, managed for cattle grazing. This habitat type provides little habitat for wintering bird species, such as geese and waders, who primarily nest and roost in estuaries, and wetlands, along Ireland's coastline. Geese also feed on crops and coastal grasslands, such as amenity grassland in Dublin City. Neither of these habitats are present within the Masterplan, and as such this is not considered a limitation

3 Provision of Information for Screening for Appropriate Assessment

19 The following sections provide information to facilitate the Appropriate Assessment screening of the Masterplan to be undertaken by the competent authority.

20 A description of the Masterplan and the receiving environment is provided to identify the potential ecological impacts. The environmental baseline conditions are discussed, as relevant to the assessment of ecological impacts where they may highlight potential pathways for impacts associated with the Masterplan to affect the receiving ecological environment (e.g. hydrogeological and hydrological data).

21 The potential impacts are examined in order to define the potential zone of influence of the Masterplan on the receiving environment. This then informs the assessment of whether the Masterplan will result in significant effects on any European sites; i.e. affect the conservation objectives supporting the favourable conservation condition of the European site's QIs or SCIs.

3.1 Description of the Masterplan

22 The Masterplan is on the suburban edge of Ashbourne town off the Dublin Road (Figure 1). It is currently in use as agriculture land and is defined by its grid of mature hedgerows and trees, some of which denote Townland boundaries of the area. Access to the site is from Cherry Lane on the northeast corner, which has good width and is a short distance from the main public road. A second access exists from Hickey's Lane to the southeast, which is a rural lane that serves a number of larger dwellings. Potential pedestrian connections could be provided into the existing Alderbrook and Tara Close housing developments to the North and West respectively. The site is approximately 1.5km South of the town centre which represents a 15 minute walk or 5 minute cycle.

23 The proposal is to develop the masterplan site from the centre outwards or in a north to south direction. Each phase of the Masterplan will deliver the appropriate amount of open space, physical and social infrastructure commensurate to the number of units and quantum of land being developed. The delivery of apartments has been split between three phases to facilitate financing of the Masterplan and also to ensure that an appropriate mix of units are delivered at each phase.

Organising Principles

a) Create an integrated, high quality residential development with a strong sense of place that includes a local neighbourhood centre, playing pitches and primary school.

24 Linkages into surrounding streets and spaces are proposed in Easterly, Northerly and Westerly directions, ensuring that Masterplan within each phase of the masterplan will be highly permeable and well-integrated with its surroundings. As well as serving the masterplan lands, the proposed east-west link road will connect the lands to the west with the existing roads network; thus, future proofing the development potential of these adjoining lands. The proposed local neighbourhood centre, which includes an urban space, creche and retail units, is located at the heart of the development where it addresses the open space to the east as well as the primary school and playing pitches to the west. With its active ground floor uses addressing the urban space and variety of building heights, the Local centre will become a focal point in the neighbourhood which will enrich and contribute to the placemaking of the area.

25 It is intended that the G1 lands (Community Infrastructure Zoning Objective) will accommodate a primary school and playing pitch, which forms the western edge of the local centre, and these facilities will play an important role in the community both during and outside school hours. Approximately 1ha. of land will be reserved, as a potential future school site, the layout of which will be determined via consultation with the Department of Education at a future date. It is considered that the layout of the future school site should be determined prior to the installation of a playing pitch as a playing pitch may impede the optimum layout for a school building on these lands. Consideration will also need to be given to how the lands reserved for

the school and playing pitch will integrate with the adjoining F1 Open Space (Zoning Objective)[15].

b) Provide an interconnected network of open spaces across the site that retains existing trees and hedgerows as much as possible and delivers high quality public amenity spaces for the area.

26 The design and layout of green infrastructure is a key organising principle in the overall masterplan. This network of open spaces forms the 'green spine' of the development from which all other streets and spaces are organised and interconnected. The open space has been shaped to retain existing mature trees and hedgerows, preventing the loss of existing flora and fauna habitats and also retaining the legibility of townland boundaries of the area. Vehicular activity traversing the open space has been minimised to create a high-quality and safe environment for residents. The open space will include Sustainable Urban Drainage Systems (SUDS) that will enhance the public open space and promote biodiversity in the area. This Masterplan proposes that the open space is addressed with a strong urban edge made up of 3-4 storey buildings, ensuring high levels of passive surveillance.

c) Create a segregated pedestrian & bicycle green link from the Dublin Road to the lands to the west, which serves the proposed primary school, playing pitches and local centre.

27 This principle works in tandem with the interconnected 'green spine' concept. The proposed 4m wide green link weaves through the site from East to West, connecting the Dublin Road with the main green spine, local centre, school, playing pitch and into the adjoining lands to the west. The provision of a safe and attractive green link through the site will encourage cycling and walking to school and should reduce traffic congestion at drop-off and collection times. Such a piece of infrastructure would have far-reaching benefits for the community, which include environmental, increased childhood mobility, road safety, increased sense of place etc. The route will be passively overlooked by houses and apartments and will be publicly lit at night.

Surface water

28 There is an existing 375mm surface water line located opposite Cherry Lane on the Dublin Road. The existing Fairyhouse Stream is located to the south of the subject site; it is proposed to discharge the outflow of the surface water drainage to this stream.

29 Surface water runoff from the site will be limited to greenfield runoff rates (Qbar) in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). Storms up to the 30-year critical storm with an additional 20% allowance for climate change will be stored underground in attenuation systems such as Stormtech or similar approved. Storms up to the 100 year critical storm with an additional 20% allowance for climate change will be stored above ground in detention/infiltration basins.

30 Surface water discharge rates from the proposed surface water drainage network will be controlled by a vortex flow control device (Hydrobrake or equivalent) and associated underground geo-cellular attenuation systems (Stormtech or approved equivalent). Surface water discharge will also pass via a Class 1 separator (sized in accordance with permitted discharge from the site).

31 The proposed surface water drainage network will collect surface water runoff from the site via a piped network prior to discharging off site via the attenuation tank, flow control device and separator arrangement as noted above. Surface water runoff from the site's road network and roofs will be directed to the proposed pipe network via conventional road gullies while surface water runoff from driveways will be captured by permeable paving.

[15] On January 21 (2021) Meath County Councillors unanimously voted to zone 80 acres of Killegland Farm as Open Space for the provision of a Community Park (Meath County Development Plan 2021 – 2027).

32 The design will include Sustainable Urban Drainage Systems (SuDS) which will be incorporated to reduce run-off volumes and improve run-off water quality. These features will be provided to cater for up to a 1-in-100 year rainfall event and 20% climate change. It should be noted that these SuDS measures have not been taken into account in the subsequent analysis and are not in place for the protection of European sites.

33 A Flood Risk Assessment, prepared by DBFL sets out that the Masterplan area is fully within Flood Zone C. This indicates a low risk of fluvial, pluvial, groundwater and coastal flooding (less than 0.1% AEP or 1 in 1000 chance of flooding in a given year). Therefore, any flood events will not cause flooding of the Proposed Masterplan, and the development will not affect the flood storage volume or increase flood risk elsewhere.

Foul water

34 The Masterplan site has no existing foul loading as it is currently a greenfield site. According to the Infrastructure Design Report, there is an existing 225/300mm foul sewer which is located immediately to the west of the subject site in the Dublin Road.

35 The site has been divided in two areas for the purposes of foul drainage management. The northern half of the site will discharge via gravity to an existing foul manhole in the Dublin Road via Cherry Lane. The units in the southern portion of the site will discharge to an existing foul sewer located in Hickeys Lane. All connections are to be agreed with Irish Water prior to commencement.

36 The Infrastructure Design Report for the proposed Masterplan estimated a foul peak flow of 24.75 l/s (for 702 no. residential units). Therefore, the total 760 no. residential units would generate a peak flow of 28.26 l/s. The foul water from the Masterplan eventually discharges to the Ringsend WasteWater Treatment Plant (WWTP) which in turn discharges into Dublin Bay.

3.2 Overview of the Receiving Environment

3.2.1 European sites

37 The Masterplan does not overlap with any European sites. The nearest European sites are Malahide Estuary SAC and Malahide Estuary SPA, located *c.* 12.6km and *c.* 12.7km east of the Masterplan, respectively. The nearest surface water feature to the site, the Fairyhouse Stream is located *c.* 300m south of the Masterplan. This stream flows *c.* 3.2km downstream in a south easterly direction, where it joins with the Broadmeadow River. The Broadmeadow River flows for a further 11.3km downstream where it ultimately discharges into the Malahide Estuary, and subsequently, the European sites therein *i.e.,* Malahide Estuary SAC and Malahide Estuary SPA.

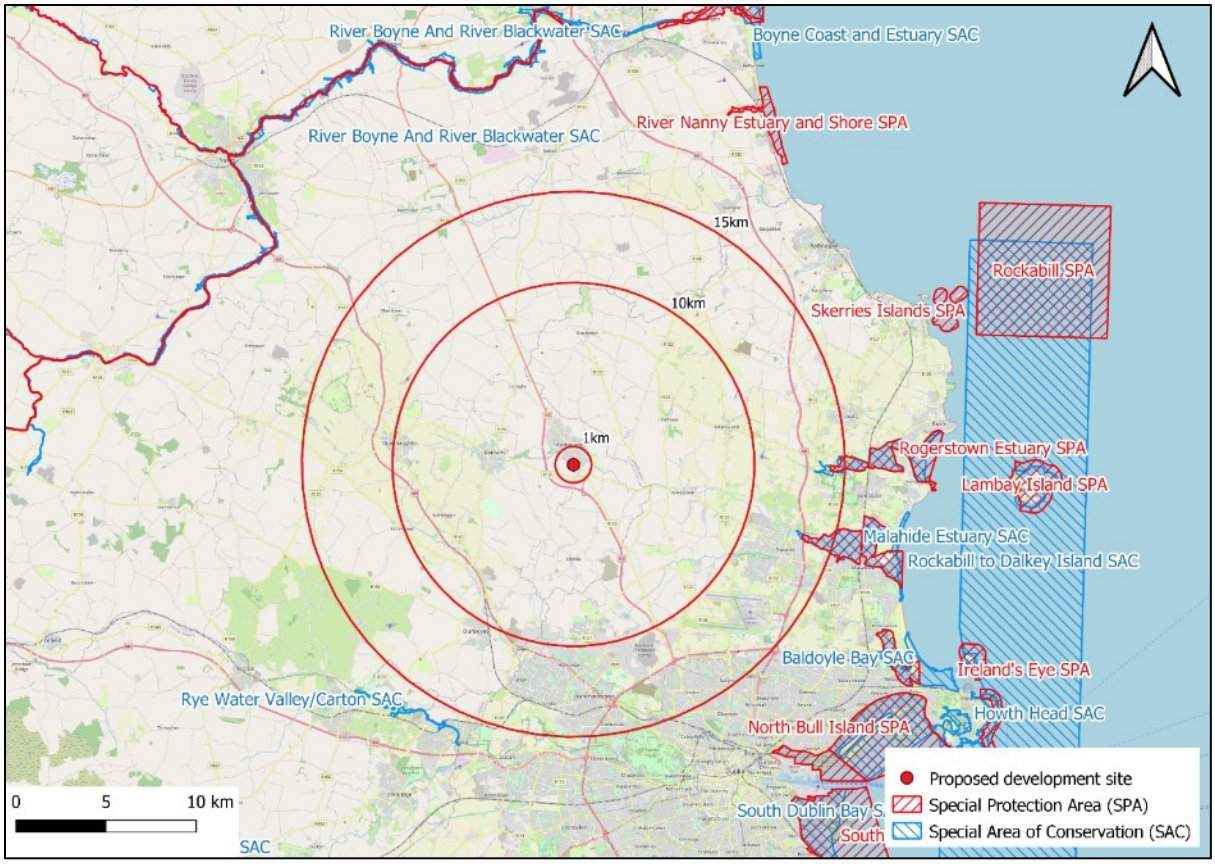
38 Rogerstown Estuary SAC and Rogerstown Estuary SPA are the only other European sites within *c.* 15km of the Masterplan site, located *c.* 13.1km and *c.* 14km east of the Masterplan site.

39 Foul waters from the Masterplan will join the public sewer and will be treated at the Ringsend WWTP prior to subsequent discharge to Dublin Bay. Therefore, there is an indirect hydrological link between the Masterplan and Dublin Bay, and the European sites within, i.e., South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA. These European sites are considered to be within the potential zone of influence of the Masterplan, as all of these sites are located downstream of the Masterplan within Dublin Bay.

40 There are no other European sites in the vicinity of the Masterplan, or hydrological pathways to any other European sites, with all other European sites over 15km away.

41 All of the European sites present in the vicinity of the Masterplan are shown on Figure 2 below. The QIs/SCIs of the European sites in the vicinity of the Masterplan are provided in Appendix I.

Figure 2 European sites in the vicinity of the Masterplan



3.2.2 Habitats

42 The Masterplan site is located in the 10km Grid Square O05 at O 06579 51368 on the outskirts of Ashbourne town. The lands comprise of 11 agricultural fields separated by hedgerows, drainage ditches and treelines. Cattle graze regularly on the southern, eastern, and north western fields. Five residential houses (two currently occupied), and four sheds/barns are also present within the Masterplan site. Agricultural fields border the lands to the west and south, with residential areas and the town of Ashbourne to the north and east of the Masterplan site. The following habitat types (and mosaics of these), assigned using the Heritage Council Classification System[8], were identified within the Masterplan site:

- *Buildings and artificial surfaces (BL3)*
- *Drainage ditches (FW4)*
- *Improved agricultural grassland (GA1)*
- *Dry meadows and grassy verges (GS2)*
- *Wet grassland (GS4)*
- *Hedgerows (WL1)*
- *Treelines (WL2)*

43 None of the habitats within the Masterplan site corresponded to Annex I Habitats, are not located within and do not provide a supporting role to any Annex I habitats connected with any European site. Overall, the habitats located within the footprint of the Masterplan have limited ecological value.

3.2.3 Flora and Fauna Species

44 No protected plant species contained within the Flora (Protection) Order, 2022, rare plant species contained within Ireland Red List No. 10 Vascular Plants (Wyse Jackson et al., 2016), or species listed on

Irelands Red List No. 8: Bryophytes (Lockhart et al., 2012) were identified on the NBDC database search of records within *c.* 2km of the site, or recorded within the Masterplan site during habitat surveys.

45 No non-native, invasive plant species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 were identified on the NBDC database search of records within *c.* 2km of the site, or recorded within the Masterplan site during habitat surveys.

46 The NBDC desktop study holds four records for one QI species, otter *Lutra Lutra*, within *c.* 2km of the Masterplan site, the most recent record being from 2016 on the Broadmeadow River located *c.* 1km north of the Masterplan site. There are no surface water features within the Masterplan site, the nearest watercourse is the Fairyhouse Stream, located *c.* 300m south of the site. The site therefore holds no suitability for this species. There are no European sites hydrologically connected to the Fairyhouse stream that are designated for otter species, with the closest being the River Boyne and River Blackwater SAC, located *c*. 20km north of the Masterplan site, of which the Masterplan is not connected via any surface water feature to the River Boyne.

47 The NBDC desktop study also holds records for two SCI bird species within *c*. 2km of the Masterplan site, redshank *Tringa tetanus* and golden plover *Pluvialis apricaria,* for which European sites within *c.* 15km are designated. One record of redshank was recorded in 1984 from the same gride square in which the Masterplan site is located in, 0O5, recorded for The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84. There were four records of golden plover, with the most recent from 2011 also record in grid square O05, for the Bird Atlas 2007 – 2011. Golden plover typically breeds within blanket bog habitat in the uplands of the west of Ireland, and overwinters in a variety of habitats, most commonly being found in coastal and estuarine habitats. Redshank are not a regular breeding species in Ireland, however coasts, lakes and the River Shannon Callows and tributaries do support small breeding populations of this species. Redshank are a widespread and common visitor during the winter months in wetlands and coasts, favouring mudflats, large estuaries and inlets. These species were not identified during any of the bird surveys carried out within the Masterplan site in 2021 and 2022, and the site is considered unsuitable for both species as the habitats within are predominately used for agricultural uses.

48 During wintering bird surveys carried out in February and March 2021 and March 2022, one SCI species from nearby European sites were identified within the lands, herring gull, an SCI species of Ireland's Eye SPA located c. 23km south east of the Masterplan. This species was identified flying over the site on numerous occasions, and observed foraging in one of the fields in 2022. Due to the distance between the Masterplan and this European site (i.e. over 20km), it is unlikely that the herring gull SCI population use the Masterplan as foraging grounds, particularly given the low numbers observed on one occasion.

49 There is no suitable habitat for light-bellied Brent goose *Branta bernicla hrota*, greylag goose and/or other SCI wintering bird species such as waders onsite. Light-bellied Brent geese and wintering waders regularly use Dublin's amenity parks and sports grounds for foraging. The nearest known light-bellied Brent goose site is c. 14km south east the Masterplan site at Broadmeadow/Seatown East Fields (Scott Cawley Ltd., 2017). Given that there is no suitable foraging habitat, i.e. open amenity grassland onsite, the Masterplan site is unsuitable for light-bellied Brent goose, and/or other SCI wintering bird species that use similar habitat for foraging within County Dublin and surrounds. The Masterplan is not on any known migrating routes of wintering bird species or located on any flight path for ex-situ SCI species.

50 The wet grassland habitat provides some suitable habitat for wading species such as snipe, which was identified in this habitat during surveys in 2022. There is limited habitat for waterfowl species however due to the lack of open waterbodies in the site.

51 The treelines and scrub offer suitable foraging habitat and shelter for smaller overwintering species such as passerines for example redwings *Turdus iliacus* and fieldfare *Turdus pilaris*, redwing was identified flying through the site during surveys in 2021.

52 No protected and/or rare flora were recorded in the Masterplan site.

53 There were no signs or tracks of QI species, of any European site present onsite.

3.2.3.1 Invasive Species

54 With regards to non-native invasive species, the NBDC database search returned records for grey squirrel *Sciurus carolinensis* and sika deer *Cervus nippon* which are listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011. Grey squirrel was recorded in 2007 *c.* 1.2km north of the Masterplan site in Ashbourne town, whilst sika deer was last recorded in 2008, *c.* 1.1km south of the site. Neither species was identified during surveys carried out in 2020 or 2021 within the Masterplan site.

55 No non-native, invasive plant species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 were recorded within the Masterplan site, or were identified on an NBDC database search of records within c. 2km of the Masterplan.

3.2.4 Hydrology

56 The Masterplan site is located within the Broadmeadow sub-catchment of the Nanny-Delvin catchment. The site falls within the Fairyhouse Stream WFD River Sub Basin, which drains to Malahide Estuary, and supports habitats and qualifying interest species of the Malahide Estuary SAC, and special conservation interest bird species (and their supporting wetland habitats) of the Malahide Estuary SPA. There are no surface water features within or in the immediate vicinity of the Masterplan site. The nearest surface water feature to the site, the Fairyhouse Stream is located *c.* 300m south of the Masterplan. This stream flows *c.* 3.2km downstream in a south easterly direction, where it joins with the Broadmeadow River. The Broadmeadow River flows *c.* 11.3km downstream where it ultimately discharges into the Malahide Estuary.

57 According to the EPA online Map Viewer, the Fairyhouse Stream has a Q-Value of "3" which is of "poor" water quality status. The EPA gather this information from the monitoring station near Harlockstown, (a bridge located *c.* 500m upstream of where the portion of Fairyhouse Stream is closest to the Masterplan discharges into the main Fairyhouse Stream) using invertebrate indices. Further downstream, the Fairyhouse Stream has a Q-Value of "4", which is of "good" water quality status, measured at the bridge at Donaghmore Crossroads River Station. The Fairyhouse Stream is considered "at risk" of not achieving good status under the Water Framework Directive (WFD). This Stream is a tributary of the Broadmeadow River, and joins c. 2.5km south east of the Masterplan site. The Broadmeadow River has a Q-Value of "3", this is gathered by using invertebrate indices upstream of where the Fairyhouse Stream joins with the Broadmeadow, at Milltown Bridge River Station. The Broadmeadow is also considered "at risk" of not achieving good status under the WFD. The Broadmeadow River flows *c.* 11.3km downstream where it discharges into Malahide Estuary, of which is considered "at risk" of not achieving good water quality status under the WFD.

58 Foul waters from the Masterplan will ultimately discharge to the Dublin Bay via Ringsend WWTP. Dublin Bay has a WFD status of 'Good'. Presently the Liffey Estuary Lower waterbody has a WFD risk score of 'At risk of not achieving good status' while the Dublin Bay waterbody has a WFD risk score of 'Not at risk'. The ecological status (which comprises biological and chemical status) of transitional and coastal water bodies during 2013-2018 for Liffey Estuary Lower and Dublin Bay is classed as 'Good'.

59 The most recent surface water quality data for the Liffey Estuary Lower and Dublin Bay (2019-2020) indicates that Liffey Estuary Lower is classified as 'intermediate', while Dublin Bay is classified as 'Unpolluted'. Under the 2015 'Trophic Status Assessment Scheme' classification of the EPA, 'Unpolluted' means there have been no breaches of the EPA's threshold values for nutrient enrichment, accelerated plant growth, or disturbance of the level of dissolved oxygen normally present.

3.2.5 Hydrogeology

60 Geological Survey of Ireland (GSI) data indicates that the Masterplan is underlain by Locally Important Aquifer (Ll), bedrock which is moderately productive only in local zones. The site is located in an area of "low" vulnerability in relation to the underlying aquifer.

61 The groundwater body (GWB) underlying the Masterplan site is the "Swords" GWB. Which is currently classified by the EPA as having "good" groundwater status under the WFD and the groundwater risk is

classed as "not at risk". The Swords GWB overlaps with four European sites, Malahide Estuary SAC and SPA and Rogerstown Estuary SAC and SPA, none of which have any qualifying interest groundwater dependent habitats.

3.3 Assessment of Effects on European Sites

62 This section identifies all the potential impacts associated with the Masterplan and its implementation if adopted , examines whether there are any European sites within the ZoI of effects from the Masterplan, and assesses whether there is any risk of the Masterplan resulting in a significant effect on any European site, either alone or in combination with other plans or projects.

63 In assessing the potential for the Masterplan to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

3.3.1 Habitat loss and fragmentation

64 The Masterplan does not overlap with the boundary of any European site. Therefore, there are no European sites at risk of direct habitat loss impacts.

65 As the Masterplan does not traverse any European sites there is no potential for habitat fragmentation to occur.

66 The Masterplan site does not support populations of any fauna species linked with the QI/SCI populations of any European site.

67 As the Masterplan will not result in habitat loss or habitat fragmentation within any European site, there is no potential for any in combination effects to occur in that regard.

68 Additionally, any project arising within the Masterplan will be subject to the AA process, and will be required to pass the AA Screening as per Policy HER OBL 33 of the Meath County Development Plan 2021 – 2028 (Meath County Council, 2021).

3.3.2 Habitat degradation as a result of hydrological impacts

69 There are a number of drainage ditches located along the site boundary. These ditches discharge to the existing Fairyhouse stream to the south. There is an existing 375mm surface water line located opposite Cherry Lane on the Dublin Road. Surface water run-off and discharges from the Masterplan will drain to the existing local surface water drainage network. The EPA maps identify a small tributary to the Fairyhouse Stream c. 130 m to the south of the Masterplan boundary. The Fairyhouse Stream flows eastwards c. 470 m to the south of the subject site. The Broadmeadows River crosses Ashbourne and is located c. 560 m to the north of the site. The Fairyhouse Stream joins the Broadmeadows River c. 2.2 Km to the east of the proposed Masterplan. The Broadmeadows outfalls into the Malahide Estuary c. 12 Km to the east of the Masterplan. Therefore, the ZoI of potential effects on water quality from the Masterplan could extend to Malahide Estuary and the European sites therein.

70 There will also be an indirect discharge to South Dublin Bay through the foul water drainage. The Masterplan site has no existing foul loading as it is currently a greenfield site. According to the Infrastructure Design Report, there is an existing 225/300mm foul sewer which is located immediately to the west of the subject site in the Dublin Road. The site has been divided in two areas for the purposes of foul drainage management. The northern half of the site will discharge via gravity to an existing foul manhole in the Dublin Road via Cherry Lane. The units in the southern portion of the site will discharge to an existing foul sewer located in Hickeys Lane. The foul water from the proposed Masterplan eventually discharges to the Ringsend Waste Water Treatment Plant (WWTP) which in turn discharges into Dublin Bay.

71 Therefore, the ZoI of potential effects on water quality from the Masterplan could extend to Dublin Bay the European sites therein.

Surface Water

72 Surface water run-off and discharges from the Masterplan will enter the downstream receiving environment via the proposed surface water drainage network.

73 Considering the following, the Masterplan will not have any measurable effects on water quality in Malahide Estuary, Dublin Bay or the Irish Sea:

- The scale and location of the Masterplan relative to the receiving surface water network
- The relatively low volume of any surface water run-off or discharge events from the Masterplan site relative to the receiving surface water and marine environments, and
- The level of mixing, dilution and dispersion of any surface water run-off/discharges from the Masterplan site in the receiving watercourses, Malahide Estuary, Dublin Bay and the Irish Sea

74 A hydrological and hydrogeological qualitative risk assessment report was prepared for the Masterplan by AWN Consulting[16] (AWN, 2022). The assessment was carried out using a conceptual site model (CSM) which was based on a good understanding of the hydrological and hydrogeological environment, plausible sources of impact and knowledge of receptor requirements. This allows possible source-pathway-receptor linkages to be identified. Potential sources of impacts during construction and operation are considered in the CSM and all potential sources of contamination are considered without taking account of any measures intended to avoid or reduce harmful effects of the Masterplan (mitigation measures) i.e. a worst-case scenario.

75 Results of the CSM carried out by AWN and which inform this AA screening report, indicate that surface run-off from the Masterplan, during both construction and operational phases respectively, will not result in any perceptible impact on water quality in downstream receiving waters in Malahide Estuary and Dublin Bay (and thus in the European sites therein). The CSM also considered in-combination effects and concluded that there would be no perceptible impact on water quality as a result of the Masterplan in-combination with surface water arising from other developments.

76 In line with good practice, effective measures have been included in the construction design, management of construction programme and during the operational phase of the Masterplan. However, it must be noted that these are included in the design, not for the purposes of avoiding or reducing any potential harmful effects to any European sites, but are required for new developments under the objectives of the Greater Dublin Strategic Drainage Study, Meath County Development Plan and Dublin City Council Development Plan and in line with good construction practice. As stated, the CSM prepared by AWN was done so in the absence of consideration of any of these measures i.e. the CSM was based on a worst case scenario, and even without these measures in place, there will be no impact on downstream European sites as a result of the Masterplan.

77 Therefore, the CSM concluded that there is no possibility of the Masterplan undermining the conservation objectives of any of the qualifying interests or special conservation interests of the European sites in, or associated with, Malahide Estuary or Dublin Bay as a result of surface water run-off or discharges.

78 Additionally, any project arising from within the Masterplan will be subject to the AA process, and will be required to pass the AA Screening as per Policy HER OBL 33 of the Meath County Development Plan 2021 – 2028 (Meath County Council, 2021).

Foul Water

79 The foul waters from the Masterplan will connect to the existing public foul water sewer network, with the northern half of the site discharging to an existing foul manhole in the Dublin Road via Cherry Lane, and the southern portion of the site will discharge to an existing foul sewer located in Hickey's Lane. The foul

[16] AWN Consulting (2022) Hydrological & Hydrogeological Qualitative Risk Assessment for Proposed Residential Development at Ashbourne, Co. Meath

water from the Masterplan eventually discharges to the Ringsend WWTP which in turn discharges into Dublin Bay.

80 Foul water, comprising sewage and industrial effluent (and some surface water run-off), from the Dublin area has historically been, and will continue to be, treated at Ringsend WwTP prior to discharge to Dublin Bay. The most recent information from Irish Water indicates that the plant is operating above its capacity of 1.64 million P.E. (Irish Water, 2020)[17], with a current operational loading of c.2.2 million P.E. Ringsend WwTP operates under a discharge licence from the EPA (D0034-01) and must comply with the licence conditions.

81 Despite the capacity issues associated with the Ringsend WwTP, Dublin Bay is currently classified by the EPA as being of "Unpolluted" water quality status[18]. The Liffey Estuary Lower is currently classified by the EPA as being of "Intermediate" water quality status, and of 'Good' WFD status, the Tolka Estuary as "Eutrophic", and the Tolka River is of 'Moderate' WFD status. The pollutant content of future foul water discharges to Dublin Bay is considered likely to decrease in the long-term for the following reasons:

- Irish Water are currently undertaking a major upgrade of the Ringsend WwTP to increase the plant's wastewater treatment capacity to a population equivalent of 2.4 million, which is programmed for completion in 2025[19]; and
- There is a commitment in the National Development Plan 2021-2030 to invest in and progress the Greater Dublin Drainage Project which includes the development of a new regional waste water treatment facility and associated infrastructure to serve Dublin and parts of the surrounding counties of Kildare and Meath. The project will involve the provision of a new regional wastewater treatment plant at a site in the northern part of the Greater Dublin Area and the provision of a new Orbital Drainage Sewer linking the new plant to the existing regional sewer network, which will enable future connections for identified areas of development within the catchment area. The provision of the Greater Dublin Drainage Project will augment the wastewater treatment capacity currently provided by Ringsend WwTP across the Greater Dublin Area and alleviate pressure within the existing wider waste water network and help to ensure that the waste water generated is treated safely, in compliance with the EU and national waste water treatment regulations.

82 It is also an objective of the Greater Dublin Strategic Drainage Study, and all development plans within the catchment of Ringsend WwTP, to include Sustainable Urban Drainage Systems (SUDS) within new developments. The relevant development plans also have protective policies/objectives in place to protect water quality in the receiving freshwater and marine environments, and to implement the Water Framework Directive in achieving good water quality status for Dublin Bay.

83 According to AWN (2022), in relation to the Masterplan "peak wastewater discharge is calculated at an average wastewater discharge of 28.26 litres/sec. The sewage discharge will be licensed by Irish Water, collected in the public sewer and treated at Irish Water's WwTP at Ringsend prior to discharge to Dublin Bay. This WwTP is required to operate under an EPA licence (D0034-01) and to meet environmental legislative requirements. The plant has received planning (2019) and is being upgraded with increased treatment capacity over the next five years. The peak foul discharge calculated for the proposed amendment is well within the capacity of the WWTP. Even without treatment at the Ringsend WWTP, the peak effluent discharge, calculated for the proposed amendment as 28.26 litres/sec (which would equate to 0.25% of the licensed discharge at Ringsend WWTP [peak hydraulic capacity]), would not impact on the overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body

[17] *Annual Environmental Report, Ringsend D0034-01* (Irish Water, 2020)

[18] Transitional and Coastal Surface Water Quality data (2018-2020) accessed from the EPA Envision Mapviewer www.gis.epa.ie/Envision (accessed August 2022)

[19] https://www.water.ie/projects/local-projects/ringsend/ (accessed August 2022)

Status (as defined within the Water Framework Directive). This assessment is supported by hydrodynamic and chemical modelling within Dublin Bay which has shown that there is significant dilution for contaminants of concern (DIN and MRP) available quite close to the outfall for the treatment plant (WwTP 2012 EIS, WwTP 2018 EIAR)". The AWN report also concludes that the cumulative or in-combination effects of effluent arising from the Masterplan with that of other developments discharging to Ringsend WWTP will not be significant having regard to the size of the calculated discharge from the proposal.

84 Considering the above, particularly the current unpolluted status of Dublin Bay, and that foul water discharges from the Masterplan would equate to a very small percentage of the overall discharge volumes sent to Ringsend WwTP for treatment, it is concluded that the Masterplan will not impact on the overall water quality status of Dublin Bay.

85 Therefore, there is no possibility of the Masterplan undermining the conservation objectives of any of the qualifying interests or special conservation interests of the European sites in, or associated with, Dublin Bay as a result of foul water discharges.

In Combination

86 There is potential for "in-combination" effects on water quality in Malahide Estuary and Dublin Bay from any other projects carried out within the functional areas of the Meath County Development Plan 2021 – 2027 (Meath County Council, 2021), the Fingal Development Plan 2017-2023 (Fingal County Council, 2017), Dublin City Development Plan 2016 – 2022 (Dublin City Council, 2016), or any other land use plans which could influence conditions in Malahide Estuary, Dublin Bay or the Irish Sea via rivers and other surface water features.

87 The Eastern & Midland Regional Assembly, Regional Spatial & Economic Strategy 2019-203120 (Eastern & Midland Regional Assembly, 2019) includes a range of policy objectives relevant to the protection of European sites and the protection of water quality in Dublin Bay, to which the relevant planning authorities must have regard to in the preparation and adoption of their development plans (included in Appendix II).

88 Lower level land plans and developments within Meath County must comply with the following overarching policy objectives of the Meath County Development Plan 2021 – 2027 relevant to the protection of European sites and the protection of water quality:

> HER POL 31: To ensure that the ecological impact of all development proposals on habitats and species are appropriately assessed by suitably qualified professional(s) in accordance with best practice guidelines – e.g. the preparation of an Ecological Impact Assessment (EcIA), Screening Statement for Appropriate Assessment, Environmental Impact Assessment, Natura Impact Statement (NIS), species surveys etc. (as appropriate).
>
> HER POL 32:To permit development on or adjacent to designated Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas, Statutory Nature Reserves or those proposed to be designated over the period of the Plan, only where the development has been subject to the outcome of the Appropriate Assessment process and has been carried out to the satisfaction of the Planning Authority, in consultation with National Parks and Wildlife.
>
> HER OBL 34: To protect and conserve the conservation value of candidate Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas as identified by the Minister for the Department of Culture, Heritage and the Gaeltacht and any other sites that may be proposed for designation during the lifetime of this Plan in accordance with the provisions of the Habitats and Birds Directives and to permit development in or affecting same only in accordance with the provisions of those Directives as transposed into Irish Law.

[20] Eastern & Midland Regional Assembly (2019) *Regional Spatial & Economic Strategy 2019-2030*

INF OBJ 8: To protect both ground and surface water resources and work with Irish Water to develop and implement Water Safety Plans to protect sources of public water supply and their contributing catchment

INF OBJ 12: The Planning Authority shall consider the provision of temporary wastewater treatment facilities for new developments only in circumstances where a permanent solution is identified and committed to by Irish Water. The temporary solution shall only be considered where it is deemed to be environmentally sustainable and would not affect the water quality status of receiving waters. Adequate provision shall be made by the developer for the operation and maintenance of the temporary facility for the duration of the operation of the required infrastructure.

INF POL 16: To ensure that all planning applications for new development have regard to the surface water management policies provided for in the GDSDS.

INF OBJ 14: To require the use of SuDS within Local Authority Developments and other infrastructural projects in accordance with the Greater Dublin Regional Code of Practice for Drainage Works.

INF OBJ 15: To require the use of SuDS in accordance with the Greater Dublin Regional Code of Practice for Drainage Works for new developments (including extensions).

INF OBJ 19: To ensure that developments permitted by the Council which involve discharge of wastewater to surface waters or groundwaters comply with the requirements of the EU Environmental Objectives (Surface Waters) Regulations and EU Environmental Objectives (Groundwater) Regulations.

INF OBJ 22: To ensure flood relief measures are suitably designed to protect the conservation objectives of Natura 2000 sites, and to avoid direct or indirect impacts upon qualifying interests or Natura 2000 sites.

INF OBJ 25: To require the use of Sustainable Urban Drainage Systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.

89 Plans and developments within the other local authority areas which could influence conditions in Malahide Estuary or Dublin Bay via rivers and other surface water features, also must comply with the policies and objectives relevant to the protection of European sites and water quality. This includes the *Fingal Development Plan 2017-2023* and the *Dublin City Development 2016 - 2022*. The relevant policies and objectives in those plans for the protection of European sites and water quality are included in Appendix II.

90 Therefore, and having regard to the policies and objectives referred to under the relevant development plans, it is concluded that the possibility of any other plans or projects acting in combination with the Masterplan to give rise to significant effects on any European site in, or associated with, Malahide Estuary and Dublin Bay can be excluded.

3.3.3 Habitat degradation as a result of hydrogeological impacts

91 Groundwater effects could arise as a consequence of an accidental pollution event potentially causing a reduction in groundwater quality and/or dewatering activity potentially causing a reduction in groundwater levels in the locality. Whilst this is a possibility, this would be very localised and would not result in the degradation of existing groundwater conditions. Furthermore, there are no groundwater dependent habitats or species associated with the European sites in Malahide Estuary or Rogerstown Estuary.

92 The nearest European site which supports groundwater dependent terrestrial habitats and/or species is the Rye Water Valley/Carton SAC, located c. 15.5km south west of the Masterplan site. This site is not located in the same GWB as the Masterplan site and is located a significant distance away. Therefore there

is no potential for groundwater impacts to affect conditions in the Rye Water Valley/Carton SAC as a result of the Masterplan.

93 Additionally, Objectives 8, 19, 3, 32, 36, and 37 of the Meath County Development Plan 2021 – 2027 includes measures for the protection of groundwater bodies, of which any plan or project within County Meath or the Masterplan must adhere to.

94 Therefore, there is no possibility of the Masterplan undermining the conservation objectives of any of the Qualifying Interests or Special Conservation Interests of any European sites, either alone or in combination with any other pans or projects, as a result of hydrogeological effects.

3.3.4 Habitat degradation as a result of introducing/spreading non-native invasive species

95 There are no species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 on the Masterplan site. The Masterplan site is hydrologically connected to European sites via the surface water drainage.,However, owing to the absence of Third Schedule non-native invasive species within the Masterplan site, there is no risk of non-native invasive species spreading from the Masterplan site to any downstream European site.

3.3.5 Disturbance and displacement impacts

96 Construction-related disturbance and displacement of fauna species could potentially occur within the vicinity of the Masterplan, were any project arising from it consented by the planning authority. For mammal species such as otter, disturbance effects would not be expected to extend beyond 150m[21]. For birds, disturbance effects would not be expected to extend beyond a distance of *c.* 300m, as noise levels associated with general construction activities would attenuate to close to background levels at that distance.[22] There are no European sites within the disturbance ZoI; the next nearest European site to the Masterplan is *c.* 12.6km away. There are also no habitat areas within the disturbance ZoI of the Masterplan that support populations of qualifying/special conservation interest species of any European site[23].

97 As the Masterplan will not result in the disturbance/displacement of the Qualifying/Special Conservation Interest species of any European site, there is no potential for any in combination effects to occur in that regard.

3.3.6 Summary

98 The potential impacts associated with the Masterplan do not have the potential to affect the receiving environment and, consequently, do not have the potential to affect the conservation objectives supporting

[21] This is consistent with Transport Infrastructure Ireland (TII) guidance (Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (NRA 2006) and Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes(NRA2005)) documents. This is a precautionary distance, and likely to be moderated by the screening effect provided by surrounding vegetation and buildings, with the actual ZoI of construction related disturbance likely to be much less in reality.

[22] The disturbance zone of influence for waterbirds is based on the relationship between the noise levels generated by general construction traffic/works (BS 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1 Noise) and the proximity of those noise levels to birds – as assessed in Cutts, N. Phelps, A. & Burdon, D. (2009) *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance*, and Wright, M., Goodman, P & Cameron, T. (2010) Exploring Behavioural Responses of Shorebirds to Impulsive Noise. *Wildfowl* (2010) 60: 150–167. At 300m, noise levels are below 60dB or, in most cases, are approaching the 50dB threshold below which no disturbance or displacement effects would arise.

[23] There is a need to consider use of habitat areas outside of an SPA by SCI bird species where they support the SCI populations and the site's conservation objectives. These habitat areas can comprise alternative roosting sites, foraging areas, staging grounds or migration routes and can, but not necessarily exclusively, be situated within the immediate hinterland of the SPA, or in areas ecologically connected to it.

the Qualifying Interest/Special Conservation Interests of any European sites. Therefore, the Masterplan is not likely to have significant effects on any European sites.

99 As the Masterplan itself will not have any effects on the QIs/SCIs or conservation objectives of any European sites, and taking into account the policies and objectives of the statutory plans referred to above, it is concluded that there is no potential for any other plan or project to act in combination with it to result in significant effects on any European sites.

100 The potential impacts of the Masterplan on the receiving environment, their ZoI, and the European sites at risk of significant effects are summarised in Table 1 below. In assessing the potential for the Masterplan to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

Table 1 Summary of Analysis of Likely Significant Effects on European sites

Potential Direct, Indirect In Combination Effects and the ZoI of the Potential Effects	**Are there any European sites within the ZoI of the Masterplan?**
Habitat loss Habitat loss will be confined to the lands within the Masterplan boundary.	No There are no European sites within the Masterplan boundary
Habitat degradation as a result of hydrological impacts Habitats and species downstream of the Masterplan site and the associated surface water drainage discharge points, and downstream of offsite wastewater treatment plants.	No There are no European sites at risk of hydrological effects associated with the Masterplan
Habitat degradation as a result of hydrogeological impacts Groundwater-dependant habitats, and the species those habitats support, in the local area that lie downgradient of the Masterplan site.	No There are no European sites at risk of hydrogeological effects associated with the Masterplan
Habitat degradation as a result of introducing/spreading non-native invasive species Habitat areas within, adjacent to, and potentially downstream of the Masterplan site.	No There are no non-native invasive species present on the Masterplan site and, therefore, no risk associated with the Masterplan to any European sites from the spread/introduction of non-native invasive species
Disturbance and displacement impacts Potentially up to several hundred metres from the Masterplan boundary, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the Masterplan, taking into account the sensitivity of the qualifying interest species to disturbance effects	No There are no European sites within the potential zone of influence of disturbance effects associated with the construction or operation of the Masterplan

4 Conclusions of Screening Assessment Process

101 Following an examination, analysis and evaluation of the best available information, and applying the precautionary principle, it can be concluded that the possibility of any significant effects on any European sites, whether arising from the project alone or in combination with other plans and projects, can be excluded, for the reasons set out in Section 3.3 above. In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.

102 Therefore, it is the professional opinion of the authors of this report that the proposed Masterplan does not require an Appropriate Assessment or the preparation of a Stage Two Natura Impact Report (NIR).

Appendix I

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the Masterplan site (see Figure 2)

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Masterplan Site
Special Area of Conservation (SAC)	
Malahide Estuary SAC [000205] 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* *S.I. No. 91/2019 - European Union Habitats (Malahide Estuary Special Area Of Conservation 000205) Regulations 2019* NPWS (2013) *Conservation Objectives: Malahide Estuary SAC 000205.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located *c.* 12.6km south east of the Masterplan.
Rogerstown Estuary SAC [000208] 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* *S.I. No. 286/2018 - European Union Habitats (Rogerstown Estuary Special Area of Conservation 000208) Regulations 2018* NPWS (2013) *Conservation Objectives: Rogerstown Estuary SAC 000208.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located *c.* 13.1km east of the Masterplan
Rye Water Valley/Carton SAC [001398] 7220 Petrifying springs with tufa formation (Cratoneurion)* 1014 Narrow-mouthed Whorl Snail *Vertigo angustior* 1016 Desmoulin's Whorl Snail *Vertigo moulinsiana* *S.I. No. 494/2018 - European Union Habitats (Conservation of Wild Birds (Rye Water Valley/Carton Special Area of Conservation 001398)) Regulations 2018.*	Located *c.* 15.5km south west of the Masterplan

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Masterplan Site
NPWS (2021) *Conservation objectives for Rye Water Valley/Carton SAC [001398].* Generic Version 1.0. Department of Housing, Local Government and Heritage.[24]	
South Dublin Bay SAC [000210] 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 *Salicornia* and other annuals colonising mud and sand 2110 Embryonic shifting dunes *S.I. No. 525/2019 - European Union Habitats (South Dublin Bay Special Area of Conservation 000210) Regulations 2019* NPWS (2013) *Conservation Objectives: South Dublin Bay SAC 000210.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located c. 22.7km south east of the Masterplan
North Dublin Bay SAC [000206] 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 *Salicornia* and other annuals colonising mud and sand 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 1395 Petalwort *Petalophyllum ralfsii* 1410 Mediterranean salt meadows (*Juncetalia maritimi*) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes) 2190 Humid dune slacks *S.I. No. 524/2019 - European Union Habitats (North Dublin Bay Special Area of Conservation 000206) Regulations 2019* NPWS (2013) *Conservation Objectives: North Dublin Bay SAC 000206.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located c. 20.7km south east of the Masterplan
Special Protection Area (SPA)	
Malahide Estuary SPA [004025] A005 Great Crested Grebe *Podiceps cristatus* A046 Light-bellied Brent Goose *Branta bernicla hrota* A048 Shelduck *Tadorna tadorna* A054 Pintail *Anas acuta* A067 Goldeneye *Bucephala clangula* A069 Red-breasted Merganser *Mergus serrator*	Located c. 12.7km south east of the Masterplan

[24] The versions of the conservation objectives documents referenced in this table are the most recent published versions at the time of writing

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	**Location Relative to the Masterplan Site**
A130 Oystercatcher *Haematopus ostralegus* A140 Golden Plover *Pluvialis apricaria* A141 Grey Plover *Pluvialis squatarola* A143 Knot *Calidris canutus* A149 Dunlin *Calidris alpina* A156 Black-tailed Godwit *Limosa limosa* A157 Bar-tailed Godwit *Limosa lapponica* A162 Redshank *Tringa totanus* A999 Wetland and Waterbirds *S.I. No. 285/2011 - European Communities (Conservation of Wild Birds (Malahide Estuary Special Protection Area 004025)) Regulations 2011.* NPWS (2013) *Conservation Objectives: Malahide Estuary SPA 004025.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	
Rogerstown Estuary SPA [004015] A043 Greylag Goose *Anser anser* A046 Brent Goose *Branta bernicla hrota* A048 Shelduck *Tadorna tadorna* A056 Shoveler *Anas clypeata* A130 Oystercatcher *Haematopus ostralegus* A137 Ringed Plover *Charadrius hiaticula* A141 Grey Plover *Pluvialis squatarola* A143 Knot *Calidris canutus* A149 Dunlin *Calidris alpina alpina* A156 Black-tailed Godwit *Limosa limosa* A162 Redshank *Tringa totanus* A999 Wetlands *S.I. No. 271/2010 - European Communities (Conservation of Wild Birds (Rogerstown Estuary Special Protection Area 004015)) Regulations 2010.* NPWS (2013) *Conservation Objectives: Rogerstown Estuary SPA 004015*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located c. 14km east of the Masterplan
North Bull Island SPA [004006] A046 Light-bellied Brent Goose *Branta bernicla hrota* A048 Shelduck *Tadorna tadorna* A052 Teal *Anas crecca* A054 Pintail *Anas acuta* A056 Shoveler *Anas clypeata* A130 Oystercatcher *Haematopus ostralegus* A140 Golden Plover *Pluvialis apricaria* A141 Grey Plover *Pluvialis squatarola* A143 Knot *Calidris canutus* A144 Sanderling *Calidris alba*	Located c. 20.7km south east of the Masterplan

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Masterplan Site
A149 Dunlin *Calidris alpina* A156 Black-tailed Godwit *Limosa limosa* A157 Bar-tailed Godwit *Limosa lapponica* A160 Curlew *Numenius arquata* A162 Redshank *Tringa totanus* A169 Turnstone *Arenaria interpres* A179 Black-headed Gull *Chroicocephalus ridibundus* A999 Wetlands & Waterbirds *S.I. No. 211/2010 - European Communities (Conservation of Wild Birds (North Bull Island Special Protection Area 004006)) Regulations 2010.* NPWS (2015) *Conservation Objectives: North Bull Island SPA 004006*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	
South Dublin Bay and River Tolka Estuary SPA [004024] A046 Light-bellied Brent Goose *Branta bernicla hrota* A130 Oystercatcher *Haematopus ostralegus* A137 Ringed Plover *Charadrius hiaticula* A141 Grey Plover *Pluvialis squatarola* A143 Knot *Calidris canutus* A144 Sanderling *Calidris alba* A149 Dunlin *Calidris alpina* A157 Bar-tailed Godwit *Limosa lapponica* A162 Redshank *Tringa totanus* A179 Black-headed Gull *Chroicocephalus ridibundus* A192 Roseate Tern *Sterna dougallii* A193 Common Tern *Sterna hirundo* A194 Arctic Tern *Sterna paradisaea* A999 Wetland and Waterbirds *S.I. No. 212/2010 - European Communities (Conservation of Wild Birds (South Dublin Bay and River Tolka Estuary Special Protection Area 004024)) Regulations 2010.* NPWS (2015) *Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	Located c. 19.1km south east of the Masterplan

Appendix II

Planning polices/objectives relating to the protection of European sites and water quality

Eastern & Midland Regional Assembly, Regional Spatial & Economic Strategy 2019-2031
Regional Policy Objective 3.4 Ensure that all plans, projects and activities requiring consent arising from the Regional Spatial and Economic Strategy are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate. In addition the future strategic development of settlements throughout the Region will have full cognisance of the legal requirements pertaining to sites of International Nature Conservation Interest. **Regional Policy Objective 7.2** To achieve and maintain 'Good Environmental Status' for marine waters and to ensure the sustainable use of shared marine resources in the Region, and to promote the development of a cross-boundary and cross-border strategic management and stakeholder engagement framework to protect the marine environment. **Regional Policy Objective 7.10** Support the implementation of the Water Framework Directive in achieving and maintaining at least good environmental status for all water bodies in the Region and to ensure alignment between the core objectives of the Water Framework Directive and other relevant Directives, River Basin Management plans and local authority land use plans. **Regional Policy Objective 7.11** For water bodies with 'high ecological status' objectives in the Region, local authorities shall incorporate measures for both their continued protection and to restore those water bodies that have fallen below high ecological status and areas 'At Risk' into the development of local planning policy and decision making any measures for the continued protection of areas with high ecological status in the Region and for mitigation of threats to waterbodies identified as 'At Risk' as part of a catchment based approach in consultation with the relevant agencies. This shall include recognition of the need to deliver efficient wastewater facilities with sufficient capacity and thus contribute to improved water quality in the Region. **Regional Policy Objective 7.12** Future statutory land use plans shall include Strategic Flood Risk Assessment (SFRA) and seek to avoid inappropriate land use zonings and development in areas at risk of flooding and to integrate sustainable water management solutions (such as SuDS, nonporous surfacing and green roofs) to create safe places in accordance with the Planning System and Flood Risk Assessment Guidelines for Local Authorities. **Regional Policy Objective 7.15** Local authorities shall take opportunities to enhance biodiversity and amenities and to ensure the protection of environmentally sensitive sites and habitats, including where flood risk management measures are planned. **Regional Policy Objective 7.16** Support the implementation of the Habitats Directives in achieving an improvement in the conservation status of protected species and habitats in the Region and to ensure alignment between the core objectives of the EU Birds and Habitats Directives and local authority development plans. **Regional Policy Objective 7.22** Local authority development plan and local area plans, shall identify, protect, enhance, provide and manage Green Infrastructure in an integrated and coherent manner and should also have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks and protected species. **Regional Policy Objective 10.6** Delivery and phasing of services shall be subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network. **Regional Policy Objective 10.7** Local authority core strategies shall demonstrate compliance with DHPLG Water Services Guidelines for local authorities and demonstrate phased infrastructure – led growth that is commensurate with the carrying capacity of water services and prevent adverse impacts on the integrity of water dependent habitats and species within the Natura 2000 network.

Regional Policy Objective 10.10

Support Irish Water and the relevant local authorities in the Region to eliminate untreated discharges from settlements in the short term, while planning strategically for long term growth in tandem with Project Ireland 2040 and in increasing compliance with the requirements of the Urban Waste Water Treatment Directive from 39% today to 90% by the end of 2021, to 99% by 2027 and to 100% by 2040.

Regional Policy Objective 10.11

EMRA supports the delivery of the waste water infrastructure set out in Table 10.2, subject to appropriate environmental assessment and the planning process.[25]

Regional Policy Objective 10.12

Development plans shall support strategic wastewater treatment infrastructure investment and provide for the separation of foul and surface water networks to accommodate the future growth of the Region.

Regional Policy Objective 10.15

Support the relevant local authorities (and Irish Water where relevant) in the Region to improve storm water infrastructure to improve sustainable drainage and reduce the risk of flooding in the urban environment and in the development and provision at a local level of Sustainable Urban Drainage solutions.

Regional Policy Objective 10.16

Implement policies contained in the Greater Dublin Strategic Drainage Study (GDSDS), including SuDS.

Regional Policy Objective 10.18

Local authorities shall ensure adequate surface water drainage systems are in place which meet the requirements of the Water Framework Directive and the associated River Basin Management Plans.

Meath County Development Plan 2021-2027

HER POL 28

To integrate in the development management process the protection and enhancement of biodiversity and landscape features wherever possible, by minimising adverse impacts on existing habitats (whether designated or not) and by including mitigation and/or compensation measures, as appropriate.

HER POL 31

To ensure that the ecological impact of all development proposals on habitats and species are appropriately assessed by suitably qualified professional(s) in accordance with best practice guidelines – e.g. the preparation of an Ecological Impact Assessment (EcIA), Screening Statement for Appropriate Assessment, Environmental Impact Assessment, Natura Impact Statement (NIS), species surveys etc. (as appropriate).

HER POL 32

To permit development on or adjacent to designated Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas, Statutory Nature Reserves or those proposed to be designated over the period of the Plan, only where the development has been subject to the outcome of the Appropriate Assessment process and has been carried out to the satisfaction of the Planning Authority, in consultation with National Parks and Wildlife.

HER POL 33

To have regard to the views and guidance of the National Parks and Wildlife Service in respect of Masterplan where there is a possibility that such development may have an impact on a designated European or National site or a site proposed for such designation.

HER POL 34

To undertake appropriate surveys and collect data to provide an evidence-base to assist the Council in meeting its obligations under Article 6 of the Habitats Directives (92/43/EEC) as transposed into Irish Law, subject to available resources.

[25] The Greater Dublin Drainage Project, the Ringsend Wastewater Treatment Plant Project, the Athlone Main Drainage Project and the Upper Liffey Valley Sewerage Scheme

HER OBL 33

To ensure an Appropriate Assessment in accordance with Article 6(3) and Article 6(4) of the Habitats Directives (92/43/EEC) and in accordance with the Department of Environment, Heritage and Local Government Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009 and relevant EPA and European Commission guidance documents, is carried out in respect of any plan or project not directly connected with or necessary for the management of the site but likely to have a significant effect on a Natura 2000 site(s), either individually or in-combination with other plans or projects, in view of the site's conservation objectives.

HER OBL 34

To protect and conserve the conservation value of candidate Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas as identified by the Minister for the Department of Culture, Heritage and the Gaeltacht and any other sites that may be proposed for designation during the lifetime of this Plan in accordance with the provisions of the Habitats and Birds Directives and to permit development in or affecting same only in accordance with the provisions of those Directives as transposed into Irish Law.

HER POL 35

To ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites and to require an appropriate level of ecological assessment by suitably qualified professional(s) to accompany development proposals likely to impact on such areas or species.

HER POL 36

To consult with the National Parks and Wildlife Service and take account of their views and any licensing requirements, when undertaking, approving or authorising development which is likely to affect plant, animal or bird species protected by law.

HER OBJ 35

To ensure that development does not have a significant adverse impact, incapable of satisfactory avoidance or mitigation, on plant, animal or bird species protected by law.

HER POL 45

To ensure that peatland areas which are designated (or proposed for designation) as NHAs, SACs or SPAs are conserved for their ecological, climate regulation, archaeological, cultural and educational significance.

HER OBJ 39

To work in partnership with relevant stakeholders on a suitable peatland site(s) to demonstrate best practice in sustainable peatland conservation, management and restoration techniques and to promote their heritage and educational value subject to Ecological Impact Assessment and Appropriate Assessment Screening, as appropriate, having regard to local and residential amenities.

HER POL 47

To protect the ecological, recreational, educational, amenity and flood alleviation potential of navigational and non-navigational waterways within the County, towpaths and adjacent wetlands.

HER OBJ 42

To undertake conservation works in accordance with best practice on the coastal dune systems subject to ecological impact assessment and Appropriate Assessment, as appropriate.

HER OBJ 60

To encourage, pursuant to Article 10 of the Habitats Directive (92/43/EEC), the management of features of the landscape, such as traditional field boundaries, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species

INF POL 9

To consider the potential for the provision of temporary water treatment facilities for new developments but only where a permanent solution has already been identified and committed to by Irish Water but has not yet been implemented. The provision of such temporary facilities shall only be considered where the solution is environmentally sustainable and would not affect the quality status of water sources. Adequate provision

shall be made by the developer for the operation and maintenance of the proposed temporary facility for the duration of its required existence and thereafter for its decommissioning and removal from site.

INF OBJ 6

To liaise and work in conjunction with Irish Water in their implementation of water conservation measures.

INF OBJ 7

To promote the sustainable use of water and water conservation in existing and new development within the County and encourage demand management measures among all water users

INF OBJ 8

To protect both ground and surface water resources and work with Irish Water to develop and implement Water Safety Plans to protect sources of public water supply and their contributing catchment

INF POL 11

To liaise and work in conjunction with Irish Water during the lifetime of the Plan in the provision, upgrading or extension of wastewater collection and treatment systems in the County to serve existing and planned future populations and enterprise in accordance with the requirements of the Core and Settlement Strategies.

INF OBJ 12

The Planning Authority shall consider the provision of temporary wastewater treatment facilities for new developments only in circumstances where a permanent solution is identified and committed to by Irish Water. The temporary solution shall only be considered where it is deemed to be environmentally sustainable and would not affect the water quality status of receiving waters. Adequate provision shall be made by the developer for the operation and maintenance of the temporary facility for the duration of the operation of the required infrastructure.

INF POL 16

To ensure that all planning applications for new development have regard to the surface water management policies provided for in the GDSDS.

INF OBJ 14

To require the use of SuDS within Local Authority Developments and other infrastructural projects in accordance with the Greater Dublin Regional Code of Practice for Drainage Works.

INF OBJ 15

To require the use of SuDS in accordance with the Greater Dublin Regional Code of Practice for Drainage Works for new developments (including extensions).

INF OBJ 19

To ensure that developments permitted by the Council which involve discharge of wastewater to surface waters or groundwaters comply with the requirements of the EU Environmental Objectives (Surface Waters) Regulations and EU Environmental Objectives (Groundwater) Regulations.

INF POL 29

To facilitate the provision of new, or the reinforcement of existing flood defences and protection measures where necessary and in particular to support the implementation of flood schemes being progressed through the planning process during the lifetime of the Plan. The provision of flood defences will be subject to the outcome of the Appropriate Assessment process.

INF OBJ 22

To ensure flood relief measures are suitably designed to protect the conservation objectives of Natura 2000 sites, and to avoid direct or indirect impacts upon qualifying interests or Natura 2000 sites.

INF OBJ 25

To require the use of Sustainable Urban Drainage Systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.

INF POL 33

To protect recognised salmonid water courses (in conjunction with Inland Fisheries Ireland) such as the Boyne and Blackwater catchments, which are recognised to be exceptional in supporting salmonid fish species.

INF OBJ 30

To ensure the County's natural coastal defences, such as beaches, sand dunes, salt marshes and estuary lands, are protected and are not compromised by inappropriate works or forms of development.

INF OBJ 36

To protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the County and manage development in a manner consistent with the sustainable management of these resources in conformity with the EU Environmental Objectives (Groundwater) Regulations 2010 and the second cycle National River Basin Management Plan 2018-2021, and any subsequent plan and the Groundwater Protection Scheme.

Fingal Development Plan 2017-2023

Objective NH10

Ensure that the Council takes full account of the requirements of the Habitats and Birds Directives, as they apply both within and without European Sites in the performance of its functions.

Objective NH11

Ensure that the Council, in the performance of its functions, takes full account of the objectives and management practices proposed in any management or related plans for European Sites in and adjacent to Fingal published by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

Objective NH15

Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the period of this Plan.

Objective SW04

Require the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.

Objective WQ01

Strive to achieve 'good status' in all waterbodies in compliance with the Water Framework Directive, the Eastern River Basin District Management Plan 2009-2015 and the associated Programme of Measures (first cycle) and to cooperate with the development and implementation of the second cycle national River Basin Management Plan 2017-2021.

Objective WQ04

Protect existing riverine wetland and coastal habitats and where possible create new habitats to maintain naturally functioning ecosystems whilst ensuring they do not impact negatively on the conservation objectives of any European Sites.

Objective WT01

Liaise with and work in conjunction with Irish Water during the lifetime of the plan for the provision, extension and upgrading of waste water collection and treatment systems in all towns and villages of the County to serve existing populations and facilitate sustainable development of the County, in accordance with the requirements of the Settlement Strategy and associated Core Strategy.

Objective WT02

Liaise with Irish Water to ensure the provision of wastewater treatment systems in order to ensure compliance with existing licences, EU Water Framework Directive, River Basin Management Plans, the Urban Waste Water Directive and the EU Habitats Directive.

Dublin City Development Plan 2016-2022

SI2:

To support and facilitate Irish Water to ensure the upgrading of wastewater infrastructure, in particular the upgrading of the Ringsend Wastewater Treatment Plant, and to support the development of the Greater Dublin Regional Wastewater Treatment Plant, the North Docklands Sewage Scheme, the Marine Outfall and orbital sewer to be located in the northern part of the Greater Dublin Area to serve the Dublin region as part of the Greater Dublin Strategic Drainage Strategy.

SI3:

To ensure that development is permitted in tandem with available water supply and wastewater treatment and to manage development, so that new schemes are permitted only where adequate capacity or resources exists or will become available within the life of a planning permission.

SI7:

To promote the progressive reduction of pollution of groundwater and prevent its further pollution

SI17:

To require an environmental assessment of all proposed flood protection or flood alleviation works

SI18:

To require the use of Sustainable Urban Drainage Systems in all new developments, where appropriate, as set out in the Greater Dublin Regional Code of Practice for Drainage Works. The following measures will apply:

- The infiltration into the ground through the development of porous pavement such as permeable paving, swales, and detention basins
- The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basins, ponds, and wetlands
- The slow-down of the movement of water.

GI2:

That any plan/project, either individually or in combination with other plans or projects that has the potential to give rise to significant effect on the integrity of any European site(s), shall be subject to an appropriate assessment in accordance with Article 6(3) and 6(4) of the EU Habitats Directives

GI23:

To protect flora, fauna and habitats, which have been identified by Articles 10 and 12 of Habitats Directive, Birds Directive, Wildlife Acts 1976–2012, the Flora (Protection) Order 2015 S.I No. 356 of 2015, European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

GI23:

To protect flora, fauna and habitats, which have been identified by Articles 10 and 12 of Habitats Directive, Birds Directive, Wildlife Acts 1976–2012, the Flora (Protection) Order 2015 S.I No. 356 of 2015, European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

GI26:

To have regard to the conservation and enhancement of significant non-designated areas of ecological importance in accordance with development standards set out in this plan

Appendix III

Hydrological & Hydrogeological Qualitative Risk Assessment for A Proposed Masterplan and SHD in Lands at Milltown, Ashbourne, Co. Meath (AWN, 2022)

HYDROLOGICAL & HYDROGEOLOGICAL QUALITATIVE RISK ASSESSMENT

for

MASTER PLAN 18 MILLTOWN MASTERPLAN, ASHBOURNE, CO. MEATH

Technical Report Prepared For

Master Plan 18 – Milltown Masterplan
Ashbourne, Co. Meath

Technical Report Prepared By

Marcelo Allende BSc, BEng,
Senior Environmental Consultant
(Hydrologist)

Our Reference

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awnconsulting

The Tecpro Building,
Clonshaugh Business & Technology Park,
Dublin 17, Ireland.

T: + 353 1 847 4220
F: + 353 1 847 4257
E: info@awnconsulting.com
W: www.awnconsulting.com

Cork Office
Unit 5, ATS Building,
Carrigaline Industrial Estate,
Carrigaline, Co. Cork.
T: + 353 21 438 7400
F: + 353 21 483 4606

AWN Consulting Limited
Registered in Ireland No. 319812
Directors: F Callaghan, C Dilworth,
T Donnelly, T Hayes, D Kelly, E Porter

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Signature		
Name	Marcelo Allende	Teri Hayes
Title	Senior Environmental Consultant	Director
Date	26 August 2022	26 August 2022

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1.0 INTRODUCTION

1.1 Background

AWN have been requested to carry out a Hydrological and Hydrogeological Qualitative Risk Assessment prepared in relation to c.19.9 hectares of lands located in the townlands of Milltown & Baltrasna, located to the south of Ashbourne town centre, which are identified as Master Plan 18 (MP 18) in the Meath County Development Plan, 2021-2027 (hereafter "Development Plan").

The MP18 Master Plan lands will provide for the following indicative aspects:

- Circa 750 no, up to a maximum of 800 no. new residential units;
- A net density of greater than 35 units per hectare (in accordance with DM OBJ 14 of the Development Plan and DoE Guidance);
- Circa 15% open space provision, in accordance with DM OBJ 26 of the Development Plan;
- Delivery of the east-west link road that will provide access from the Dublin Road (R135) through the Master Plan lands to adjoin the F1 zoned lands to the west;
- A site for a new school and playing pitch.

The Meath County Development Plan 2021-2027 sets out the main organising principles for the site to guide the future development of the lands. It proposes that these lands shall provide a primary school site, lands for recreational uses, including playing fields, and lands for residential development. The development of the lands shall be on a phased basis to be agreed as part of the preparation of the Masterplan.

The potential impacts on the receiving water environment considered withing this report are:

- The management of foul, surface water run-off and accidental oil leaks during construction phase.
- Connection to foul sewer and stormwater sewer during operation. Due to the residential development proposed it has been assumed that there will be no bulk oil storage during operation.

1.2 Hydrological Setting

The existing site is predominantly greenfield and the topography of the site generally falls from the north-east corner towards the west corner. It is noted that there are a number of drainage ditches located along the site boundary. These ditches discharge to the existing Fairyhouse Stream located to the south of MP18. There is an existing 375 mm surface water line located opposite Cherry Lane on the Dublin Road.

The EPA (2022) on-line database identify a small tributary to the Fairyhouse Stream c. 130 m to the south of the Masterplan boundary. The Fairyhouse Stream flows eastwards c. 470 m to the south of the subject site (refer to Figure 1.1 below). The Broadmeadows River crosses Ashbourne and is located c. 560 m to the north of the site. The Fairyhouse Stream joins the Broadmeadows River c. 2.2 km to the east of MP18.

The Broadmeadows outfalls into the Malahide Estuary c. 12 km to the east of the subject site. The Malahide Estuary hosts Natura 2000 sites (Malahide Estuary Special Area of Conservation (SAC, site code 000205) and Special Protection Area (SPA, site code 004025)), located c. 12.6 km and c. 12.7 km east of the Masterplan, respectively. The review of the EPA (2022) on-line database indicates that the

nearest designated lands to the site are the aforementioned Malahide Estuary SAC/SPA.

A review of the EPA (2022) on-line database indicates that the nearest designated lands to the site are the aforementioned Malahide Estuary SAC/SPA. The Masterplan site will have an indirect discharge to the Malahide Estuary from the Masterplan site through the stormwater and foul water site drainage as described in Section 1.4 below.

There will also be an indirect discharge to South Dublin Bay through the foul water drainage as also explained in Section 1.4 below. The South Dublin Bay also hosts a range of Natura 2000 Sites – South Dublin Bay Special Area of Conservation (SAC), South Dublin Bay and River Tolka Estuary / Special Protection Area (SPA)/ and South Dublin Bay proposed Natural Heritage Area (pNHA). These sites are located c. 23.0 km to the southeast of the Masterplan site.

The Masterplan site will have an indirect discharge to the Malahide Estuary via the stormwater and foul water site drainage as described in Section 1.4 below.

Figure 1.1 Location and Hydrological Environment

For reference, Figure 1.2 below presents the extent of the Masterplan 18 in the context of the Meath County Development Plan 2021-2027.

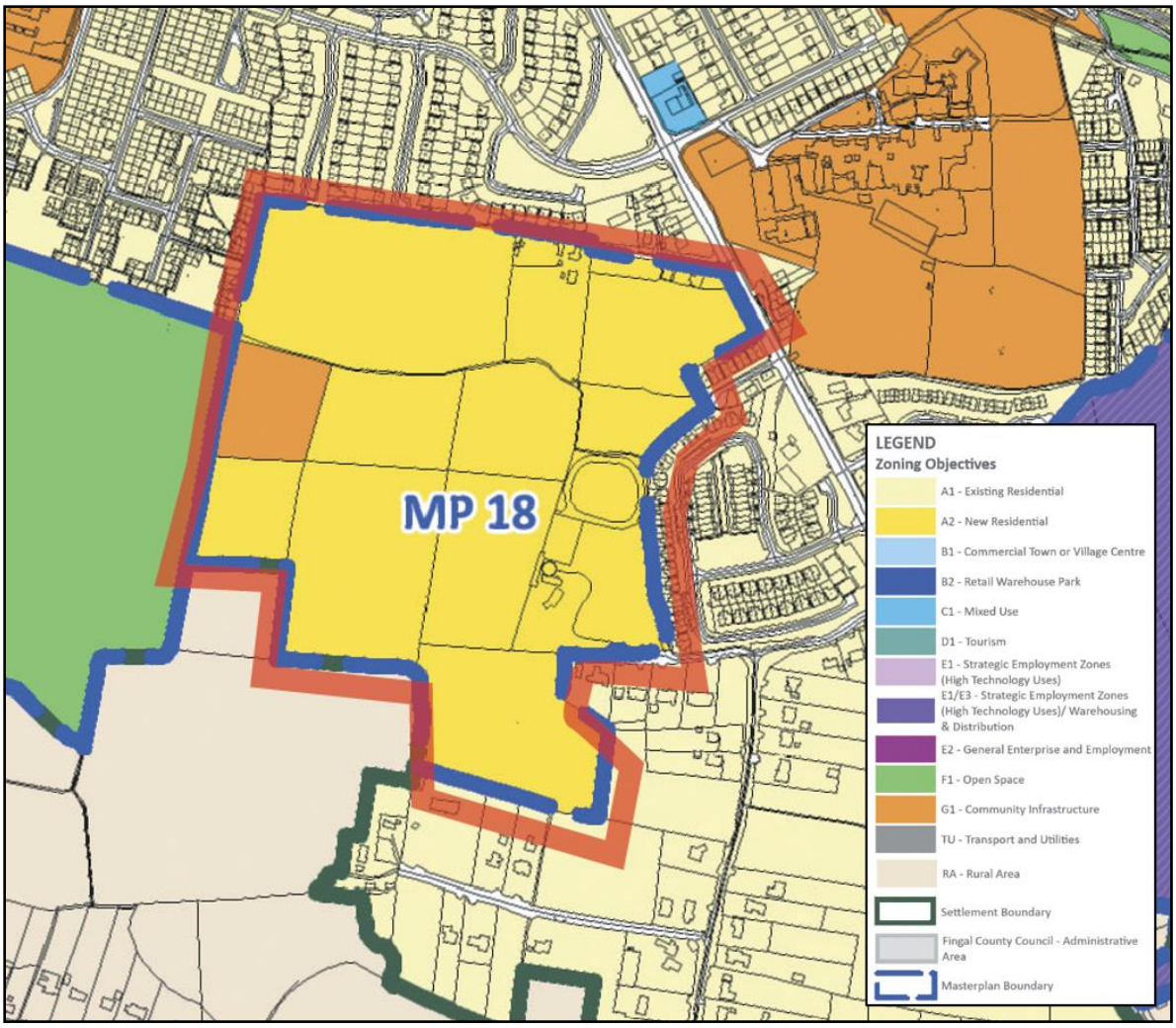

Figure 1.2 Masterplan Area 18 (Source: Davey & Smith, 2021)

1.3 Objective of Report

The scope of this desktop review is to assess the potential for any likely significant impacts on receiving waters and protected ecological areas during construction or post development, in the absence of taking account of any measures intended to avoid or reduce harmful effects of the proposed project (i.e. design or mitigation measures).

In particular, this review considers the likely impact of construction and operation impacts (construction run-off, and domestic sewage) from the proposed development on water quality and overall water body status within the Malahide Estuary (where the relevant European Sites are located). The assessment relies on information regarding construction and design provided by the applicant as follows:

- Masterplan Lands at Milltown, Ashbourne. Davey & Smith Architects, December 2021;
- Strategic Environmental Assessment (SEA) Screening of Master Plan 18 (MP 18) in the Meath County Development Plan, 2021-2027 (Armstrong Fenton);
- Strategic Flood Risk Assessment (SFRA) undertaken for the Meath County Development Plan 2021-2027.

This report was prepared by Marcelo Allende (BSc, BEng), and Teri Hayes (BSc MSc PGeol EurGeol). Marcelo is a Water Resources Engineer with over 15 years of experience in environmental consultancy and water resources studies. Marcelo is a

Senior Environmental Consultant (Hydrologist) with AWN Consulting, a member of the International Association of Hydrogeologists (Irish Group) and a member of Engineers Ireland (MIEI). Teri is a hydrogeologist with over 25 years of experience in water resource management and impact assessment. She has a Masters in Hydrogeology and is a former President of the Irish Group of the Association of Hydrogeologists (IAH) and has provided advisory services on water related environmental and planning issues to both public and private sector bodies. She is qualified as a competent person as recognised by the EPA in relation to contaminated land assessment (IGI Register of competent persons www.igi.ie). Her specialist area of expertise is water resource management eco-hydrogeology, hydrological assessment and environmental impact assessment.

1.4 Description of Existing Site and Proposed Drainage

Existing and Proposed Surface Water Drainage

There are a number of drainage ditches located on the site's boundary. These discharge to the existing Fairyhouse stream to the south. There is no surface water infrastructure within the site, However, there is an existing 375 mm surface water main located opposite Cherry Lane on the Dublin Road. It is proposed to connect the outflow of the surface water drainage to this sewer which ultimately discharges into the Broadmeadows River.

The development of the MP18 lands will necessitate the installation of a new surface water drainage network to cater for the additional hardstanding. The surface water runoff will be limited to greenfield runoff rates (Qbar) in accordance with the Greater Dublin Strategic Drainage Study (GDSDS).

In accordance with the GDSDS it is proposed to use Sustainable Urban Drainage systems (SUDS) for managing storm-water for MP18. The aim of the SUDS strategy for the site will be to:

- Attenuate storm-water runoff.
- Reduce storm-water runoff.
- Reduce pollution impact.
- Replicate the natural characteristics of rainfall runoff for the site.
- Recharge the groundwater profile.

It should be noted that SuDS measures have not been taken into account in the subsequent analysis. The surface water drainage network within MP18 will collect surface water runoff from the site via a piped network prior to discharging off site via the attenuation tank and/or above ground in detention/infiltration basins, vortex flow control device (Hydrobrake or equivalent), and Class 1 separator (sized in accordance with permitted discharge from the site).

The stormwater and foul water networks within MP18 will be independent systems.

Flood Risk Assessment

The Eastern CFRAM Study indicates that the subject site is located within Flood Zone C (i.e., less than 0.1% AEP (Annual Exceedance Probability) or 1 in 1000 chance of flooding in a given year). Therefore, the future development of the lands for residential and community uses is appropriate for the subject lands.

The Strategic Flood Risk Assessment (SFRA) undertaken for the Meath County Development Plan 2021-2027 contains "Settlement Zoning Review" (under section 5) which:

- Considered the land use zoning objectives utilised within County Meath as a whole and assessed their potential vulnerability to flooding.
- Based on the associated vulnerability of the particular use, a clarification on the requirement of the application of the Justification Test is provided.
- The consideration of the specific land use zoning objectives and flood risk will be presented for the settlements. Comment is provided on the use of the sequential approach and Justification Test. Conclusions have been drawn on how flood risk is proposed to be managed in the settlement.

The SFRA reviewed the land use zoning objectives for each settlement in County Meath, including Ashbourne, within the Plan and provides a comprehensive summary of flood risk and justification where necessary. Section 5.2 of the Development Plan's SFRA provides details on Ashbourne, which does not identify the MP18 Master Plan lands as being at risk of flooding. It also concludes that "*the Ashbourne Flood Relief scheme will be completed at the end of 2020 and the scheme will offer protection to a significant amount of existing development. Manage flood risk and development in line with the policies of the MCDP. Development should be subject to an appropriately detailed FRA at development management stage. This will ensure that FFLs and ground levels are set appropriately and that the risk of surface water flooding is managed*".

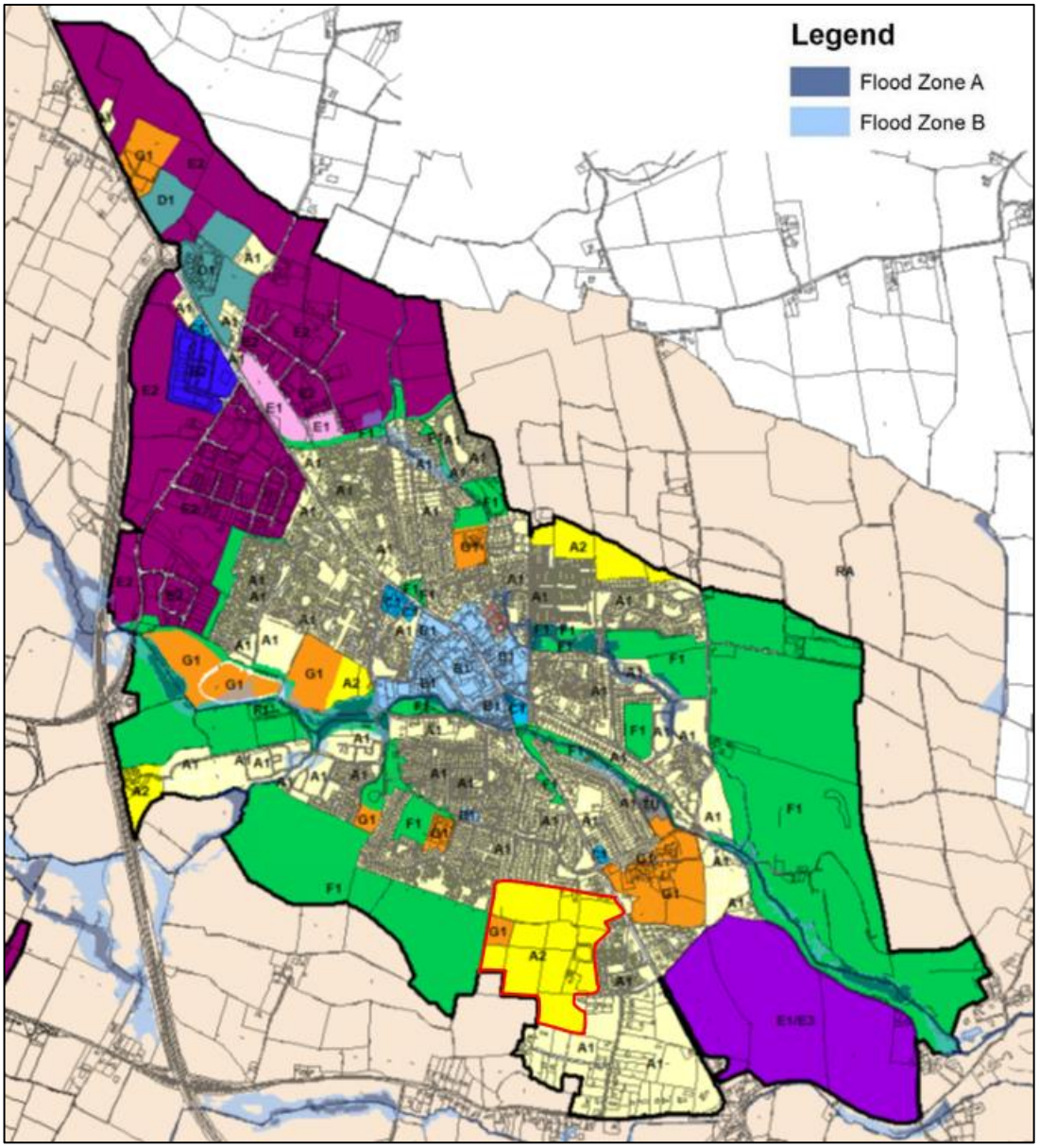

Figure 1.3 Extract from SFRA of Meath County Development Plan 2021-2027 – Flood Map for Ashbourne (MP18 Master Plan lands outlined in red)

Existing and Proposed Foul Water Drainage

The Masterplan site has no existing foul loading as it is currently a greenfield site. There is an existing 225/300mm foul sewer which is located immediately to the west of the subject site in the Dublin Road.

The site has been divided in two areas for the purposes of foul drainage management. The northern half of the site will discharge via gravity to an existing foul manhole in the Dublin Road via Cherry Lane. The units in the southern portion of the site will discharge to an existing foul sewer located in Hickeys Lane. All connections are to be agreed with Irish Water prior to commencement.

The MP18 is to cater for circa 750 no, up to a maximum of 800 no. new residential units and a site for a new school and playing pitch. The estimated foul sewer discharge per person per day of 150 litres, equates to a peak discharge of 24.75 l/s for the 800 no. residential units and 3.51 l/s for the school which results a total peak discharge flow of 28.26 l/s.

The foul water from the proposed Masterplan eventually discharges to the Ringsend Waste Water Treatment Plant (WWTP) which in turn discharges into Dublin Bay.

In the future, a new Irish Water WWTP is planned in Ashbourne. However, details of this WWTP and its commissioning date are unknown but it will be expected to accept the foul flow foreseen in the Masterplan.

As mentioned above, the stormwater and foul water networks within MP18 will be independent systems.

2.0 ASSESSMENT OF BASELINE WATER QUALITY, RIVER FLOW AND WATER BODY STATUS

A reliable Conceptual Site Model (CSM) requires an understanding of the existing hydrological and hydrogeological setting. This is described below for the proposed development site and surrounding hydrological and hydrogeological environs.

2.1 Hydrological Catchment Description

The proposed development site lies within the Nanny-Delvin Catchment 08 and Broadmeadow-SC-010 WFD sub-catchment 08-3 (Fairyhouse Stream_010 WFD River Sub Basin; EPA, 2022).

The Environmental Protection Agency (EPA, 2022) on-line mapping presents the available water quality status information for water bodies in Ireland. The Fairyhouse Stream belongs to the '*Fairyhouse Stream_010*' WFD surface waterbody (WFD code IE_EA_08F010500) which has a '*Poor*' Status (EPA, 2022) and its WFD risk score is '*At risk of not achieving good status*'. However, the most recent surface water quality data for the Fairyhouse Stream (2020) indicate that it is '*Unpolluted*'. According to the EPA River Quality Surveys report, the Fairyhouse Stream '*improved to 'Good' quality in 2020, a significant improvement compared with 2014 when last assessed. Some filamentous algae and siltation were noted but good numbers of Ecdyonurus sp. were present. This is the best quality this stream has achieved since monitoring began in 1988. The macroinvertebrate fauna indicated a welcome improvement to good ecological conditions in June 2020 the first time since monitoring commenced at this site in 2006, however excessive siltation of the substratum was observed*' (refer to www.catchments.ie).

The Malahide Estuary Natura 2000 Sites (SAC/SPA) extend over the Broadmeadow Water WFD transitional waterbody (WFD code IE_EA_060_0100) and Malahide Bay WFD coastal waterbody (WFD code IE_EA_060_0000). The former has been classified by the WFD (2013-2018 period) as having '*Poor*' status and the latter as having '*Moderate*' status. Both waterbodies are '*At risk of not achieving status*'.

As the proposed Masterplan will have no additional stormwater run-off, when compared with the current situation, during a stormwater event, the development will, therefore, have no measurable impact on the water quality in any overflow situation at Ringsend WWTP apart from a minor contribution from foul sewage. As explained in Section 3.4 below, the maximum contribution of foul sewage (peak flow of 28.26 l/s) from the Proposed Development is 0.25% of the peak hydraulic capacity at Ringsend WWTP. The proposed stormwater and foul water networks within MP18 will be entirely independent systems and rainfall will have no impact on foul flows to the WWTP.

It should be noted that the bathing status has no direct relevance to the water quality status of the Natura 2000 sites due to rapid mixing and dilution resulting in no measurable change in water quality within the overall water body.

2.2 Aquifer Description & Superficial Deposits

Mapping from the Geological Society of Ireland (GSI, 2022 http://www.gsi.ie, accessed on 24-08-2022) indicates the bedrock underlying the site is part of the Lucan Formation (code CDLUCN) and made up of dark limestone and shale (Calp). The lithological description comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar. The beds are predominantly fine-grained distal turbidites in the north Dublin Basin. The formation is intermittently exposed on the coast between Rush and Drumanagh Head. The formation ranges from 300m to 800m in thickness. The GSI also classifies the principal aquifer types in Ireland as:

- Lk - Locally Important Aquifer - Karstified
- Ll - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones
- Lm - Locally Important Aquifer - Bedrock which is Generally Moderately Productive
- Pl - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones
- Pu - Poor Aquifer - Bedrock which is Generally Unproductive
- Rkd - Regionally Important Aquifer (karstified diffuse)

Presently, from the GSI (2022) National Bedrock Aquifer Map, the GSI classifies the bedrock aquifer beneath the subject site as a '*Locally Important Aquifer – Bedrock which is Moderately Productive only in Local Zones*'. The proposed development is within the '*Swords*' groundwater body (Ground Waterbody Code: IE_EA_G_011) and is classified under the WFD Status 2013-2018 (EPA, 2022) as having '*Good status'* and a WFD Risk Score of '*Not as Risk*'.

Aquifer vulnerability is a term used to represent the intrinsic geological and hydrological characteristics that determine the ease with which groundwater may be contaminated generally by human activities. The GSI (2022) guidance presently classifies the bedrock aquifer in the region of the subject site as having '*Low*' and vulnerability which indicates a general overburden depth potential greater than 10m, indicating that the aquifer is naturally well protected by low permeability tills. The GSI The aquifer vulnerability class in the region of the site is presented as Figure 2.1 below.

Figure 2.1 Aquifer Vulnerability (source: GSI, 2022)

The GSI/ Teagasc (2022) mapping database of the quaternary sediments in the area of the subject site indicates the principal subsoil type in the residential area comprises till Carboniferous (TLs i.e. Till derived from limestones).

3.0 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) is developed based on a good understanding of the hydrological and hydrogeological environment, plausible sources of impact and knowledge of receptor requirements. This in turn allows possible Source Pathway Receptor (S-P-R) linkages to be identified. If no S-P-R linkages are identified, then there is no risk to identified receptors.

3.1 Assessment of Plausible Sources

Potential sources during both the construction and operational phases are considered. For the purposes of undertaking the potential of any hydrological/ hydrogeological S-P-R linkages, all potential sources of contamination are considered *without taking account of* any measures intended to avoid or reduce harmful effects of the proposed project (mitigation measures) i.e. a worst-case scenario. Construction sources (short-term) and operational sources (long-term) are considered below.

<u>Construction Phase</u>

The following potential sources are considered plausible risk scenarios for the proposed construction site:

(i) Hydrocarbons or any hazardous chemicals will be stored in specific bunded areas. Refuelling of plant and machinery will also be carried out in bunded areas to minimise risk of any potential being discharged from the site. As a worst-case

scenario, a rupture of a 1,000-litre tank to ground is considered in this analysis which disregards the effect of bunding. This would be a single short-term event.

(ii) Leakage may occur from construction site equipment. As a worst-case scenario an unmitigated leak of 300 litres is considered. This would be a single short-term event.

(iii) Use of wet cement is a requirement during construction. Run-off water from recent cemented areas will result in highly alkaline water with high pH. As this would only occur during particular phases of work this is again considered as a single short-term event rather than an ongoing event.

(iv) Construction requires soil excavation and removal. Unmitigated run-off could contain a high concentration of suspended solids and contaminants such as hydrocarbons during earthworks, given the presence of contamination beneath the site according to site investigations. These could be considered intermittent short-term events, i.e. on the basis that adequate mitigation measures which are already incorporated in the Construction Environmental Management Plan (CEMP) fail.

(v) During the excavations for foundations and basements, no significant dewatering is expected given the low permeability overburden underlying the site.

Operational Phase

The following sources are considered plausible post construction:

(i) The Masterplan development does not require any bulk chemical storage and therefore the potential for water quality impact is negligible.

(ii) Leakage of petrol/ diesel fuel may occur from individual cars in parking areas; run-off may contain a worst-case scenario of 70 litres for example.

(iii) The stormwater drainage system will follow SuDS measures and an underground attenuation system. This system has been designed in order to discharge following the characteristics of a greenfield run-off into the public sewer. As such the potential for silt laden runoff is low. It should be noted that the worst-case scenario (70 litres) under consideration here disregards the effect of SuDS and petrol interceptors.

(iv) The Masterplan development will be fully serviced with separate foul and stormwater sewers which will have adequate capacity for the facility and discharge limits as required by Irish Water licencing requirements. Discharge from the site to the public foul sewer will be sewage and grey water only due to the residential nature of the Proposed Development. The foul discharge from the site will join the public sewer and will be treated at the Irish Water Ringsend Wastewater Treatment Plant (WWTP) prior to subsequent discharge to Dublin Bay. This WWTP is required to operate under an EPA licence (D0034-01) and meet environmental legislative requirements as set out in such licence. It is noted that a planning permission for a new upgrade to this facility was received in 2019 and is currently in the process of construction/ implementation.

This plant operates under an EPA licence (D0034-01) and is currently in the process of being upgraded to a PE of 2.4million to meet the increased demand of the Dublin area. The most recent Annual Environmental Report (AER 2020)

shows it is currently operating for a PE peak loading of 2.27million while originally designed for 1.64million. However, the current maximum hydraulic load (832,269 m^3/day) is less than the peak hydraulic capacity as constructed (959,040 m^3/day) i.e. prior to any upgrade works.

Irish Water is working to provide infrastructure to achieve compliance with the Urban Wastewater Treatment Directive for a population equivalent of 2.1million in the second half of 2023. When all the proposed works are complete in 2025, the Ringsend Wastewater Treatment Plant will be able to treat wastewater for up to 2.4 million population equivalent.

These upgrade works (described in section 3.4 below) have commenced and comprise a number of phases and are ongoing and expected to be fully completed by 2025.

3.2 Assessment of Pathways

The following pathways have been considered within this assessment with impact assessment presented in Section 3.4:

The potential for offsite migration due to any construction discharges is low as there is no significant pathway in the aquifer or through land ditches or streams.

(i) Vertical migration to the underlying Limestone is minimised due to the recorded '*Low*' vulnerability present at the site resulting in good aquifer protection from any localised diesel/ fuel oil spills during either construction or operational phases. The site is underlain by [generally low permeable] Limestone which the GSI classifies as a *Locally Important Aquifer (*This aquifer is characterised by discrete local fracturing with little connectivity rather than large connected fractures which are more indicative of Regional Aquifers. As such, flow paths are generally local.

(ii) There is no direct hydrological linkage for construction and operation run-off or any small hydrocarbon leaks from the site to the identified surface waterbodies located farther downgradient (Fairyhouse Stream) or the Malahide Estuary. There is an indirect connection as storm water discharges into an existing public sewer which ultimately discharges to the Fairyhouse Stream and ultimately into the Malahide Estuary and Irish Sea.

(iii) There is no direct pathway for foul sewage to any receiving water body. There is however an 'indirect pathway' through the public foul sewer which ultimately discharges to the Ringsend WWTP prior to final discharge to Dublin Bay post treatment.

3.3 Assessment of Receptors

The receptors considered in this assessment include the following:

(i) Underlying limestone bedrock aquifer;
(ii) Malahide Estuary SAC (site code: 0205) and SPA (site code: 4025).
(iii) South Dublin Bay and River Tolka Estuary SPA (site code: 4024), and the South Dublin Bay SAC (site code: 0210).

Other Natura 2000 Sites within Dublin Bay that may be hydrologically connected to the proposed development site, but are located further away (North Dublin Bay SAC (site code: 0206), the North Bull Island SPA (site code: 4006), Rockabill to Dalkey Island SAC (site code: 3000) and Lambay Islands SAC (site code: 0204) and SPA

(site code: 4069)) were excluded from the assessment due to their distance from the subject site, the potential loading of contaminant from the site (risk scenarios presented in Section 3.1) and significant dilution through its pathway.

3.4 Assessment of Source Pathway Receptor Linkages

Table 3.1 below summarises the plausible pollutant linkages (S-P-R) considered as part of the assessment and a review of the assessed risk is also summarised below.

The potential for impact on the aquifer is low based on the absence of any bulk chemical storage on site. The overburden thickness, low permeability nature of till and a lack of fracture connectivity within the limestone will minimise the rate of off-site migration for any indirect discharges to ground at the site. As such there is no potential for a change in the groundwater body status or significant source pathway linkage through the aquifer to any Natura 2000 site.

During construction phase, there is no direct open-water pathway between the site and Natura 2000 sites within Malahide Estuary or South Dublin Bay. However, there is an indirect pathway through the public surface sewer which discharges into the Fairyhouse Stream. Should any silt-laden stormwater from construction or hydrocarbon-contaminated water from a construction vehicle leak/tank leak manage to enter into the surface water sewer, the suspended solids will naturally settle within the sewer; however, in the event of a worst case hydrocarbon leak of 1,000 litres this would be diluted to background levels (water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019) by the time the stormwater reaches the nearest Natura 2000 Sites (Malahide Estuary SAC/SPA, c. 12.6 km downgradient).

During operation, the potential for a release is low as there is no bulk fuel/chemical storage and no silt laden run-off. Stormwater will be collected by a drainage system which includes SuDS measures, an attenuation system and oil/ petrol interceptors prior to discharge off-site (albeit these measures have been disregarded for this analysis). In addition, the potential for hydrocarbon discharge is quite minimal based on an individual vehicle (70 litres) leak being the only source for hydrocarbon release. However, even if the operation of the proposed SuDS and interceptor systems are excluded from consideration, there is no likely impact above water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019) in the worst case scenarios described above at section 3.2 and there will be no significant effect on any European site. The volume of contaminant release is low and combined with the significant attenuation within the stormwater drainage network, hydrocarbons will dilute to background levels with no likely impact above water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019 at any Natura 2000 sites.

It can be concluded that the in-combination effects of surface water arising from the Masterplan taken together with that of other permitted developments will not be significant based on the in-combination low potential chemical and sediment expected loading. Therefore, based on the loading of any hazardous material considered in the worst case scenarios mentioned in Section 3.1 above during construction and operation phases, there is subsequently no potential for impact on downgradient Natura 2000 habitats (Malahide Estuary, located c. 12.6 km from the site).

The peak wastewater discharge is calculated at 28.26 l/s. The sewage discharge will be licensed by Irish Water, collected in public sewers and and ultimately treated at Irish Water's WWTP at Ringsend prior to discharge to Dublin Bay. As outlined in section 3.1 (iv), upgrade works commenced in 2018 and are expected to be fully

completed by 2025. The upgrade works will result in treatment of sewage to a higher quality than current, thereby ensuring effluent discharge to Dublin Bay will comply with the Urban Wastewater Treatment Directive for a population equivalent of 2.1 million by Q4 2023.

The project is being progressed in stages to ensure that the plant continues to treat wastewater to the current treatment levels throughout the delivery of the upgrade. The project comprises three key elements and underpinning these is a substantial programme of ancillary works:

- Provision of additional secondary treatment capacity with nutrient reduction (400,000 population equivalent);
- Upgrade of the 24 existing secondary treatment tanks to provide additional capacity and nutrient reduction, which is essential to protect the nutrient-sensitive Dublin Bay area; and
- Provision of a new phosphorous recovery process.

In February 2018, the work commenced on the first element, the construction of a new 400,000 population equivalent extension at the Ringsend Wastewater Treatment Plant. After commissioning stages, the Capacity Upgrade facility began accepting flows for treatment in November 2021). This facility will enable current treatment levels to be maintained during the remainder of the upgrade of the existing secondary treatment tanks.

The 2019 planning permission facilitated upgrading works to meet nitrogen and phosphorus standards set out in the licence, which are temporarily exceeded currently. Works on the first of four contracts to retrofit the existing treatment tanks with aerobic granular sludge technology commenced in November 2020 and was completed in December 2021. In September 2021, the second contract was awarded and its construction works commenced in November 2021 and is expected to take approximately 2 years to complete. In November 2021, the third contract was awarded and its Construction works are anticipated to commence in late 2022. The fourth contract is scheduled to commence in mid-2023.

The application for the upgrade of the WWTP in 2012 and the revised upgrade in 2018 was supported by a detailed EIAR. As outlined in the EIAR, modelling of water quality in Dublin Bay has shown that the upgrades (which are now currently underway) will result in improved water quality within Dublin Bay. The 2018 EIAR predicts that the improvement in effluent quality achieved by the upgrade will compensate for the increase in flow through the plant. The ABP inspector's report summarises the positive findings of the modelling for the post WWTP upgrade scenario on Dublin Bay water quality in sections 12.3.5 and 12.3.12 of his report and the overall positive impact for human health and the environment in his conclusions in section 12.9.1.

In addition, the EIAR report acknowledges that under the do-nothing scenario "*the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WWTP*", which could result in a deterioration of the biological status of Dublin Bay (Irish Water, 2018). Nevertheless, these negative impacts of nutrient over-enrichment are considered "unlikely" (Irish Water, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. Therefore, the do-nothing scenario predicts that nutrient and suspended solid loads from the WWTP will "continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity". Therefore, it can be concluded that

significant effects on the current status of the European sites within Dublin Bay from the current operation of Ringsend WWTP are unlikely. This conclusion is not dependent upon any future works to be undertaken at Ringsend.

Even without treatment at the Ringsend WWTP, the peak effluent discharge, calculated for the proposed development as 28.26 l/s (which would equate to 0.25% of the licensed discharge at Ringsend WWTP [peak hydraulic capacity]), would not have a measurable impact on the overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive). This assessment is supported by hydrodynamic and chemical modelling within Dublin Bay which has shown that there is significant dilution for contaminants of concern (DIN and MRP) available quite close to the outfall for the treatment plant (Ringsend WWTP 2012 EIS, Ringsend WWTP 2018 EIAR; refer to Section 12.4.22, ABP-301798-18 Inspector's report). The most recent water quality assessment of Dublin Bay WFD Waterbody undertaken by the EPA (Water Quality in 2020: An Indicator Report, 2021) also shows that Dublin Bay on the whole, currently has an 'Unpolluted' water quality status (refer to www.catchments.ie).

With regard to bathing waters in Dublin Bay, as mentioned above the Proposed Development will have no impact on the water quality in any overflow situation apart from a minor contribution (0.25% of the peak hydraulic capacity at Ringsend WWTP) from foul sewage.

It should be noted that the Ringsend WWTP upgrade has experienced capacity issues during rainfall events and therefore overflows can occur following periods of heavy rainfall. These overflows occur as a result of the impact on treatment capacity during heavy rainfall events due to surges primarily caused by the historical combined drainage system in Dublin. As the Proposed Development will not contribute any additional stormwater drainage to the WWTP over the natural greenfield rate, the development will therefore have no measurable impact on the water quality in any overflow situation.

The assessment has also considered the effect of cumulative events, such as release of sediment laden water combined with a hydrocarbon leak on site (1,000 litres as a worst case scenario during the construction phase). As there is adequate assimilation and dilution between the site and the Natura 2000 sites (Dublin Bay, which is c. 23 km from the site), it is concluded that no perceptible impact on water quality would occur at the Natura 2000 sites as a result of the construction or operation of this Proposed Development. It can also be concluded that the cumulative or in-combination effects of effluent arising from the Proposed Development with that of other permitted proposed developments, or with development planned pursuant to statutory plans in the greater Dublin, Meath and Kildare areas, which will be discharged into Ringsend WWTP will not be significant having regard to the size of the calculated discharge from the Proposed Development and having regard to the following:

- Recent water quality assessment for Dublin Bay shows that they currently continue to meet the criteria for 'Unpolluted' water quality status (EPA, data until July 2021).
- The Ringsend WWTP upgrade which is currently being constructed will result in improved water quality by Q4 2023 (for a population of 2.1 million) and 2025 (for a population of 2.4 million) to ensure compliance with Water Framework Directive requirements.
- All new developments are required to comply with SuDS which ensures

management of run-off rate within the catchment of Ringsend WWTP.

- The natural characteristics of Dublin Bay result in enriched water rapidly mixing and degrading such that the plume has no appreciable effect on water quality at Natura 2000 sites.

As the Proposed Development will have no additional stormwater run-off during a stormwater event over and above the current level, surface water run-off from the development in the operational phase will therefore have no impact on the current water quality in any overflow situation at Dublin Bay.

It should also be noted that the bathing status has no direct relevance to the water quality status of the Natura sites due to rapid mixing and dilution resulting in no measurable change in water quality within the overall water body.

In addition, there is no long term discharge planned which could have an impact on the status of the water body. In the scenario of an accidental release (unmitigated leaks mentioned above) there is potential for a temporary impact only which would not be of a sufficient magnitude to effect a change in the current water body status.

Finally, in a worst-case scenario of an unmitigated leak and not considering the operation of the SuDS measures already included in the design, no perceptible risk to any Natura 2000 Sites is anticipated given the distance from source to Malahide Estuary protected areas (c. 12.6km). Potential contaminant loading will be attenuated, diluted and dispersed near source area.

Source	Pathways	Receptors considered	Risk of Impact
Construction Impacts (Summary)			
Unmitigated leak from an oil tank to ground/ unmitigated leak from construction vehicle (1,000 litres worst case scenario).	Bedrock protected by >10m low permeability overburden. Migration within weathered/ less competent limestone is low (limestone has discrete local fracturing rather than large connected fractures).	Limestone bedrock aquifer (Locally Important Aquifer)	Low risk of migration through poorly connected fracturing within the limestone rock mass (Locally Important Aquifer). No likely impact on the status of the aquifer/off site migration due to low potential loading, natural attenuation within overburden and discrete nature of fracturing reducing off site migration.
Discharge to ground of runoff water with High pH from cement process/ hydrocarbons from construction vehicles/run-off containing a high concentration of suspended solids	Indirect pathway through stormwater drainage and river network to Malahide Estuary (distance source-receptor: >12.6km)	Malahide Estuary SAC/ SPA	Potential for local temporary exceedances of statutory water quality standards at outfall. However, no perceptible risk to water requirements for the Natura 2000 sites in Malahide Estuary based on loading and high level of dilution in the surface water sewer and on the distance of c. 12.6 km between the source and the estuary.
Operational Impacts (Summary)			
Foul effluent discharge to sewer	Indirect pathway to South Dublin Bay through public sewer	South Dublin Bay SAC/SPA/pNHA	No perceptible risk – Even without treatment at Ringsend WWTP, the peak effluent discharge (28.26 l/sec which would equate to 0.25% of the licensed discharge at Ringsend WWTP); would not impact on the

			overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive).
Discharge to ground of hydrocarbons from carpark leak (70 litres worst case scenario)	Indirect pathway through stormwater drainage and river network to Malahide Estuary (distance source-receptor: >12.6km)	Malahide Estuary SAC/ SPA	No perceptible risk – taking into account the extent of loading of contaminant, distance between the source and Malahide Estuary is c. 12.6 km and significant dilution in the surface water sewer, Fairyhouse Stream and Broadmeadows River will ensure any released hydrocarbons are at background levels (i.e., with no likely impact above water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019).

Table 3.1 Pollutant Linkage Assessment (without mitigation)

4.0 CONCLUSIONS

A conceptual site model (CSM) has been prepared following a desk top review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e. mitigation measures) in place at the proposed development site.

During construction and operation phases there is no direct source pathway linkage between the Masterplan site and open waters. There is no direct source pathway linkage between the Masterplan site and any Natura 2000 sites (i.e. Malahide Estuary SAC/SPA and South Dublin Bay SAC/SPA/pNHA). There are indirect source pathway linkage from the Masterplan development through the public stormwater sewer which discharges into the Fairyhouse Stream and ultimately to Malahide Estuary, and the foul sewer which will eventually discharges to the Ringsend WWTP and ultimately discharges to South Dublin Bay. The future development has a peak foul discharge that would equate to 0.25% of the licensed discharge at Ringsend WWTP (peak hydraulic capacity).

Even disregarding the operation of design measures including SuDS and an attenuation system and petrol interceptors on site, it is concluded that there will be imperceptible impacts from the proposed Masterplan to the water bodies due to emissions from the site stormwater drainage infrastructure to the wider drainage network. It should be noted the proposal also includes permeable paving, an attenuation system and petrol interceptors as part of best practice project design, and these features will provide additional filtration from the site to the drainage network.

It is concluded that there are no pollutant linkages as a result of the construction or operation of the Proposed Development which could result in a water quality impact which could alter the habitat requirements of the Natura 2000 sites within Malahide Estuary and South Dublin Bay.

Finally, and in line with good practice, appropriate and effective mitigation measures will be included in the construction design, management of construction programme

and during the operational phase of the proposed development. With regard the construction phase, adequate mitigation measures will be incorporated in the Construction Environmental Management Plan (CEMP). These specific measures will provide further protection to the receiving soil and water environments. However, the protection of downstream European sites is in no way reliant on these measures and they have not been taken into account in this assessment.

5.0 REFERENCES

EPA, (2022). Environmental Protection Agency. Available on-line at: https://gis.epa.ie/EPAMaps/ [Accessed: 24-08-2022].

GSI, (2022). Geological Survey of Ireland; Available on-line at: http://www.gsi.ie [Accessed: 24-08-2022].

NPWS, (2022). National Parks & Wildlife Service. Available on-line at: http://webgis.npws.ie/npwsviewer/ [Accessed: 24-08-2022].

Irish Water (2021). Ringsend Wastewater Treatment Plant Annual Environmental Report 2020.

Irish Water (2018) Ringsend Wastewater treatment plant Upgrade Project Environmental Impact Assessment Report.

Inspector's Report – ABP-301798-18. 10-year permission for development of the Ringsend wastewater treatment plant upgrade project including a regional biosolids storage facility.

Board Order and Report of Inspector – ABP-301798-18. 10-year permission for development of the Ringsend wastewater treatment plant upgrade project including a regional biosolids storage facility.

Davey & Smith Architects (2021). Masterplan Lands at Milltown, Ashbourne.

DBFL Consulting Engineers (2022). Infrastructure Design Report. Lands at Cherry Lane, Ashbourne, Co, Meath.

DBFL Consulting Engineers (2022). Site Specific Flood Risk Assessment. Lands at Cherry Lane, Ashbourne, Co, Meath.