FARGANSTOWN SOCIAL HOUSING

Report to Inform Screening for Appropriate Assessment

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1 INTRODUCTION

RPS was commissioned by Meath County Council (MCC) to produce this report to inform Screening for Appropriate Assessment. This report will inform Meath County Council's (MCC) Appropriate Assessment (AA) screening of a proposed residential development, and associated works, at Farganstown, Navan, Co. Meath (hereafter 'the proposed development').

This report has been prepared to accompany a Part 8 planning package by MCC, and is an examination of whether, in view of best scientific knowledge and applying the precautionary principle, the proposed development, either individually or in combination with other plans or projects, is likely to have a significant effect on any European site(s). The assessment will be carried out in accordance with the legal context outlined in **Section 1.1**.

1.1 Legislative Context

1.1.1 European Sites

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of a European Union (EU)-wide network of sites known as Natura 2000 (hereafter referred to as 'European sites'). In the Republic of Ireland, European sites comprise:

- Special Areas of Conservation (SACs) designated for habitats, plants, and non-bird species, under the Habitats Directive (92/43/EEC);
- Special Protection Areas (SPAs) designated for bird species and their habitats, under the Birds Directive (79/409/ECC as codified by Directive 2009/147/EC); and
- 'Candidate' sites including 'cSACs'. The process of designating cSACs as SACs is ongoing in Ireland. The term SAC is used throughout this report for both SACs and cSACs, given they are subject to equal protection.

1.1.2 Appropriate Assessment

1.1.2.1 European Context

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

"*Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public*."

Article 6(4) states:

"*If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory*

measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."

1.1.2.2 National Context

In the context of the proposed development, the requirement (to screen) for AA under the Habitats Directive is transposed by the Planning and Development Acts (2010 to 2018 as amended); 'the Planning Acts', and the Planning and Development Regulations (2010 to 2018, as amended).

Under Section 177U (5) of the Planning and Development Acts 2000-2010, as amended ('the Planning Acts'), the competent authority (in this case, MCC) shall determine that an AA of a proposed development is required if it cannot be excluded [emphasis added], on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

1.1.2.3 Role of the Competent Authority

MCC, in its role as the competent authority, is obliged to examine the likely significant effects individually or in combination, of the proposed development on European sites in light of their specific qualifying interests (QIs; i.e. non-bird species and habitats), Special Conservation Interests (SCIs; i.e. bird species and associated wetland habitats) and Conservation Objectives (COs). If Screening for AA determines that there is likely to be significant effects on any European site, then full AA must be carried out for the proposed development, including the compilation of a Natura Impact Statement (NIS) to inform the determination.

1.1.2.4 Public Access to Environmental Information

The European Communities (Access to Information on the Environment) Regulations 2007 to 2014 (AEI Regulations) transpose Directive 2003/4/EC on public access to environmental information, which was adopted to give effect to the 'Access to Information' pillar of the Aarhus Convention (S.I. No. 615/2014).

The AEI Regulations give the public the right to access environmental information. The Regulations also oblige public authorities to be proactive in disseminating environmental information to the public and to make reasonable efforts to maintain environmental information and have it in a form that is accessible and can be reproduced.

1.2 Stages of Appropriate Assessment

Stage 1: Screening / Test of Significance

This process identifies whether the proposed development is directly connected to or necessary for the management of a European site(s) and identifies whether the development is likely to have significant impacts upon a European site(s) either alone or in combination with other projects or plans.

The output from this stage is a determination for each European site(s) of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause that site to be brought forward to Stage 2.

Stage 2: Appropriate Assessment

This stage considers the impact of the proposed development on the integrity of a European site(s), either alone or in combination with other projects or plans, with respect to: (i) the site's conservation objectives; and (ii) the site's structure, function and its overall integrity. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts is undertaken.

The output from this stage is a Natura Impact Statement (NIS). This document must include sufficient information for the competent authority to carry out the appropriate assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must consider alternatives (Stage 3) or proceed to Stage 4.

Stage 3: Assessment of Alternatives

This process examines alternative ways of achieving the objectives of the project that avoid adverse impacts on the integrity of the European site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European sites then the process either moves to Stage 4 or the project is abandoned.

Stage 4: Assessment where Adverse Impacts Remain

This stage includes the identification of compensatory measures where, in the context of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

2 PROPOSED DEVELOPMENT

The proposed development consists of the construction of 84 social housing units, including the provision of car park spaces, new entrances onto a consented, but yet to be constructed, Local Distributor Road (LDR) 6 (R153 to Boyne Road), landscaping, lighting, and all associated development works. The proposed development is located north of Old Road, Farganstown, Navan, Co. Meath, and measures c. 1.7 hectares. The proposed development is bounded by agricultural land and small watercourses to the south and east, and a new road development (under construction) to the north and east (hereafter 'the proposed development site') (see **Figure 2-1** and **Appendix A**).

The proposed development is dependent on the construction of the Local Infrastructure Housing Activation Fund (LIHAF) LDR6, linking the R153 with the Boyne Road. If this distributor road is not constructed, the proposed development will not be possible, due to the landlocked nature of the proposed development site, for both access and services (e.g. foul water system).

2.1 Project Description

The main infrastructural elements to be included in the proposed development comprise the following:

- construction of 84 units comprising 34 no. one-bedroom apartments, 38 no. two-bedroom apartments, 2 no. three-bedroom houses, 6 no. three-bedroom houses and 4 no. four-bedroom houses;
- provision of 131 no. car park spaces;
- internal roads and hardstanding;
- the construction of 1 no. new vehicular entrance onto a consented LDR6;
- landscaping, including planting;
- 0.34 ha open space;
- watercourse exclusion wall (sheet piling c. 1 m from watercourse bank);
- lighting; and
- all associated development works.

2.1.1 Surface Water and Foul Water Management

2.1.1.1 Existing

The existing surface water drainage within the proposed development site consists of green field run-off from agricultural (arable) land into two unnamed watercourses. These watercourses flow into the River Boyne, west of the proposed development site.

There is no existing foul water management within the proposed development site.

2.1.1.2 Proposed

The proposed development will incorporate a surface water management system which has been designed in accordance with the Greater Dublin Strategic Drainage Study (GDSDS, 2005) approach using Sustainable Drainage Systems (SuDS) techniques. This system, detailed in **Appendix A,** will include:

- surface water drainage piping and gullies within the hardstanding;
- class 1 bypass oil interceptor;
- use permeable paving (roof drainage to private driveways);
- green roofing on the flat roof apartments;

- underground surface water attenuation tanks (Stormtech®, or similar, attenuation);
- flow control device (hydro-break) to greenfield rates; and
- precast outfall to unnamed stream at the north west of the proposed development site. The installation of the outfall will be completed without the need for instream works or pouring od concrete within 5 m of the watercourse.

From the surface water outfall at the proposed development, the route of the unnamed stream is undetermined; however, it is assumed that the unnamed stream confluences with the River Boyne downstream of the proposed development site.

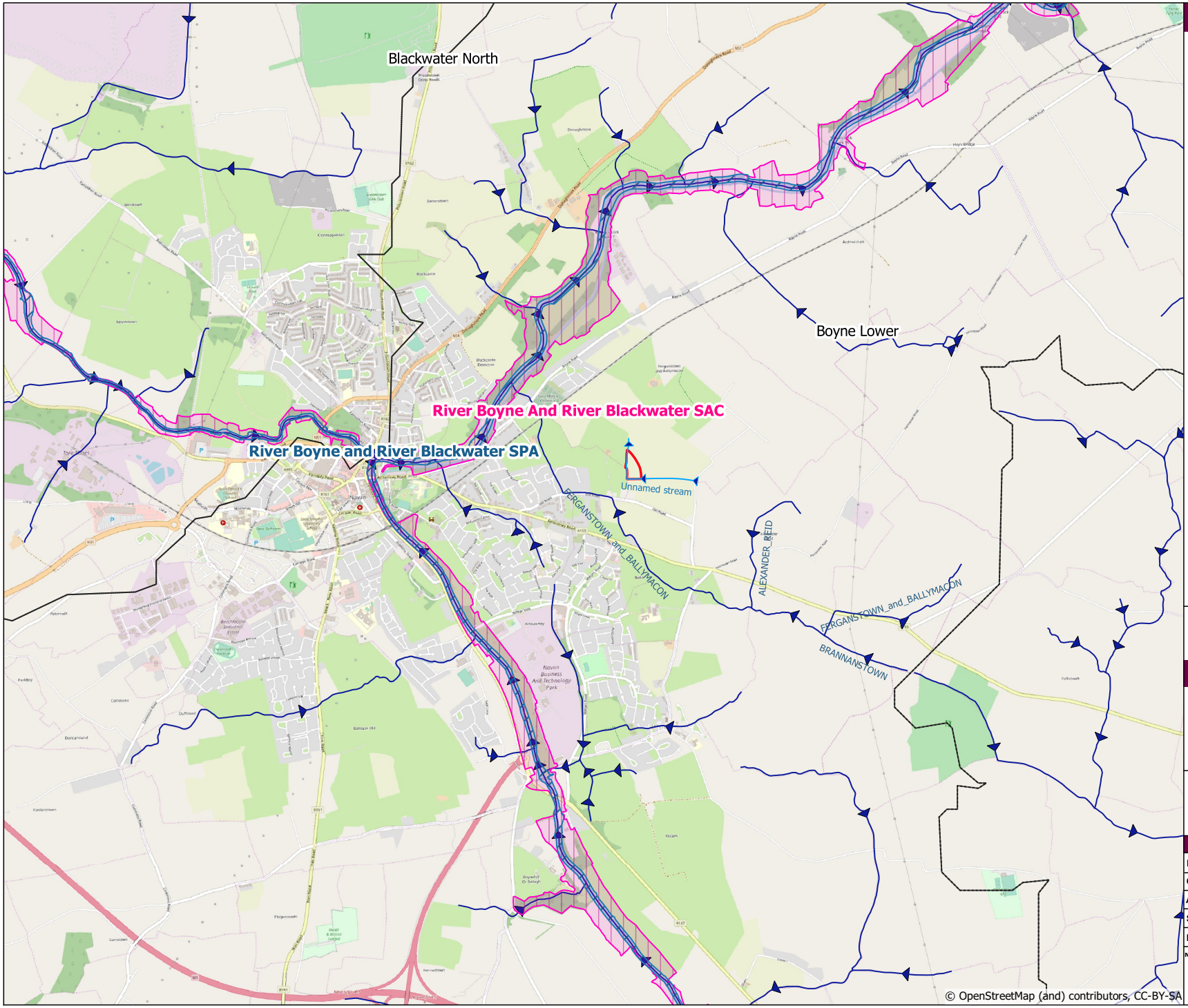
The proposed foul water management incorporates both temporary and permanent measures (see **Appendix A**), accounting for the completion of an adjacent consented distributor road (LDR6), which will contain foul water services. There will be a temporary foul water holding tank (with duty and standby pumps) to pump foul water via a temporary rising main, until the gravity trunk sewer is operational. When the LDR6 is operational, there will be a rising main and a gravity main. When the permanent connection to the trunk sewer is established, the temporary foul water holding tank will become obsolete and infilled with concrete.

2.1.2 Construction Programme/Phasing

The is no phasing of the construction of the proposed development; however, the construction of the proposed development will dependant on the completion of the Local Infrastructure Housing Activation Fund (LIHAF) distributor road linking the R153 to the Boyne Road. If this distributor road is not constructed, the proposed development will not be possible, due to the landlocked nature of the proposed development site, for both access and services (e.g. foul water system).

2.1.3 Habitat Removal and Alteration

The proposed development is located on agricultural (arable) land. No alteration of semi-natural habitats, including culverting of watercourses or removal of hedgerows will take place. Landscaping, including planting of grassed areas and establishment of appropriately sized trees, will take place after construction of the proposed development. Sheet-piling to c. 1 m of the watercourse bank will cause temporary vibration and disturbance to the aquatic environment, and associated biodiversity, during construction.



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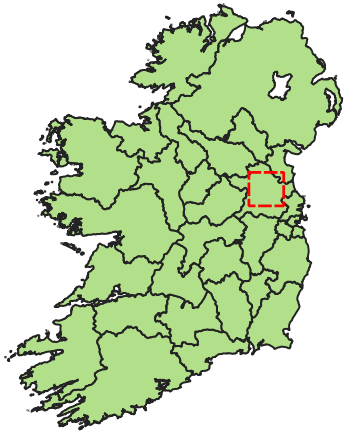

- Proposed Development Site
- River waterbodies
- Unnamed stream
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- WFD Water Management Units

Source: NPWS (January 2019)

Client: comhairle chontae na mí / meath county council

Project: **Farganstown Social Housing**

Title

Figure 2-1: European sites

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3 METHODOLOGY

3.1 Appropriate Assessment Guidance

EU and national guidance exist in relation to Member States' fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA has had regard to the following guidance:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government (DoEHLG, 2010);
- Communication from the Commission on the Precautionary Principle (EC, 2000);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (known as MN2000), Office for Official Publications of the European Communities, Luxembourg (EC, 2018);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission (EC, 2007);
- Nature and biodiversity cases: Ruling of the European Court of Justice (EC, 2006);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013); and
- Article 6 of the Habitats Directive: Rulings of the European Court of Justice (EC, 2014).

There have been significant changes to AA practice since both the EC (2001) and the DoEHLG guidance (2010), arising from practice and rulings in European, UK and Irish courts. The following issues have been addressed in the preparation of this report:

- When considering whether a European site can be screened out, the competent authority cannot take into account any measures intended to avoid or reduce the harmful effects of the proposed development (i.e. mitigation measures)[1]; however, a 2019 Irish High Court consideration[2] concluded that Sustainable Drainage Systems (SuDS) are "*as a matter of fact and law… not mitigation measures which a competent authority is precluded from considering at the stage 1 screening stage*";
- The screening must consider the cumulative impacts of any development: that already exists; for which a planning application has been made; which the applicant for permission intends to make an application in the future; and, which is a matter of public record and which is planned to be implemented in the future;
- Consideration of the cumulative effects of plans, including local area plans;
- Where an element of the proposed development is missing design detail or subsequent agreements, the assessment should assume the worst-case scenario (i.e. the design with the greatest environmental impact); and

[1] *People Over Wind v Coillte Teoranta* (Court of Justice of the EU, case C-323/17)

[2] *Kelly v An Bord Pleanála & anor* [2019] IEHC 84 (High Court)

- Making of findings explicit[3].

3.2 Ecological Data

3.2.1 Desk Study

A desk study was completed to assess the potential for all QIs and SCIs of European sites to occur, given their ecological requirements identified by Balmer *et al*. (2013) for SCIs, and the National Parks and Wildlife Service (NPWS) for QIs (NPWS, 2019a,b,c).

SCI Birds and mobile QI species can travel many kilometres from their core areas, and desktop surveys assessed the potential presence of such species beyond the European sites for which they are QIs/SCIs. Desktop studies had particular regard for the following sources:

- EPA online interactive mapping tool[4];
- Tabulated lists for all European sites in Ireland of SCIs and QIs, obtained through a data request to the NPWS;
- Information on ranges of mobile QI populations in Volume 1 of NPWS' Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a), and associated digital shapefiles obtained from the NPWS Research Branch;
- Information on ranges of mobile SCIs bird populations from Bird Atlas 2007–11 (Balmer *et al*., 2013), excluding birds of prey whose ranges were determined with reference to Hardey *et al*. (2013);
- Mapping of European site boundaries and Conservation Objectives for relevant sites in County Meath and beyond, as relevant, available online from the NPWS;
- Distribution records for QI and SCI species of European sites held online by the National Biodiversity Data Centre (NBDC)[5];
- Details of QIs/SCIs of European sites within the Draft County Meath Biodiversity Action Plan 2015-2015 (MCC, 2015);
- Data including surface and ground water quality status, and river catchment boundaries available from the online database of the Environmental Protection Agency (EPA);
- National and regional surveys of semi-natural habitats, including grasslands (O'Neill *et al*., 2013), saltmarsh (McCorry and Ryle, 2009; Devaney and Perrin, 2015), and woodland (Perrin *et al*., 2008);
- Boundaries for catchments with confirmed or potential freshwater pearl mussel (FWPM) *Margaritifera margaritifera* populations in GIS format available online from the NPWS; and,
- Environmental assessment of the consented, but yet to be constructed, LDR6 road project (MacCabe Durney, 2008).

3.2.2 Field Study

This report was informed by a habitat and protected species survey of the proposed development site on the 21st March 2019 by an RPS ecologist. The survey assessed the potential for all QIs/SCIs of European sites

[3] *Connelly v An Bord Pleanála* [2018] IESC 31 (Supreme Court)

[4] Available online at https://gis.epa.ie/EPAMaps/default. Accessed February 2019.

[5] Assessing records up to 10 years old (from date of search), for an area of 5 km from the proposed development site. Available online at: https://maps.biodiversityireland.ie/Map, Assessed 18/02/2019.

and third schedule[6] invasive species to occur, given their ecological requirements identified by Balmer *et al*. (2013) for birds, and the NBDC and NPWS for all other species/habitats (NPWS, 2019b,c).

The survey included checks of suitable habitats for all highly mobile QI/SCI species potentially occurring. For instance, the adjacent unnamed watercourses were checked for the potential of common kingfisher *Alcedo atthis* nest sites, and potential breeding or resting sites of otter *Lutra lutra*. Numerous non-breeding SCI bird species travel many kilometres from their core areas, and surveys also assessed potential presence of roosting or feeding sites of such species. Species survey had regard for relevant guidance (e.g. NRA, 2009). The potential of any buildings, vegetation, or features within the Zone of Influence (ZoI) (see **Section 3.3.1**) of the proposed development to offer nesting or roosting habitat to SCI bird populations, was assessed.

3.2.3 Limitations

The receiving environment (i.e. baseline condition) may naturally vary through seasons and between years (NRA, 2008). This limitation to the assessment is acknowledged and incorporated into the assessment.

The field study was completed during a single site walkover. The timing of the survey was sub-optimal for the floral survey of hedgerows and river corridors (NRA, 2008); however, the timing was deemed suitable for the purposes of Appropriate Assessment, due to a reasonably mild spring (to date), e.g. higher mean soil and air temperatures, and lower rainfall at the nearest Met Eireann Weather Station (Dunsany)[7]. This limitation to the assessment is acknowledged and incorporated into the assessment.

Sources of desk study information are neither exhaustive nor necessarily easily available, and every effort was made to obtain ecological data in the public domain to inform the description of the receiving environment and its assessment. It is possible that other information, not in the public domain and known only to private individuals, exists. This limitation to the assessment is acknowledged and incorporated into the assessment.

3.3 Relevant European Sites

The identification of relevant European sites to be included in this report was based on the identification of the ZoI of the proposed development, a source-pathway-receptor model of effects, and the likely significance of any identified effects.

3.3.1 Zone of Influence

The proximity of the proposed development to European sites, and more importantly QIs/SCIs of the European sites, is of importance when identifying potentially likely significant effects. During the initial scoping of this report, a 15 km ZoI was applied for impact assessment. A conservative approach has been used, which minimises the risk of overlooking distant or obscure effect pathways, while also avoiding reliance on buffer zones (e.g. 15 km), within which all European sites should be considered. This approach assesses the complete list of all QIs/SCIs of European sites in Ireland (i.e. potential receptors), instead of listing European sites within buffer zones. This follows Irish departmental guidance on AA:

"*For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects*" (DoEHLG, 2010; p.32, para 1).

[6] Invasive species scheduled to the EC (Birds and Natural Habitats) Regulations 2011-2015 ('the Regulations'). Under the Regulations, it is an offence to plant, disperse, allow or cause to disperse, spread or otherwise cause to grow in any place any species scheduled to the Regulations without a licence.

[7] Available online at https://www.met.ie/climate/available-data/monthly-data. Accessed March 2019.

Following the guidance set out by the NRA (2009), the proposed development has been evaluated based on an identified ZoI with regard to the potential impact pathways to ecological feature (e.g. mobile and static). The ZoI of the proposed development on mobile species (e.g. birds, mammals, and fish), and static species and habitats (e.g. saltmarshes, woodlands, and flora) is considered differently. Mobile species have 'range' outside of the European site in which they are QI/SCI. The range of mobile QI/SCI species varies considerably, from several metres (e.g. in the case of whorl snails *Vertigo* spp.), to hundreds of kilometres (in the case of migratory wetland birds). Whilst static species and habitats are generally considered to have ZoIs within close proximity of the proposed development, they can be significantly affected at considerable distances from an effect source; for example, where an aquatic QI habitat or plant is located many kilometres downstream from a pollution source.

Hydrological linkages between the proposed development and European site (and their Qis/SCIs) can occur over significant distances; however, any effect will be site specific depending on the receiving water environment and nature of the potential impact. As a precautionary measure, a reasonable worst-case ZoI for water pollution from the proposed development site is considered to be the surface water catchment. In this report, the surface water catchment is defined at the scale of Catchment Management Unit (CMU), as adopted in the River Basin Management Plan (RBMP) for Ireland 2018-2021 (DoHPLG, 2018).

3.3.2 Source-Pathway-Receptor Model

The likely effects of the proposed development on any European site from has been assessed using a source-pathway-receptor model, where:

- A 'source' is defined as the individual element of the proposed works that has the potential to impact on a European site, its qualifying features and its conservation objectives;
- A 'pathway' is defined as the means or route by which a source can affect the ecological receptor; and
- A 'receptor' is defined as the Special Conservation Interests (SCI) of SPAs or Qualifying Interests (QI) of SACs for which conservation objectives have been set for the European sites being screened.

A source-pathway-receptor model is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. The source-pathway-receptor model was used to identify a list of European sites, and their QIs/SCIs, with potentially links to European site. These are termed as 'relevant' European sites/QIs/SCIs throughout this report.

3.3.3 Likely Significant Effect

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above a *de minimis* level[8]. The opinion of the Advocate General in CJEU case C-258/11 outlines:

"*the requirement that the effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.*"

[8]*Sweetman v. An Bord Pleanála* (Court of Justice of the EU, case C-285/11). A de minimis effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects

In this report, therefore, 'relevant' European sites are those within the potential ZoI of activities associated with the construction and operation of the proposed development, where LSE pathways to European sites were identified through the source-pathway-receptor model.

3.4 Screening Process

The Screening for Appropriate Assessment will incorporate the following steps:

I. Determining whether a project or plan is directly connected with or necessary to the conservation management of any European sites;

II. Describing the project or plan;

III. Identifying the European sites potentially affected by the project or plan;

IV. Identifying and describing any potential effects of the project or plan on European sites, alone, in-combination and cumulatively with other plans/projects; and

V. Assessing the likelihood of significant effects on European sites.

4 RECEIVING ENVIRONMENT

4.1 Overview of Proposed Development

The predominant landuse within the ZoI of the proposed development is agricultural (arable and pasture) land, with occasional residential developments and road infrastructure.

4.2 European Sites

The closest European site to the proposed development is the River Boyne and River Blackwater SAC (site code 2299), which is located c. 910 m to the northwest of the proposed development. This SAC is downstream, via unnamed watercourses and undetermined path, of the proposed development. The River Boyne and River Blackwater SAC is within the same Catchment Management Unit as the proposed development.

The next nearest European site to the proposed development is the River Boyne and River Blackwater SPA (site code 4232) which is located c. 980 m to the northwest of the proposed development. This SPA is downstream, via unnamed watercourses and undetermined path, of the proposed development. The River Boyne and River Blackwater SPA is within the same Catchment Management Unit as the proposed development.

The generic Conservation Objectives of the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA are detailed in **Table 4.1**. There are no other European sites within the ZoI of the proposed development site. If relevant, more distant European sites will be discussed in the Screening Assessment in **Section 5**. All European sites identified in this report are illustrated in **Figure 2-1.**

Table 4.1: Conservation Objectives for Special Areas of Conservation and Special Protection Areas Referenced in AA Screening Report

Site (Code), and Distance from Proposed Development	Conservation Objectives version	Qualifying Interest(s) [code] * / Special Conservation interest(s)	Conservation Objective(s)
River Boyne and River Blackwater SAC (2299); located c. 910 m northwest of proposed development.	Generic Version 6.0, dated 21 February 2018 (NPWS, 2018a)	Alkaline fens [7230]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.
		Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] *	
		Lampetra fluviatilis (River Lamprey) [1099]	
		Salmo salar (Salmon) [1106]	
		Lutra lutra (Otter) [1355]	
River Boyne and River Blackwater SPA (2299); located c. 980 m northwest of proposed development.	Generic Version 6.0, dated 21 February 2018 (NPWS, 2018b)	Kingfisher (*Alcedo atthis*) [A229]	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

*Priority Annex I habitat

4.3 Habitats and Flora

4.3.1 Terrestrial

No terrestrial habitats within the footprint or ZoI of the proposed development have affinity to QI habitats or offer any significant supporting value to QIs or SCIs of any European sites.

4.3.2 Aquatic

Two unnamed watercourses were identified during the field survey of the proposed development site. A small, flowing east to west, unnamed stream runs along the southern boundary of the proposed development site. This stream confluences into a similar unnamed stream flowing south to north along the western boundary of the proposed development site. The path of this stream, after leaving the proposed development site, is undetermined.

Analysis of the EPA online mapper[4] identified the Ferganstown and Ballymacon first order stream, located c. 175 m to the southwest of the proposed development, and the River Boyne, located c. 980 m north west of the proposed development. The River Boyne is designated as both a SAC and SPA (see **Section 4.2**).

This Ferganstown and Ballymacon steam is hydrologically connected to the proposed development via overland run-off and drainage ditches. There is no water quality monitoring of this stream, which flows northwest of the proposed development and into the River Boyne.

An EPA monitoring station (StationID RS07B041900), located c. 1.25 km downstream of the proposed development, indicates a water quality status of 'moderate' in 2003 (the most recent data). There is no river waterbody status (2010-2015) for the River Boyne at the nearest hydrological connectivity to the proposed development; however, the c. 1.25 km downstream river waterbody status (2010-2015) for the River Boyne (BOYNE_150) is considered 'moderate'. The most recent assessment of the River Boyne waterbody status (2010-2015) is summarised as follows:

"*Three of the thirteen stations on the Boyne were in satisfactory condition when assessed in 2015. Two of the sites had improved in ecological quality; Inchamore Br. (0800) improved to high ecological status after a decline in 2012 and Obelisk Br. (2200) went from moderate to good condition, however a large stand of Himalayan balsam was recorded at the site. Site 1000 (Derrinydaly Br.) remains in good condition. Sites 2010 (d/s Broadboyne Br.) and 2100 (Slane Br.) both deteriorated from good to moderate ecological condition. The remaining sites (0200, 0300, 0600, 0900, 1200, 1400, 1500, 1700) all remained unchanged at moderate ecological condition. Ashfield Br. (0600) had high levels of peat siltation*." (EPA, 2019).

The water quality of the transitional Boyne Estuary, located c. 16 km downstream of the proposed development, is of intermediate status (most recent results from 2010-2012). The downstream coastal waterbody (Boyne Estuary Plume Zone) status is good (most recent results from 2010-2015).

The proposed development is within the Trim groundwater body, which is classified as being of 'good' status, for the period 2010-2015. This groundwater body adjoins both the River Boyne And River Blackwater SAC and the River Boyne And River Blackwater SPA.

The flood risk management plan for the Boyne (OPW, 2018) includes the flood risk probability within the proposed development site. The proposed development site is not within any historically recorded flood event, and it does not intersect any area associated with low, medium or high flood probability (OPW, 2018). Furthermore, the proposed development site has an annual exceedance probability of less than 0.1%[9].

4.3.3 Flora and Invasive Alien Plants

The field survey recorded no evidence or potential for QI flora, including Killarney fern *Trichomanes speciosum*, marsh saxifrage *Saxifraga hirculus*, slender naiad *Najas flexilis*, slender green feather moss *Hamatocaulis vernicosus*, or petalwort *Petalophyllum ralfsii*. None of these species were returned from the desk study data search, and the proposed development is outside the favourable reference range of all these species (NPWS, 2019c).

[9] Available online at: http://www.floodinfo.ie/map/floodmaps/. Accessed March 2019.

One invasive alien plant, scheduled to the European Communities (Bird and Natural Habitat Regulations) 2011-2015, was returned from the data search. Himalayan balsam *Impatiens glandulifera* was recorded c. 1.4 km west and upstream of the proposed development, on the River Boyne. Through profession experience, Himalayan balsam is known to be well established along sections of the banks to the River Boyne, between Slane and Navan.

No invasive alien plants, scheduled to the European Communities (Bird and Natural Habitat Regulations) 2011-2015, were noted during the field survey of the proposed development site. It is our understanding that there is are no invasive alien plants, scheduled to the European Communities (Bird and Natural Habitat Regulations) 2011-2015, present within the footprint of the proposed development.

4.4 Mobile Species

4.4.1 Qualifying Interests

Desk study results indicated that several QI mobile species have been recorded with 5 km of the proposed development site, while the field survey found no evidence or potential for QI mobile species within the ZoI of the proposed development.

4.4.1.1 Mammals

The desk study returned several records of European otter *Lutra lutra* the nearest of which was c. 1 km west of the proposed development; upstream of the confluence of the Ferganstown and Ballymacon and the River Boyne.

The proposed development is outside the favourable reference range of the lesser horseshoe bat *Rhinolophus hipposideros* (NPWS, 2019b), which is the only bat species designated as a QI in Ireland. The species is restricted to the western Atlantic seaboard and has never been recorded in Co. Meath.

4.4.1.2 Fish

The proposed development is within the favourable reference range of QI Atlantic salmon (*Salmo salar*) and QI river lamprey (*Lampetra fluviatilis*), QI brook lamprey (*Lampetra planeri*), and QI sea lamprey (*Petromyzon marinus*) (NPWS, 2019c). The proposed development is outside the favourable reference range QI Killarney shad *Alosa fallax killarnensis* and QI twaite shad *Alosa fallax fallax* (NPWS, 2019c).

QI Salmon

Atlantic salmon are a QI of the River Boyne and River Blackwater SAC (NPWS, 2018a). Inland Fisheries Ireland (IFI) have stated that several "*low-head barriers to fish migration present along lower sections of the Boyne Catchment River, the most substantial of these being located at Slane, and downstream of Navan at Blackcastle…with a number of potential barriers are also present on the Kells Blackwater*" (Gallagher *et al.,* 2016). However, IFI have advised that Atlantic salmon do successfully migrate upstream past these obstacles, to reach spawning and nursery habitats in the Kells Blackwater. QI Atlantic salmon of the River Boyne and River Blackwater River SAC are presumed present in the River Boyne, within the ZoI of the proposed development.

QI Lamprey

The River Boyne and River Blackwater SAC is designated for QI river lamprey *Lampetra fluviatilis*. There are presumed to be suitable spawning habitats present for adults, and suitable muds present for river lamprey larvae (ammocoetes) in the River Boyne downstream of the proposed development site. QI river lamprey of the River Boyne and River Blackwater River SAC are known to be present in the river Boyne within the ZoI of the proposed development (O'Connor, 2006).

The proposed development is within the favourable reference range for brook lamprey *Lampetra planeri* (NPWS, 2019b). The nearest SAC designated for brook lamprey is c. 60 km outside the proposed development site (River Barrow and River Nore SAC; site code 1262), and this SAC has no hydrological connectivity with the proposed development.

The proposed development is not within the favourable reference range for sea lamprey *Petromyzon marinus* (NPWS, 2019b), the nearest SAC designated for this species is c. 60 km distant in the River Barrow and River Nore SAC (site code 1262), which has no hydrological connectivity with the Boyne CMU.

Regarding (brook and river) lamprey, O'Connor (2006) summarises that the Kells Blackwater sub-catchment (in which the proposed works are located):

- Has a good abundance of physically ideal juvenile lamprey habitats; and,
- Contains lamprey habitat under threat from pollution and drainage maintenance from urban pollution in Navan and further upstream.

Invasive fish

Roach *Rutilus rutilus*, a scheduled invasive species has been recorded in the River Boyne (O'Grady, 1995); although there are no online records in the NBDC of roach in the Catchment Management Unit within which the proposed development is located. Whilst it may occur, it is not discussed further in this report, given there will be no instream works which could influence the spread this species.

4.4.1.3 Invertebrates and Amphibians

The proposed development is outside the favourable reference range (NPWS, 2019c) and potential foraging range (i.e. 10 km; Zimmerman *et al.,* 2011) of QI marsh fritillary *Euphydryas aurinia*. The favourable reference ranges of all QI whorl snails are outside the ZoI of the proposed development (NPWS, 2019c).

The proposed development is outside the favourable reference range of both QI freshwater pearl mussel *Margaritifera margaritifera* and QI Irish freshwater pearl mussel *Margaritifera durrovensis* (NPWS, 2019c), and is not within any *Margaritifera* Sensitive Area (O'Connor, 2017) or within the same Catchment Management Unit as any *Margaritifera* SAC catchment[10].

The proposed development is within the favourable reference range of QI white-clawed crayfish *Austropotamobius pallipes*. Although no records were returned from the data search, white-clawed crayfish are known to occur on more distant upstream locations both the River Blackwater (Kells) and the River Boyne[11].

The proposed development is also outside the favourable reference range of QI Kerry slug *Geomalacus maculosus*) and QI natterjack toad *Bufo calamita* (NPWS, 2019c).

4.4.2 Special Conservation Interests

The field survey did not record the presence of any SCI birds within the ZoI of the proposed development. The desk study returned records for 15 SCI bird species from the preceding 10 years, within 5 km of the proposed development (see **Table 4.2**). There were no habitats offering significant nesting or foraging sites for any SCI species within the footprint of the proposed development.

[10] Catchments of *Margaritifera* SAC populations listed in S.I. 296 of 2009.

[11] Available online at: https://maps.biodiversityireland.ie/Map. Accessed March 2019.

Table 4.2: Special Conservation Interest Birds Returned from NBDC Data Search

Common Name (*Scientific Name*)	Record Count	Date of Last Record
Black-headed Gull (*Larus ridibundus)*	20	31/12/2011
Common Kingfisher *(Alcedo atthis)*	26	31/12/2011
Common Redshank *(Tringa totanus)*	1	31/12/2011
Dunlin *(Calidris alpina)*	2	31/12/2011
Eurasian Teal *(Anas crecca)*	2	31/12/2011
European Golden Plover *(Pluvialis apricaria)*	6	31/12/2011
Great Cormorant *(Phalacrocorax carbo)*	11	31/12/2011
Hen Harrier *(Circus cyaneus)*	3	31/12/2011
Herring Gull *(Larus argentatus)*	13	31/12/2011
Lesser Black-backed Gull *(Larus fuscus)*	2	31/12/2011
Little Grebe *(Tachybaptus ruficollis)*	16	31/12/2011
Mallard *(Anas platyrhynchos)*	58	31/12/2011
Northern Lapwing *(Vanellus vanellus)*	15	31/12/2011
Ringed Plover *(Charadrius hiaticula)*	1	31/12/2011
Whooper Swan *(Cygnus cygnus)*	5	31/12/2011

5 SCREENING ASSESSMENT

5.1 Management of European Sites

AA Screening is not required where the proposed development is connected with, or necessary to the management of any European site. In this case, the proposed development is not directly connected with or necessary to the management of any European site(s).

5.2 Summary of Information Required

The screening assessment for AA follows the methodologies set out in **Section 3**, and analysis of the following information:

- ZoI of effect from the proposed development; and
- Distribution of QIs and SCIs in relation to the ZoI.

5.3 Assessment of Source-Pathway-Receptor Model

As described in the methodology (**Section 3.3.2**), the AA Screening Report assessment adopts a comprehensive and precautionary approach for which the starting point is a complete list of all QIs/SCIs of European sites in Ireland. In this context, **Table 5.1** assesses a specific source-pathway-receptor model for this proposed development.

Table 5.1: Source-Pathway-Receptor Model for the Proposed Development

Phase	Source of Potential Effect	Description of Effect Pathway	Potential Zone of Influence of Effect
Construction	Noise, vibration, lighting and human presence during movements of vehicles and staff associated with construction activities.	During construction, noise or other construction-related disturbance could reduce the ability of populations of Qualifying Interest/ Special Conservation Interest species to forage, roost or breed.	Varies by species. Generally assessed within 500 m of the proposed development footprint for wintering birds (see Madsen, 1985; Smit & Visser,1993; and Rees *et al*., 2005). However, distance can be significantly lower (e.g. 150 m for otter underground sites (NRA, 2006)), or higher (e.g. hen harriers may take flight when nesting at up to 750 m from disturbance (Whitfield *et al*., 2008)).
	Surface water run-off carrying suspended silt or contaminants into local watercourses.	Silt, hydrocarbons, and/or other contaminants (oils, fuels, etc.) may enter nearby watercourses through surface water run-off.	The Zone of Influence of effects from contaminated surface water is difficult to accurately estimate as it will depend on numerous factors including the type and concentration of pollutants, assimilative capacity of receiving waters, and time of year (related to water levels). As a precautionary measure, a reasonable worst-case Zone of Influence for water pollution from the proposed development site is considered to be the downstream surface water catchment. In this report the surface water catchment is defined at the scale of Catchment Management Unit (CMU) as adopted in the River Basin Management Plan (RBMP) for Ireland 2018-2021 (DoHPLG, 2018). The open coastlines, where Coastal Waterbodies begin, are considered to fall outside the potential Zone of Influence of significant effects.

Phase	Source of Potential Effect	Description of Effect Pathway	Potential Zone of Influence of Effect
	Disturbance of invasive species during the construction of the proposed development.	Construction activities could lead to the dispersal of scheduled invasive species either via machinery, materials, clothing or wild animals.	The Zone of Influence of effects for spread of terrestrial invasive species is difficult to accurately estimate, as plant fragments may be spread on tyre treads to distant unrelated sites. In relation to water-borne spread of vegetation, the Zone of Influence generally is restricted to the surface water Catchment Management Unit.
	Changes of groundwater quality, yield and/or flow paths associated with earthworks during construction.	Construction activities (e.g. earthworks) could interfere with groundwater quality, yields and/or flow paths, potentially affecting the water quality or habitats dependent on groundwater supply.	The potential Zone of Influence of effects from earthworks to ground water quality, flow or/or yield is difficult to accurately estimate as it will depend on factors including the depth and intrusion of excavations, and time of year (related to water levels). As a precautionary measure, a reasonable worst-case spatial Zone of Influence is considered to be 500 m from the point of excavation; which is a precautionary doubling of the 250 m stated as the potential Zone of Influence from intrusive excavations to sensitive upland peatland sites (SEPA, 2014).
Operation	Noise, vibration, lighting and human presence during movements of vehicles and staff associated with construction activities.	During Operation, noise or other construction-related disturbance could reduce the ability of populations of Qualifying Interest/ Special Conservation Interest species to forage, roost or breed.	Varies by species. Generally assessed within 500 m of the proposed development footprint for wintering birds (see Madsen, 1985; Smit & Visser,1993; and Rees *et al*., 2005). However, distance can be significantly lower (e.g. 150 m for otter underground sites (NRA, 2006)), or higher (e.g. hen harriers may take flight when nesting at up to 750 m from disturbance (Whitfield *et al*., 2008)).
	Surface water run-off carrying suspended silt or contaminants into local watercourses.	Silt, hydrocarbons, and/or other contaminants (oils, fuels, etc.) may enter nearby watercourses through surface water run-off.	The Zone of Influence of effects from contaminated surface water is difficult to accurately estimate as it will depend on numerous factors including the type and concentration of pollutants, assimilative capacity of receiving waters, and time of year (related to water levels). As a precautionary measure, a reasonable worst-case Zone of Influence for water pollution from the proposed development site is considered to be the downstream surface water catchment. In this report the surface water catchment is defined at the scale of Catchment Management Unit (CMU) as adopted in the River Basin Management Plan (RBMP) for Ireland 2018-2021 (DoHPLG, 2018). The open coastlines, where Coastal Waterbodies begin, are considered to fall outside the potential Zone of Influence of significant effects.
	Disturbance of invasive species during the construction of the proposed development.	Operational activities could lead to the dispersal of scheduled invasive species either via machinery, materials, clothing or wild animals.	The Zone of Influence of effects for spread of terrestrial invasive species is difficult to accurately estimate, as plant fragments may be spread on tyre treads to distant unrelated sites. In relation to water-borne spread of vegetation, the Zone of Influence generally is restricted to the surface water Catchment Management Unit.
	Changes of groundwater quality, yield and/or flow paths associated with earthworks during operation.	Operational activities (e.g. earthworks and infilling) could interfere with groundwater flow paths, potentially affecting the quality or distribution of	The potential Zone of Influence of effects from earthworks to ground water quality, flow or/or yield is difficult to accurately estimate as it will depend on

Phase	Source of Potential Effect	Description of Effect Pathway	Potential Zone of Influence of Effect
		habitats dependent on groundwater supply.	factors including the depth and intrusion of excavations, and time of year (related to water levels). As a precautionary measure, a reasonable worst-case spatial Zone of Influence is considered to be 500 m from the point of excavation; which is a precautionary doubling of the 250 m stated as the potential Zone of Influence from intrusive excavations to sensitive upland peatland sites (SEPA, 2014).

5.3.1 Scoping of Effects

5.3.1.1 Noise, Vibration, Lighting, and Human Presence

The effects of noise, vibration, lighting, and human presence on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed. These effects are not predicted to result in any LSEs within the ZoI, as there are no significant populations of QI or SCI species present within the ZoI of the proposed development. The effects of noise, vibration, lighting and human presence are, therefore, scoped out from further assessment.

5.3.1.2 Surface Water Run-off

The effects of pollution, from surface water runoff, on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed. It has been determined that silt, grit, fuels, and/or oils could enter surface water, including the River Boyne, during the construction of the proposed development. These effects are potentially amplified by the 'moderate' receiving water quality of the downstream River Boyne.

In the absence of mitigation measures to control surface water pollution during construction and operation of the proposed development, the potential for LSEs to the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA cannot be ruled out.

5.3.1.3 Disturbance of Invasive Species

The effects of disturbance of invasive species on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed. Desk study results indicate that there are no known scheduled invasive species within 5 km of the proposed development. Field surveys have confirmed the absence of scheduled invasive plant species within the footprint of the construction and operation of the proposed development.

5.3.1.4 Changes of Groundwater Quality, Yield and/or Flow Paths

The effects of changes of yield of groundwater associated with earthworks on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed, and scoped out from further assessment. There are no highly groundwater dependant QI habitats, e.g. Alkaline fens (MCC, 2010), known to occur within the ZoI of the proposed development.

5.3.2 Key findings

The key findings of this AA Screening Report of the proposed development are that:

- In the absence of mitigation measures to control surface water pollution during construction and operation of the proposed development, the potential for LSEs to the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA cannot be ruled out.

5.4 In-Combination Effects

Legislation, guidance and case law (See **Section 1.1** and **Section 3.1**) requires that in-combination effects with other plans or projects are considered. On this basis, a range of other plans and projects were considered in terms of their potential to have in-combination effects with the proposed development.

The assessment of in-combination effects has regard for developments potentially affecting the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA, with witch a potential pathway has been identified. The Natura Standard Data Form for the River Boyne and River Blackwater SAC (NPWS, 2017a) and River Boyne and River Blackwater SPA (NPWS, 2017b) identify the most important negative impacts (high and medium) on the sites as:

River Boyne and River Blackwater SAC:

- J02.11 - siltation rate changes, dumping, depositing of dredged deposits
- C01.01 - sand and gravel extraction
- A10.01 - removal of hedges and copses or scrub
- E02 - industrial or commercial areas
- A05.02 - stock feeding
- A10.01 - removal of hedges and copses or scrub
- E05 - storage of materials
- J02.15 - other human induced changes in hydraulic conditions
- I01 - invasive non-native species
- D01.02 - roads, motorways
- G02.10 - other sport / leisure complexes
- A01 - cultivation
- J02 - human induced changes in hydraulic conditions
- B01.02 - artificial planting on open ground (non-native trees)
- E03.02 - disposal of industrial waste
- A07 - use of biocides, hormones and chemicals
- E03.04 - other discharges
- H01 - pollution to surface waters (limnic, terrestrial, marine & brackish)
- E01.04 - other patterns of habitation
- J02.10 - management of aquatic and bank vegetation for drainage purposes
- A08 - fertilisation

River Boyne and River Blackwater SPA:

- E01 - urbanised areas, human habitation
- J02 - human induced changes in hydraulic conditions

- D01.02 - roads, motorways
- E01.03 - dispersed habitation

5.4.1 Plans

5.4.1.1 National Development Plan

The National Development Plan 2018-2027 (Government of Ireland, 2018) designates Housing and Sustainable Urban Development as one of the National Strategic Investment Priorities as a result of the existing patterns of development and demography. The National Planning Framework highlights the urgent requirement for an uplift of the delivery of houses within the existing urban areas which results in the allocation of €14.5 billion for the *Housing and Sustainable Urban Development* Strategic Investment Priority (2018-2027), doubling the annual housing output from 2016/2017 to an average of 25,000 to 30,000 new homes per year.

This Strategic Priority carries the potential for in-combination impacts with the proposed development on potential receptors, specifically designated sites/habitats and species. However, the National Development Plan 2018-2027 also set biodiversity as a priority (i.e. *Enhanced Amenity and Heritage*) and apportions €1.4 billion to, amongst other, support further and deliver compliance with the EU's Habitats Directive. This compliance will, inevitably, implicate that all in-combination and cumulative potential impacts with other developments are contemplated and mitigated. The in-combination impacts from the proposed development with the National Development Plan 2018-2027 is then deemed null.

5.4.1.2 Meath County Development Plan

The Meath County Development Plan 2013-2019 (MCC, 2016) sets out several relevant biodiversity objectives, including:

NH POL 5:

"*To permit development on or adjacent to designated Special Areas of Conservation, Special Protection Areas, National Heritage Area or those proposed to be designated over the period of the plan, only where an assessment carried out to the satisfaction of the Meath County Council, in consultation with National Parks and Wildlife Service, indicates that it will have no significant adverse effect on the integrity of the site.*"; and

NH OBJ 2:

"*To ensure an Appropriate Assessment in accordance with Article 6(3) and Article 6(4) of the Habitats Directive, 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 to 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.*"

5.4.1.3 Navan Local Area Plan

The Navan Development Plan 2009-2015 (MCC, 2014) identifies two strategies in relation to the provision of social housing, namely:

Housing Strategy OBJ 1 "*To ensure that 16% of all eligible residential sites are set aside for the development of new social and affordable units, except under exceptional circumstances*"; and

Housing Strategy OBJ 8 "*To continue to implement the "Meath Local Authorities Plan Social and Affordable Housing 2004-2008 and any subsequent Action Plans adopted during the life of this Development Plan*."

The proposed development site is identified in the Navan Development Plan 2009-2015 (MCC, 2014) as zone R1 (new/proposed residential), with the following zone description:

"*To provide for new residential communities and community facilities and protect the amenities of existing residential areas in accordance with an approved framework plan*"

The NIS for this plan concluded that:

"*Having incorporated mitigation measures, it is considered that the Variation will not have a significant adverse effect on the integrity of the Natura 2000 network*." (CAAS, 2014).

5.4.1.4 Water Quality

The Water Framework Directive (WFD) 2000/60/EC provides a framework for the protection and improvement of rivers, lakes, marine and ground waters in addition to water-dependent habitats. The aim of the WFD is to prevent any deterioration in the existing status of water quality, including the protection of good and high water quality status where it exists. The second cycle River Basin Management Plan, covering the period 2018 – 2021, was published in April 2018. The Plan sets out a proposed framework for the protection and improvement of Ireland's water environment in line with Water Framework Directive objectives. It was determined that the multiple River Basin District approach used in the 2009-2015 Management Plan was not as effective as expected, so the 2018-2021 Management Plan has defined a single River Basin District (DoHPLG, 2018). This national strategy outlined all the actions required to improve the water quality, with county councils and Irish Water playing an important role in the implementation of the plan.

There are binding obligations on all Irish local authorities, including Meath County Council, to achieve good status of surface waters, under the terms of the EU Water Framework Directive 2000/60/EC [may be cited as European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272/2009], and in related policies in the Meath County Development Plan (MCC, 2016), e.g. Strategic Objective WS SOBJ 9:

"*To promote compliance with environmental standards and objectives established - (i) for bodies of surface water, by the European Communities (Surface Waters) Regulations 2009; (ii) for groundwater, by the European Communities (Groundwater) Regulations 2010; which standards and objectives are included in river basin management plans.*"

Furthermore, Irish Water, who has national statutory remit for wastewater and drinking water services, has committed to a 25-year programme of improvements to wastewater impacts on surface waters in their Water Services Strategic Plan (WSSP) (Irish Water, 2015).

5.4.1.5 Flooding

The flood risk management plan for the Boyne (OPW, 2018) includes the flood risk probability within the proposed development area. The proposed development is not located within any historically recorded flood events and it does not intersect with any area associated with low, medium or high flood probability (OPW, 2018). Furthermore, the proposed development site has an annual exceedance probability of less than 0.1%[12]. However, the likely access roads to the proposed development (i.e. Old Road and R153) are within an area with that has been affected by more than one flood event within the last 15 years (i.e. three flood

[12] Available online at: http://www.floodinfo.ie/map/floodmaps/. Accessed March 2019.

events in 2005[13]) and, therefore, is classified as an area of High Probability of flood events - it has an Annual Exceedance Probability of 10%.

5.4.2 Projects

A search was conducted of planning applications (projects) within the vicinity of the proposed development site, using the Meath County Council planning portal map viewer[14], the Department of Housing, Planning and Local Government EIA portal map viewer[15], and the list of MCC Part 8's[16] . The search was limited to the five year period preceding the date of issue of this report, and excluded retention applications (i.e. typically local-scale residential or commercial developments where an impact has already occurred), incomplete, withdrawn, and refused applications. The relevant projects with potential for in-combination adverse effects on the integrity of European sites, are detailed in **Table 5.2**.

Furthermore, a search of An Bord Pleanála's website was completed to identify any relevant applications, including Strategic Infrastructure Development (SID) and Strategic Housing Development (SHD) in the past three years or in close proximity to the proposed development. No SID/SHD project within the ZoI of the proposed development were identified.

A consented road scheme (LDR6; Part 8 reference P8/08012) adjoins the north and east boundary of the proposed development site. An environmental assessment report for the road (MacCabe Durney, 2008) details that SuDS (grit chambers and petrol interceptors) will be incorporated into the operation of the road. Although no Appropriate Assessment was carried out for this consented road scheme, the environmental assessment concludes that:

"*Provided the mitigation measures… are followed, especially those related to otters and badgers, it is considered that the impacts on ecology by the proposed development will be mostly low. However, it is noted that a walk-over survey for habitats, flora and fauna along the section between the site and the Kentstown Road is required prior to construction – further mitigation measures may then be recommended.*"

There is an approved mining operation located c. 4 km north-west and upstream of the proposed development (planning reference NA171232). However, there is no above ground infrastructure associated with this proposed resumption mining operation. The operation takes place underground and within existing built auxiliary infrastructure. The submitted Natura 2000 Statement (i.e. an NIS) (FERS, 2018) states that the development will not give rise to any adverse impacts to Natura 2000 sites, assuming the implementation of all outlined mitigation measures.

A consented project comprising the construction of eight houses, car parking and landscaping works and all ancillary works is located c. 400 m west of the proposed development (planning reference NA160057). There are no supporting documents (e.g. AA screening, NIS, or EIAR) available for this consented development, through the Department of Housing, Planning, Community and Local Government online portal. Without details of the development or mitigation measures incorporated into the project, there is potential for in-combination pollution to surface water or groundwater to occur.

[13] Available online at http://www.floodinfo.ie/map/pf_addinfo_report/714. Accessed March 2019

[14] Available online at http://lp4.meathcoco.ie/locationpublisher42/default.aspx?themename=Planning&topicname=Planning. Accessed March 2019.

[15] Available online at http://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1. Accessed March 2019.

[16] Available online at http://www.meath.ie/CountyCouncil/Planning/Part8s/. Accessed March 2019.

Table 5.2: Planning Search Results

Planning Application Reference Number	Project/Applicant Name and Proposed Location	Brief Development Description	Application Status/ Outcome	Approximate Distance and Direction from Proposed Development	Date Planning Application Grated
P8/08012	MCC	MCC proposed to construct the RT8 Local Distributor Roat and Navan, County Meath. The road covers a length of 1.6 km leading from Kentstown Road to the Boyne Road.	Granted	Adjoining the north and east boundaries	unknown
NA171232	Boliden Tara Mines DAC	The development works will consist of the resumption of underground mining in the Nevinstown orebody.	Application Finalised/ Granted	c. 4 km north west	24/08/2018
NA160057	Deaton Lysaght Architects	The development consists of: (i) the construction of 8 no. 3 bedroom 2 storey townhouses in place of previously approved 5 no. 4 bedroom detached houses under Reg. Ref. NA/150645; (ii) Car parking and landscaping works (iii) All associated and ancillary works	Application Finalised/ Granted	c. 400 m west	13/04/2016

5.4.3 In-Combination Conclusion

A number of planning applications in proximity to the proposed development have potential to result in surface water pollution. These applications have been subject to Natura Impact Statements which indicated a number of mitigation measures to each project to avoid adverse effects on the integrity of European sites. Therefore, where described mitigation measures are effectively incorporated, no likely significant effects can be predicted from these developments.

Taking a conservative approach, the absence of supporting documents for the permitted development NA160057 (**Table 5.2**) gives rise to the possibility for in-combination pollution to surface water or groundwater to occur. This has potential to result in a LSEs on European sites within the ZoI of the proposed development.

No other pathways have been identified by which any plan or project could have a likely significant in-combination effect on any European sites. It is concluded that there is potential for cumulative or in-combination impacts.

6 SCREENING CONCLUSIONS AND STATEMENT

RPS has prepared this screening for AA report to assess whether the proposed development, individually or in combination with other plans or projects, and in view of best scientific knowledge, is likely to have a significant effect on any European site(s).

The screening exercise was completed in compliance with the relevant European Commission guidance, national guidance, and case law. The potential impacts of the proposed development have been considered in the context of the European sites potentially affected, their qualifying interests or special conservation interests, and their conservation objectives.

Through an assessment of the source-pathway-receptor model, which considered the zone of influence of effects from the proposed development and the potential in-combination effects with other plans or projects, the following findings were reported:

- In the absence of mitigation measures to control surface water pollution during construction of the proposed development, the potential for Likely Significant Effects to the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA cannot be ruled out; and

- Due to the unknown impacts of consented developments adjacent to the proposed development site, there is potential for in-combination pollution to surface waters to occur. The potential for Likely Significant Effects to the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA cannot be ruled out.

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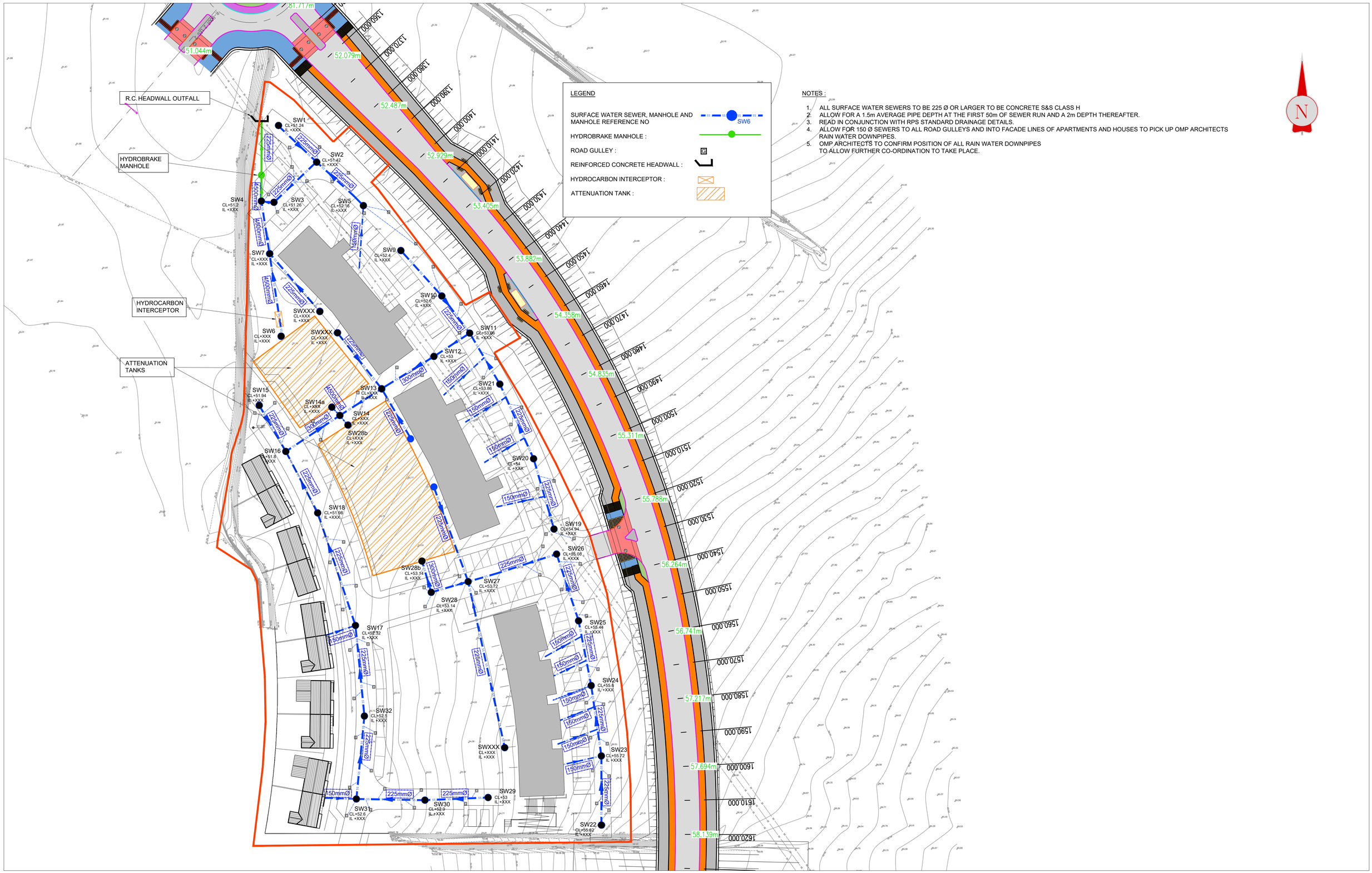
Appendix A

Project Drawings



R:\MDC0641 - Farganstown & Ashbourne Housing\8.0 Drawings\DG\MDC0641-RPS-00-FN-DR-C-DG1002.dwg

Architect:

comhairle chontae na mí
meath county council

mahony pike

General Notes

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Rev	Date	Drn	Chk	Amendment / Issue	App
S4 P02	05.10.20	PH	CW	ISSUE FOR PLANNING	RT
S2 P01	29.03.19	PB	CW	DRAFT ISSUE FOR COMMENT	RT

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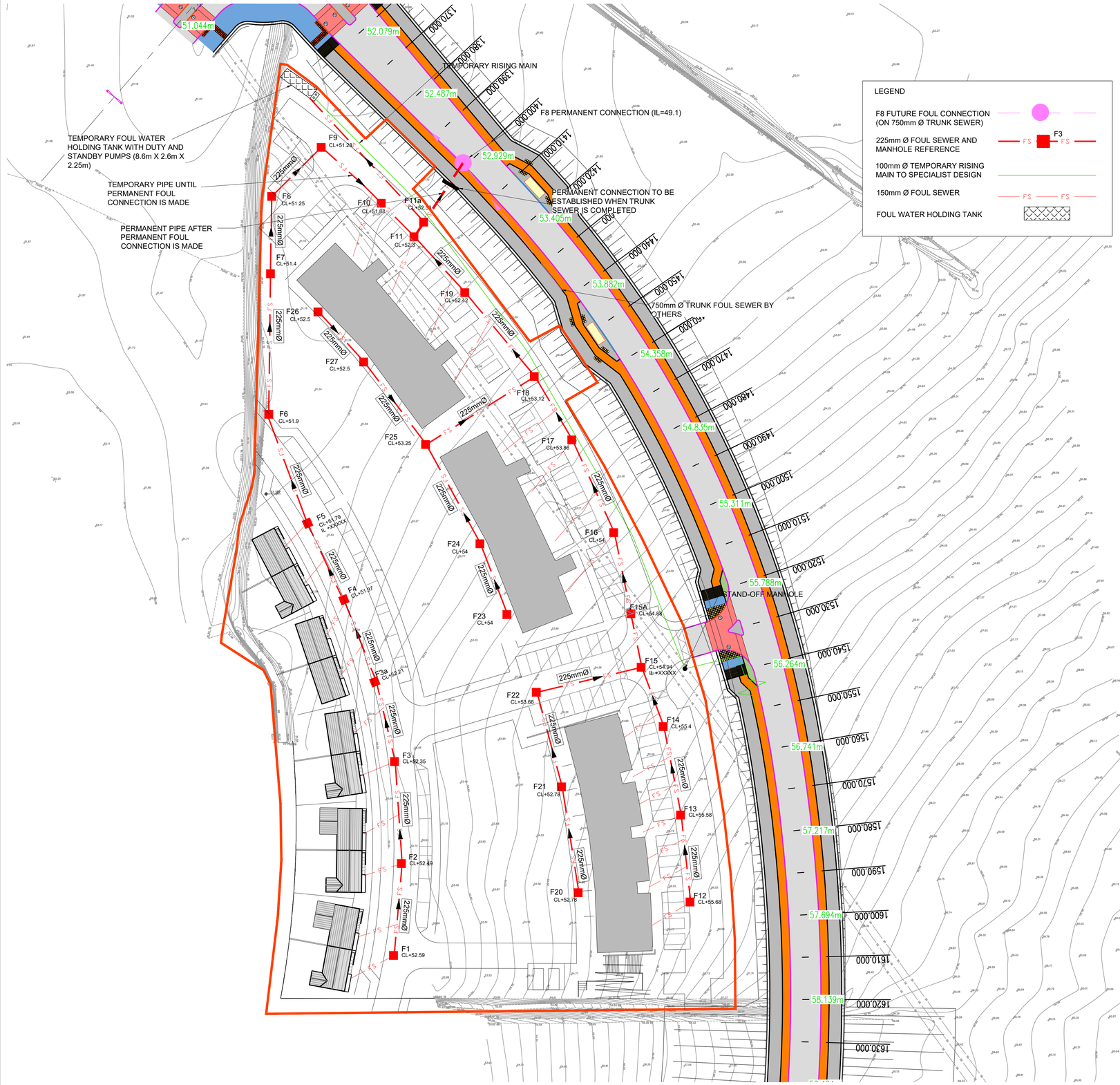
Model File Identifier

Scale	1:500 @ A1 1:1000@ A3
Created on	29/03/2019
Sheets	1 OF 1
Project	FARGANSTOWN HOUSING
Title	PROPOSED SURFACE WATER DRAINAGE LAYOUT
File Identifier	MDC0641RPS-00-FN-DR-C-DG1002.dwg
Status	S4
Rev	P02



GENERAL NOTES :

ALL FOUL DRAINAGE IS TO COMPLY WITH IRISH WATER PUBLICATION: CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE DEC 2017

PERMISSIBLE FOUL SEWER PIPE TYPES :

-CONCRETE: CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RING FITTINGS SHALL COMPLY WITH IS EN 1916 (2002), BS 5911, PART 1 (2002 – 2010) AND IS 6 (2004) OR EQUIVALENT STANDARD, STRENGTH CLASS 120 WITH MINIMUM CRUSHING LOADS IN ACCORDANCE WITH TABLE 8 OF BS 5911-1 (2002- 2010). ALL PIPES AND FITTINGS SHALL HAVE GASKET TYPE JOINTS OF SPIGOT AND SOCKET OR REBATED FORM. (PIPE DIAMETERS 225MM AND ABOVE)

-UNPLASTICISED PVC; UPVC PIPES AND FITTINGS SHALL COMPLY WITH THE PROVISIONS IS EN 1401 2009/2012. PIPES TO BE APPLICATION AREA CODE "UD", STIFFNESS CLASS 8KN/M2 . PROVISION FOR JETTING SHALL BE BASED ON THE WRC SEWER JETTING CODE OF PRACTICE, JUNE 1997. PIPES TO BE CAPABLE OF RESISTING A MAXIMUM JETTING PUMP PRESSURE OF 2,600PSI (180 BAR) WITHOUT DAMAGE. (SEWER DIAMETERS 150MM UP TO 450MM, SERVICE CONNECTIONS OF 100MM DIAMETER);

ALLOW FOR A 1.75M AVERAGE PIPE DEPTH AT THE FIRST 50M OF SEWER RUN (FROM THE HEAD OF EACH SEWER RUN) AND A 2.25M DEPTH THEREAFTER.

THIS MARK UP IS TO BE READ IN CONJUNCTION WITH THE RPS STANDARD DRAINAGE DETAILS DRAWINGS.

ALLOW FOR 150 DIAMETER CONNECTOR SEWERS AT 1 IN 80 FALL TO APARTMENT BLOCKS AND HOUSES WITH EXTERNAL AJS LOCATED ADJACENT BUILDING FACADES

SUBFLOOR DRAINAGE TO COMPRISE 110 DIAMETER PIPES AT 1 IN 60 FALLS BY OTHERS.

IN THE PERMANENT CASE ON COMPLETION OF THE NEW DISTRIBUTER ROAD TO THE EAST FOUL WATER WILL DISCHARGE TO THE 750MM DIAMETER TRUNK SEWER THAT WILL GO IN WITH THE CONSTRUCTION OF THIS ROAD.

THE PROPOSED CONNECTION POINT IS AT MANHOLE F8 ON THIS TRUNK SEWER.

IN THE EVENT THIS HOUSING DEVELOPMENT IS COMPLETED IN ADVANCE OF THE DISTRIBUTOR ROAD THEN A FOUL WATER HOLDING TANK WILL BE PROVIDED (SIZED FOR 12 HOUR STORAGE) COMPLETE WITH DUTY AND STANDBY PUMP SETS COMPLETE WITH PUMP FAILURE ALARM, HIGH LEVEL ALARM AND LIFTING DERRIK. A RISING MAIN FROM THIS HOLDING TANK WILL PUMP FOUL WATER BACK SOUTH TOWARDS EXISTING LOCAL AUTHORITY INFRASTRUCTURE ON OLD ROAD (LOCATED JUST NORTH OF THE R153).

R:\MDC0641 - Farganstown & Ashbourne Housing\8.0 Drawings\DG\MDC0641-RPS-00-FN-DR-C-DG1003.dwg

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meath county council

Architect:
mahony pike

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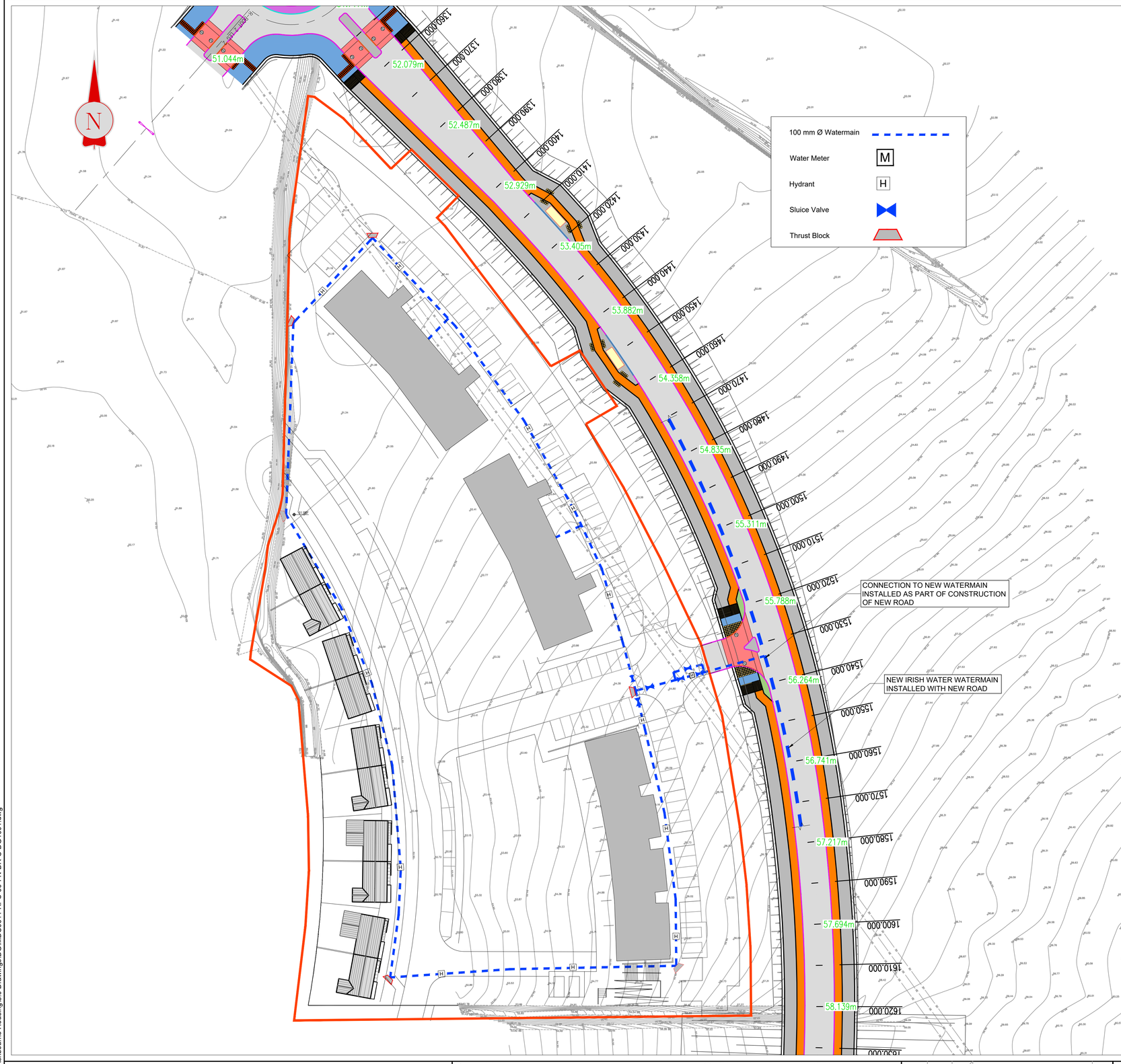
Model File Identifier

Scale	1:500 @ A1 1:1000 @ A3
Created on	29/03/2019
Sheets	1 OF 1
Project	FARGANSTOWN HOUSING
Title	PROPOSED FOUL WATER DRAINAGE LAYOUT
File Identifier	MDC0641RPS-00-FN-DR-C-DG1003.dwg
Status	S4
Rev	P02



GENERAL NOTES :

All houses to have an individual watermeter.

All apartment blocks to have individual sluice valve and watermeter.

R:\MDC0641 - Farganstown & Ashbourne Housing\8.0 Drawings\DGI\MDC0641-RPS-00-FN-DR-C-DG1001.dwg

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Architect:
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Model File Identifier

Scale	1:500 @ A1 1:1000 @ A3
Created on	29/03/2019
Sheets	1 OF 1

Project: **FARGANSTOWN HOUSING**

Title: PROPOSED WATERMAIN GENERAL ARRANGEMENT

File Identifier	Status	Rev
MDC0641RPS-00-FN-GE-C-DG1001.dwg	S4	P02