OIFIG na nOIBREACHA POIBLÍ
OFFICE OF PUBLIC WORKS

River Deel (Crossmolina) Drainage Scheme

APPROPRIATE ASSESSMENT SCREENING REPORT

September 2020

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RIVER DEEL (CROSSMOLINA) FLOOD RELIEF SCHEME

APPROPRIATE ASSESSMENT SCREENING REPORT

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1 INTRODUCTION

1.1 GENERAL INTRODUCTION

Ryan Hanley in association with McCarthy Keville O'Sullivan Ltd. (MKO) have been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for a proposed flood relief scheme on the River Deel, Crossmolina, Co. Mayo.

The current project is not directly connected with, or necessary for, the management of any European Site, consequently the project has been subject to the Appropriate Assessment Screening process.

The assessment in this report is based on extensive desk study and field surveys undertaken between 2012 and 2020. It specifically assesses the potential for the proposed development to impact on European sites.

This Report has been prepared in accordance with the European Commission guidance document '*Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC*' (EC, 2001) and '*Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive* 92/43/EEC (EC, 2018) as well as the Department of the Environment's '*Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities.*' (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents was considered in preparation of this report.

- Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.
- EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.
- EC (2007) 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 (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.

1.2 BACKGROUND TO APPROPRIATE ASSESSMENT

1.2.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site. The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

1.3 STATEMENT OF AUTHORITY

Pat was responsible for co-ordination of this AA Screening Report. Pat is a Senior Ecologist and director of the Ecology team with MKO. with over 15 years' post graduate experience as a professional ecologist. Pat has worked as a senior ecologist on numerous OPW projects for over 10 years. These have included including flood relief schemes and drainage maintenance projects. Pats key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics. He currently manages the ecological team within MKO and ensures that the outputs from that team are of a very high standard and meet the requirements of the clients. Elements of the survey work that informs this assessment were carried out by the following ecologists: Pat Roberts (B.Sc. Env., MCIEEM), Dervla O'Dowd (B.Sc. (Env.), MCIEEM), John Hynes (B.Sc. (Env), MSc (Eco.), MCIEEM), Laoise Kelly (B.Sc. (Env.), MCIEEM) Pamela Boyle (B.Sc. (Env), PhD), Chris Peppiatt (B.Sc., PhD), Julie O'Sullivan (B.Sc. (Biol.), M.Sc. Ecological Assessment) and James Owens (B.Sc. (Env), MSc) from McCarthy Keville O'Sullivan Ltd. A fisheries habitat assessment was undertaken by Ross Macklin and Bill Brazier of Triturus Environmental Ltd. The Screening Assessment detailed in this report was undertaken by Pat Roberts, Julie O'Sullivan and James Owens all of whom have the necessary qualifications and experience to undertake this assessment.

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT AND BASELINE ENVIRONMENT

2.1 SITE LOCATION

The proposed works are located approximately 750 metres to the south of the Jack Garrett Bridge in Crossmolina Town. The proposed channel runs from the bank of the River Deel (Grid Ref: E113141 N316508), it crosses a local road (leading south from Chapel Street) and proceeds in an easterly direction through farmland before crossing the R315 and veering south and crossing the local road to Gortnor Abbey and a local access to private properties. The proposed channel terminates to the east of the R315 in the townland of Mullenmore (Grid Ref: E114220 N316630). Additional areas surrounding the channel are required for the site compound. These are located on the lands surrounding the channel.

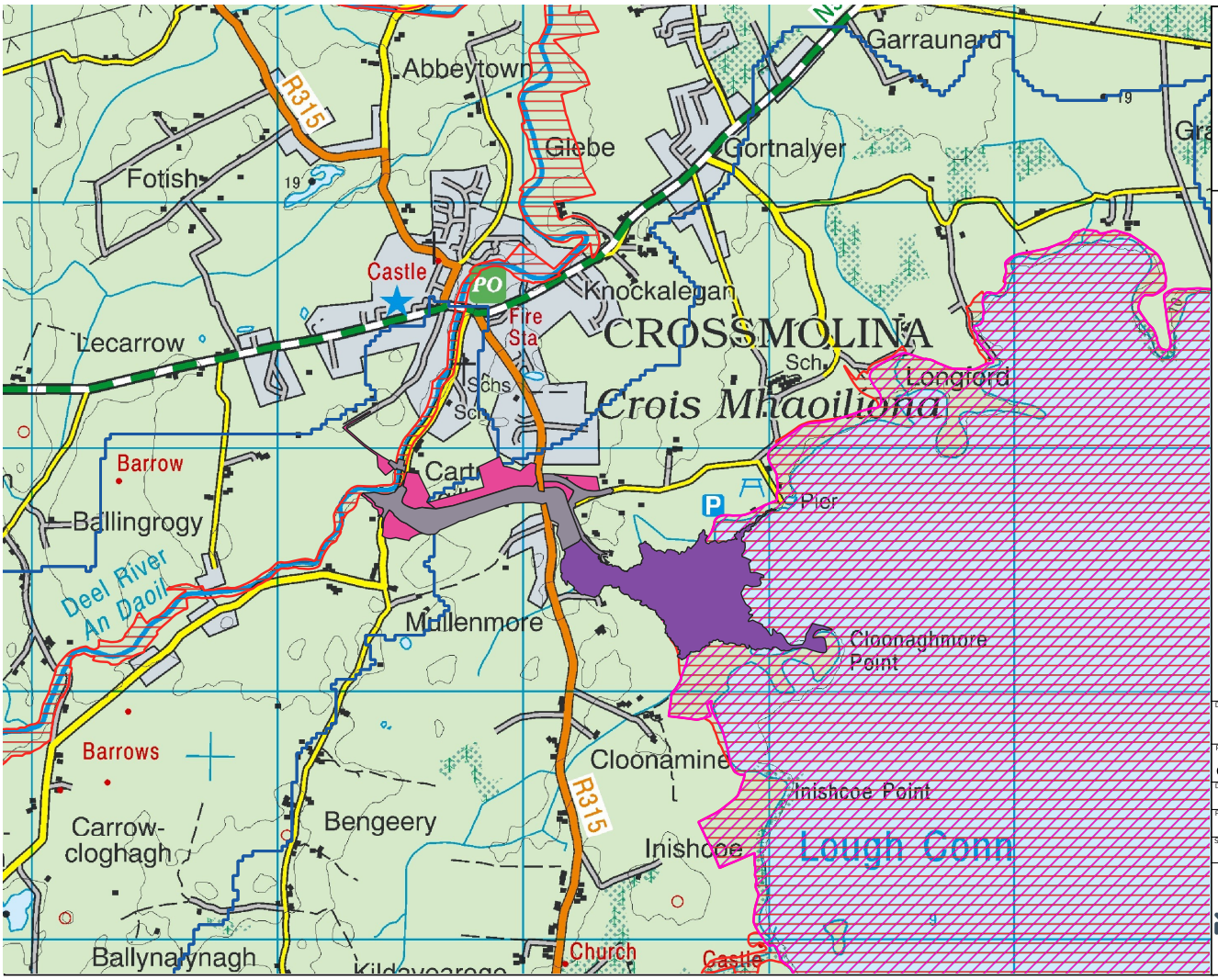
The text above describes the location of the physical works that are associated with the proposed flood relief scheme. Whilst there are no physical works associated with the lands over which the waters will discharge (washlands), they are included within the study area and the impacts thereon are assessed. The washlands extend from the end of the channel and proceed over two large springs at Mullenmore before following the route of the Mullenmore stream and entering Lough Conn to the after approximately 550metres. The location of the proposed works is provided in Figure 2.1 and site layout drawings are provided as Figure 2.2.

2.2 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The River Deel and Crossmolina Town have a long history of flooding. The four most recent flood events in 1989, 2006, and 2015 (twice) resulted in flooding of three main streets in Crossmolina Town. Approximately 120 properties were inundated by flood water during the most extreme of these floods in December 2015. The preferred flood scheme for the River Deel is a diversion channel upstream of the town, which will redirect flood waters away from the town, directly to the flood plains of Lough Conn. The scheme will be designed to cater for the 1% Annual Exceedance Probability (AEP) flood event (also known as the 100 year flood event). In order to prevent flooding in Crossmolina Town, a diversion channel and intake structure is required with a capacity of 110 cumec.

The proposed infrastructure has been designed in order to prevent flooding in Crossmolina Town during high flow events up to the 1% Annual Exceedance Probability (AEP) flood event, while minimising resulting changes in the hydrology of the river by avoiding any significant impact on river flows downstream of the intake structure for flows up to bank full flow.

The proposed works are summarised below. To undertake the proposed works on site, some access will be required to adjacent lands and the river banks. The locations of each of the proposed works features are marked on the relevant drawing with a code, with the adjacent table providing a description for each code.


Abbeytown
Garraunard
Glebe
Gortnalyer
Fotish
R315
Castle
PO
Knockalegan
Fire Sta
CROSSMOLINA
Crois Mhaoilíona
Sch
Schs
Longford
Lecarrow
Barrow
Cart
Pier
Ballingrogy
Deel River
An Daoil
Mullenmore
Cloonaghmore Point
Barrows
Cloonamine
Inishcoe Point
Carrow-cloghagh
Bengeery
Inishcoe
Lough Conn
Ballynalynagh
Church
Castle
Map Legend
Permanent Works Area
Temporary Construction Works Area
Washlands Extent
Special Area of Conservation
N
Ordnance Survey Ireland Licence No. AR 0021820© Ordnance Survey Ireland/Government of Ireland
Drawing Title
EU designated sites within 15km
Project Title
Crossmolina Flood Relief Scheme
Drawn By
KP
Checked By
PR
Project No.
120211-a
Drawing No.
Figure 2.1
Scale
1:20000
Date
25.06.20
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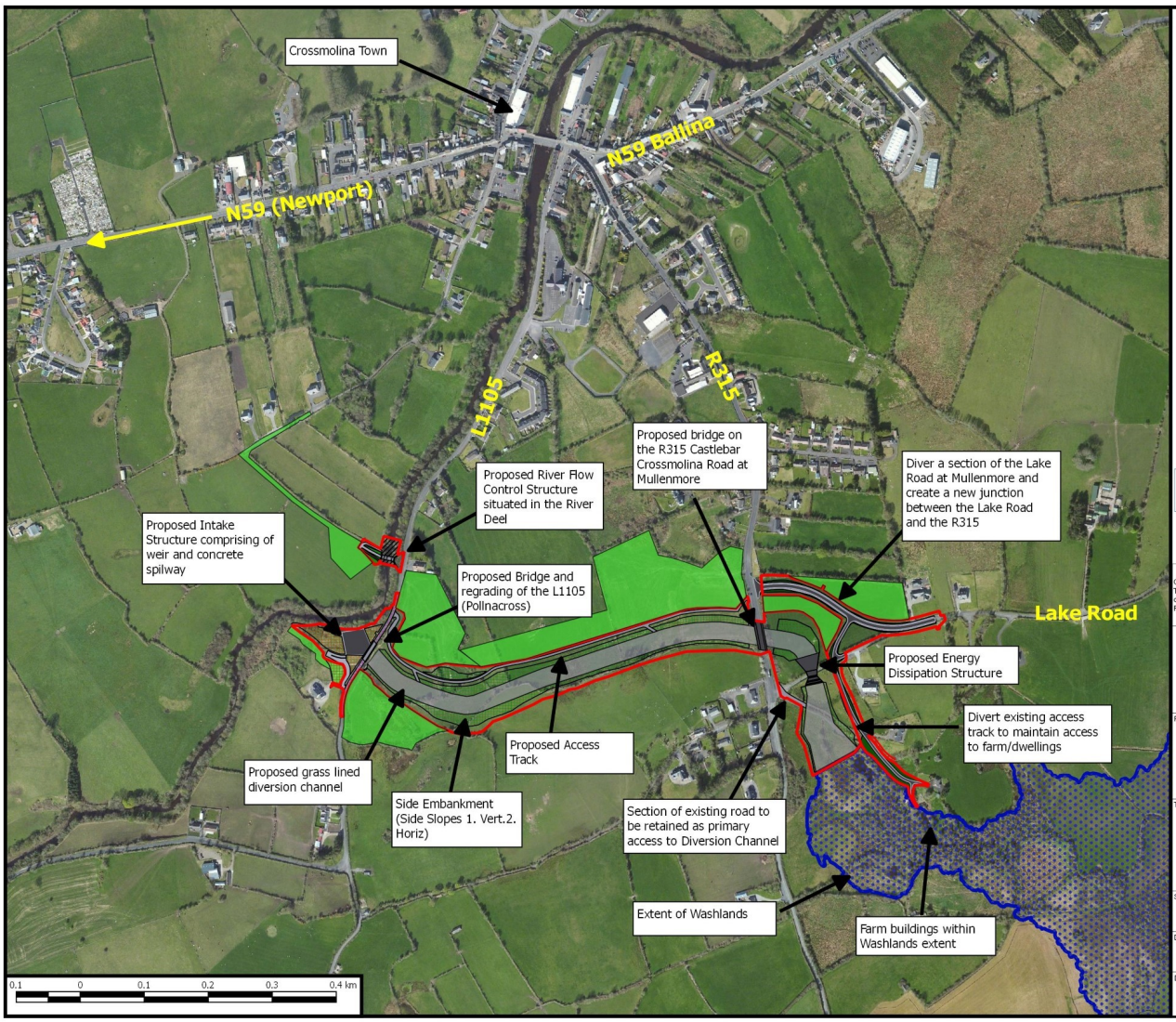

N

W E

S

Legend

- Temporary construction works area
- Washlands Extent
- Permanent Works Boundary

RYAN HANLEY

PROJECT

River Deel (Crossmolina) Drainage Scheme

TITLE

Outline Discription of Diversion Channel

SCALE @ A3	DATE
1:5,500	24 JUN 2020

DRAWN	CHECKED	APPROVED
RS	KC	JR

DRAWING No.	REV.
Figure 2.2	A

In summary, the proposed works for the River Deel Drainage Scheme comprise the following:

- Site investigation;
- Site preparation and clearance;
- Construction of a new grass lined diversion channel commencing at the River Deel/ L1105 and terminating in the townland of Mullenmore to the East of the R315 Crossmolina to Castlebar Regional Road;
- Construction of a new reinforced concrete intake structure and spillway on the banks of the River Deel at the upstream end of the abovementioned grass lined channel complete with an adjustable steel plate at the top of the 70m reinforced concrete intake structure;
- Construction of a new river flow control structure incorporating adjustable steel plates. The structure will consist of a series of precast box culverts and will be located approximately 155 metres downstream of the intake structure;
- Construction of an earthen embankment and reinforced concrete retaining walls/ steel sheet piling at the river flow control structure;
- Construction of a new reinforced concrete energy dissipation structure within the proposed diversion channel to the south east of the R315;
- Construction of two new bridges, one each on the R315 (Mullenmore Bridge) and L1105 (Pollnacross Bridge);
- Raising the L1105 at the approach to the new bridge;
- Realignment of the Lake Road and creation of a new junction with the R315. This will necessitate the closure of a section of the existing road;
- Realignment and raising of existing avenues connecting the Lake Road to properties to the South;
- Creation of washlands between the termination point of the new channel and Lough Conn;
- Removal of existing access points/ access routes and creation of new access points;
- Construction of an access track along the top of the channel between the L1105 and the R315. An access track will also be constructed alongside the intake structure linking the L1105 to the river bank. This will be used for maintenance purposes;
- Localised regrading of ground levels, erection of fencing and access gates, to facilitate pedestrian/ vehicular access to and around flood defences, or to redirect overland surface water flow paths;
- Utility diversions where required;
- Maintenance activities and other non-structural measures.

2.3 SUMMARY OF BASELINE ENVIRONMENT

This summary provides a brief overview of the flora, habitats and fauna at the site of the proposed works and is based on the extensive desk and field surveys that have been undertaken to inform this assessment. Full details of the extent of the surveys and the methodologies followed are available in the Biodiversity Chapter of the EIAR and in the NIS. To avoid un-necessary repetition, these details are not included here.

Intake Structure, Flow Control Structure and Diversion Channel

The western extent of the study area begins at the River Deel in the townland of Cartrongillbert. The river is classified as an Eroding river (FW1). The river is fast flowing with no significant growth of macrophyes and little sand or silt at this location. The substrate was dominated by cobbles with some areas of very coarse gravels. The river has regularly dried out for extended periods over at least the last three years. The river is shown at the location of the flow control structure in Plate 2.1 with water flowing in it. It is then shown in Plate 2.2 in a dry state. The river itself was fringed in this area with a line of mature broad-leaved trees with sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), grey willow (*Salix cinerea*), alder (*Alnus glutinosa*) and hazel (*Corylus avellana*) found along the riparian fringe and classified as a Tree Line (WL2) on the left (western) bank and Mixed Broadleaved Woodland (WD1) on the right bank.

Plate 2.1 River Deel in flow at the location of the flow control structure.

Plate 2.2. River Deel with no flow at the location of the flow control structure.

The flow control structure is located within the River Deel approximately 100m downstream of the intake weir. In this area, the river is bordered by a Tree Line (WL2) on the western bank, which separates it from a field of Improved Agricultural Grassland (GA1). This tree line is dominated by sycamore, ash and willow species. Works associated with the flow control structure will be located in this field. The tree line is shown as viewed from the field in Plate 2.3. The eastern bank in this area is formed by a steep wooded bank that leads up to the public road. This area is dominated by species including ash, hazel and hawthorn (*Crataegus monogyna*) and with a ground flora of ivy (*Hedera helix*) with hart's tongue fern (*Asplenium scolopendrium*) and the occasional occurrence of species including wood avens (*Geum urbanum*), dandelion (*Taraxicum officinale agg.*) and seedlings of ash, sycamore and hawthorn. This woodland is shown in Plate 2.4 and is classified as Mixed Broadleaved Woodland (WD1).

Moving downstream on the River Deel, the river is outside the construction footprint but will be the subject of ongoing maintenance by the OPW as part of the River Moy drainage scheme following construction of the proposed flood relief project. The OPW are currently responsible for drainage maintenance on the River Deel as far up the catchment as the Jack Garrett Bridge in Crossmolina. Following completion of the currently proposed scheme, they will manage the section of the river between the intake weir and the Jack Garrett Bridge. This maintenance will involve only minor removal of branches as necessary. The left (west) bank of the river is fringed with a tree line almost along the entire length between the intake weir and the urban centre of Crossmolina Town. The right bank comprises a steep bank of Mixed Broadleaved Woodland (WD1) at the location of the flow control structure. This continues approximately half way to Crossmolina Town and is regularly cut as part of roadside hedge trimming and to facilitate utility infrastructure. In areas along this section, a fringe of riparian trees has developed in a narrow band at the base of the bank, where silts have been deposited. These fringes are narrow strips that are classified as Wet Willow Alder Ash Woodland