

AtkinsRéalis



Planning Report

Mayo County Council

June 2025

N58 STRADE RIVER BRIDGE REHABILITATION WORKS

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Contents

1.	Introduction.....	1
2.	Site Location	1
3.	Proposed Development	5
3.1	Need for Proposed Development.....	5
3.2	Description of Proposed Development	5
3.2.1	Proposed Methodology	7
4.	Planning Process	7
5.	Planning and Development Context.....	8
6.	Assessment of Proposed Development.....	9
6.1	Appropriate Assessment	9
6.2	Environmental Impact Assessment.....	10
6.3	Cultural Heritage Impact Assessment.....	11
6.4	Hydraulic Assessment.....	11
7.	Conclusion	12
Appendix A. Environmental Impact Assessment Screening Determination.....		14



1. Introduction

AtkinsRéalis were appointed by Mayo County Council for Eirspan Task Order 315 Mayo Bridge Assessments and Strengthening 2023, comprising the assessment and rehabilitation of 10no. bridges in County Mayo.

The Stage 2 Assessment of MO-N58-001.00 Strade River Bridge determined the existing bridge has a reduced load capacity of 7.5t due to bond failure between the concrete and steel beams with significant cracking, delamination and spalling visible to the deck slab soffit providing evidence of the issue. The proposed development comprises deck replacement works to the existing bridge to provide a full load capacity for traffic on the N58 National Secondary Road in accordance with I.S. EN 1991-2.

This report supports the Section 177AE planning application to be made to An Coimisiun Pleanála under Section 177AE of the Planning and Development Act, 2000, as amended.

2. Site Location

The proposed development site is located on the Strade River at the convergence of Knockagarraun, Strade and Knockshanbally townlands in County Mayo and are c. 2.9km northeast from Ballyvary village. The existing MO-N58-001.00 Strade River Bridge carries the N58 National Secondary Road over the Strade River at the location. The existing bridge comprises a two span filler beam deck with steel railway girders encased in concrete and supported on a mass concrete pier and abutments.

The ITM co-ordinates of the existing structure are:

Easting: 525753 Northing: 797497

The location of the proposed development site is shown in Figure 2-1 below with the extent of development shown in Figure 2-2. See Figure 2-3 and 2-4 below for views of the existing bridge surface and west elevation.

The proposed development site is immediately upstream of a Natura 2000 site, the River Moy SAC (site code: 002298). Further downstream (> 30km) lies the Killala Bay/Moy Estuary SAC (000458) and Killala Bay/Moy Estuary SPA (004036). Lough Conn and Lough Cullin SPA (004228) lies c. 4.1km overland from Strade River Bridge. There are no other Natura 2000 sites with connectivity to Strade River Bridge.

The existing bridge is located in a rural location with farmland located northwest and southwest of the structure. The Michael Davitt Museum (NIAH 31307029) is located to the east of the structure with Strade Friary, the Catholic Church of Saint Peter and Saint Paul (RPS 0129; NIAH 31307027) and associated graveyards also located northeast of the structure. A public house and a residential premises are located southeast of the structure.

Two other protected structures are located in close proximity. Strade Bridge (RPS 0130; NIAH 31307030) is located 40m upstream of the existing bridge and was in use until bypassed as part of a road realignment in 1983. The O'Donnell Mausoleum (RPS 0006, NIAH 31307028) is also located east of the structure.



The bridge location is also within the Zone of Notification for MA070-067001 (Religious House - Dominican Friars); MA070-067004 (Graveslab); MA070-067005 (Religious House - Franciscan Friars); MA070-067006 (Graveyard) and other associated monuments.

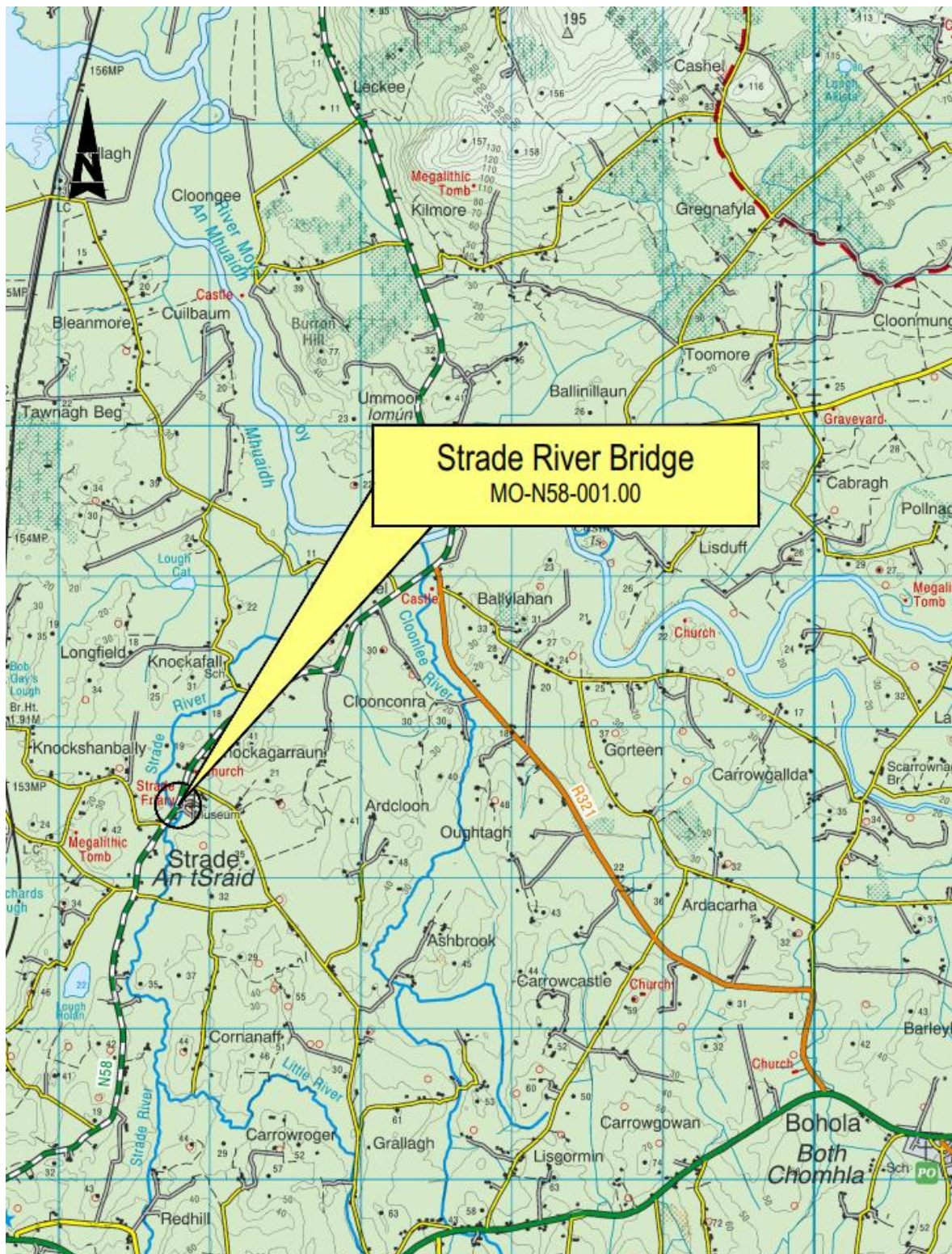


Figure 2-1 – Proposed Development Location Map

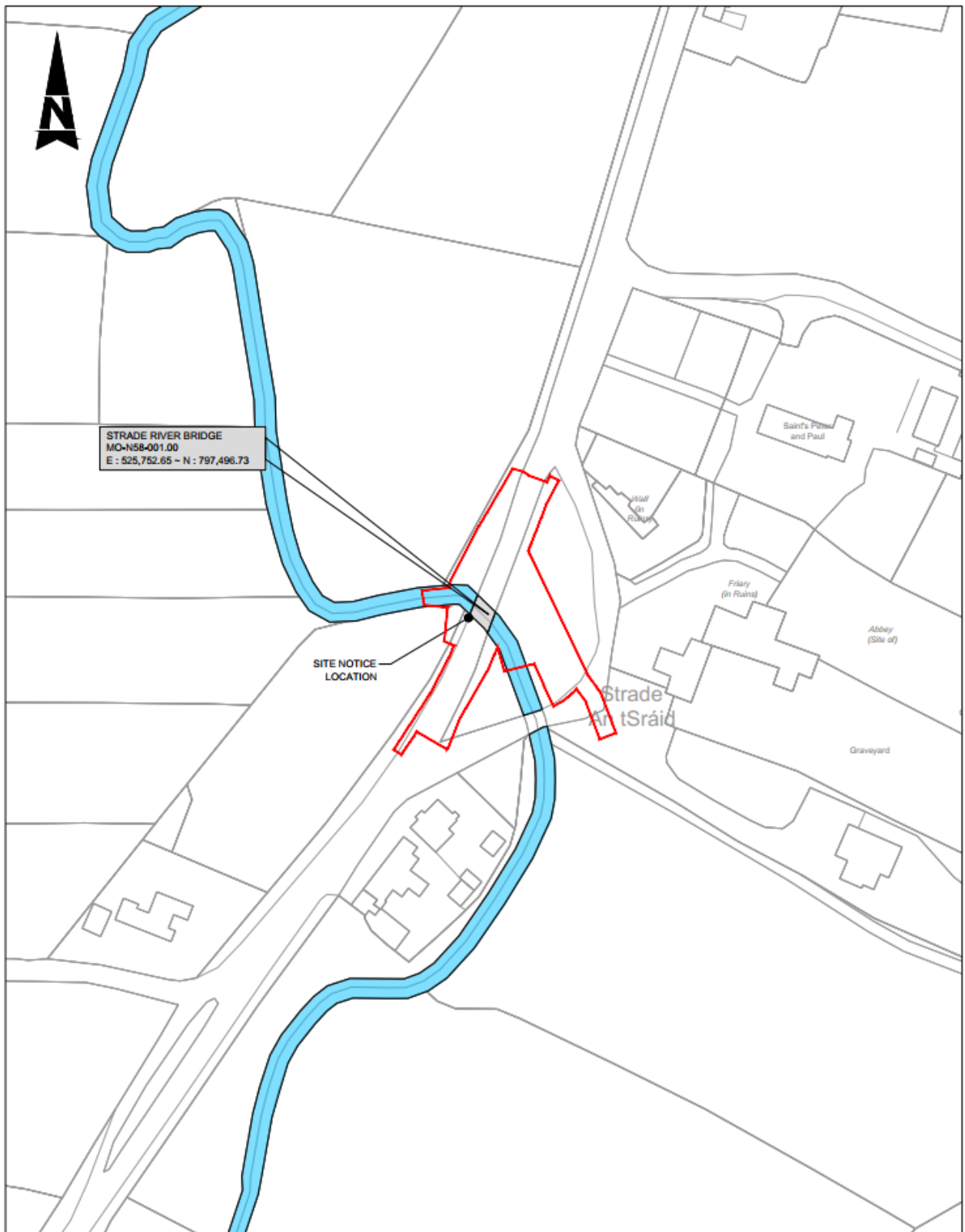


Figure 2-2 – Extent of Proposed Development Site (Red Line)



Figure 2-3 – Existing bridge surface over the structure looking north



Figure 2-4 - West elevation of the existing bridge

3. Proposed Development

Mayo County Council intends to seek the approval of An Coimisiun Pleanála under Section 177AE of the Planning and Development Act, 2000 (as amended) to carry out a proposed development on the N58 National Secondary Road in Strade, Co. Mayo.

3.1 Need for Proposed Development

The Stage 2 Structural Assessment report for the existing Strade River Bridge determined the existing bridge to have a reduced load carrying capacity of 7.5t vehicles due to bond failure between the concrete and steel beams with significant cracking, delamination and spalling visible to the deck slab soffit providing evidence of the issue, see Figure 3-1 below.



Figure 3-1 - Spalling and exposed filler beams evident to both the south span (L) and north span (R)

Following the findings of the Stage 2 Assessment Report both strengthening and replacement options were considered for the rehabilitation works to the existing bridge in order to achieve full load carrying capacity with the merits of each option outlined in a Structure Options Report included with the planning application.

3.2 Description of Proposed Development

The proposed works to the existing Strade River Bridge to increase the load carrying capacity and structural integrity of the bridge comprise the demolition of the existing bridge superstructure and replacement with a new single span deck constructed to align with the retained existing abutments. The proposed replacement deck would be formed of precast prestressed concrete beams with an in situ concrete deck infill. The replacement deck has an approximate clear span of 10.8m and an approximate width of 11.8m.

New independent foundation supports would be located behind the existing abutment walls with the proposed foundations comprising reinforced concrete bored cast in place piles and pile caps. The existing pier and concrete apron are to be demolished to improve conveyance through the structure

with a new reduced height (300mm) concrete apron constructed to maintain the existing low flow channel, following consultation with the Office of Public Works (OPW) and Inland Fisheries Ireland (IFI).

In order for the new bridge soffit to meet the medium probability design flood level requirements of OPW the vertical alignment of the road is required to be raised by approximately 450mm immediately at the bridge with tie-ins to existing road levels provided on the approaches.

The existing carriageway width is to be retained across the new superstructure with the raised verges widened to achieve a minimum width of 2m. New 1.25m high reinforced concrete masonry clad parapets will be constructed over the length of the structure with safety barriers installed on both verges approaching and crossing the bridge.

Ancillary works include the reconstruction of the landowner boundary wall southeast of the bridge and diversion of existing underground Eir fibre optic cable and overhead ESB lines crossing the development site.

The area of the proposed development site is 0.3ha.

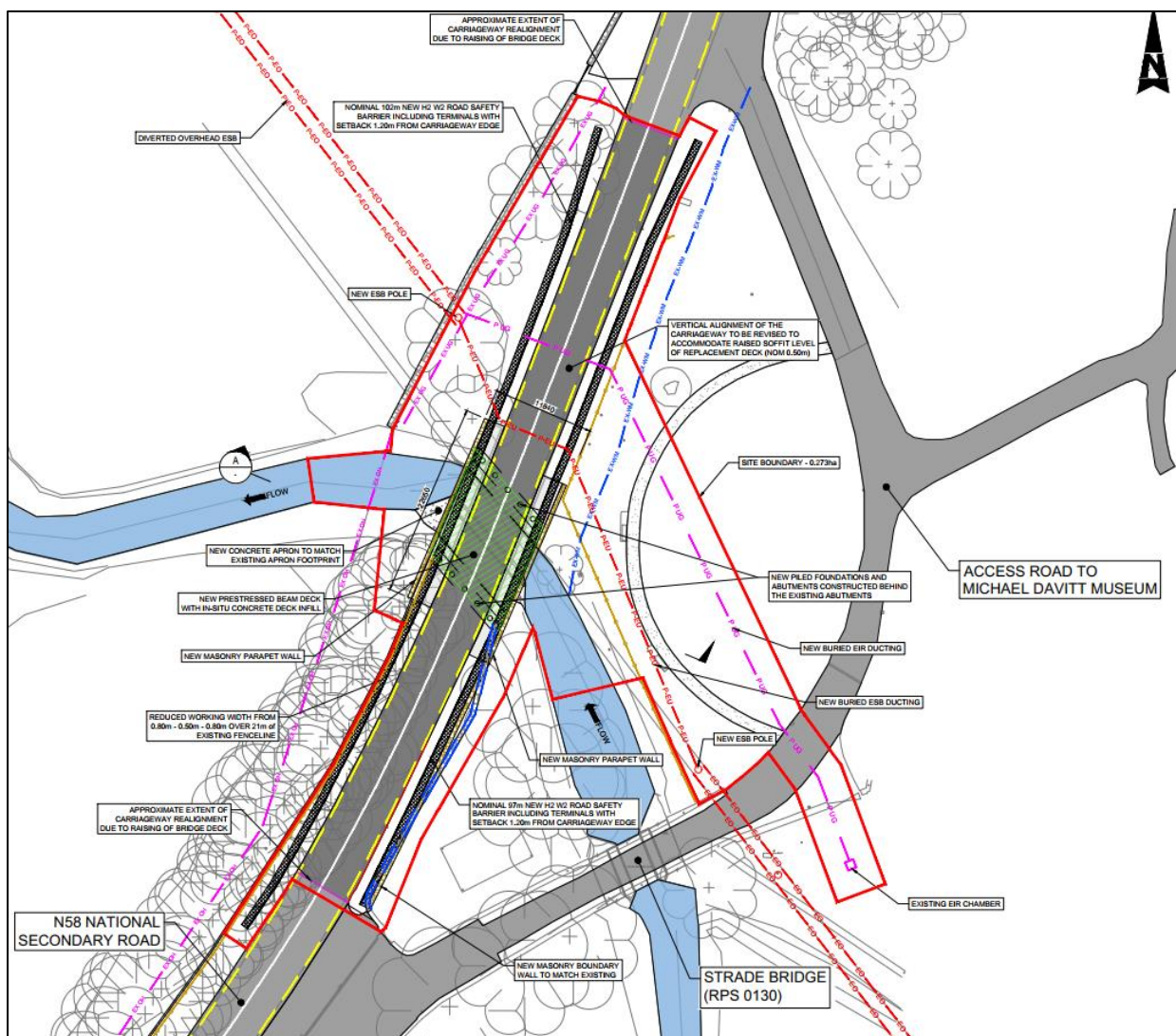


Figure 3-2 – Proposed Development Plan Layout

3.2.1 Proposed Methodology

A summary of the proposed construction methodology and sequence of works are outlined below. A detailed construction and environmental management plan is included with the planning application.

1. Mobilisation to site, erection of site compound and installation of traffic management (initial alternating single lane closure).
2. Erection of temporary working platform below the existing bridge to provide watercourse protection during demolition works.
3. Demolition of existing bridge parapets.
4. Full road closure of N58 and traffic diversion route provided on R621 Regional Road.
5. Removal of existing carriageway, concrete verges and fill material on bridge and immediate approaches.
6. Excavation behind both existing abutments
7. Installation of bored cast in place piles and pile caps within excavation footprint
8. Backfilling of excavations with lean mix concrete infill and selected granular material.
9. Demolition of existing bridge deck followed by demolition of central pier and taking down the existing abutment height
10. Removal of temporary working platform below the structure and dewatering of the watercourse to create a dry working area at the bridge.
11. Demolition of existing raised concrete apron and construction of the new apron using in-situ reinforced concrete.
12. Construction of new abutment capping on existing reduced height abutments.
13. Installation of prestressed concrete beams on top of new pile cap supports.
14. Fixing of steel reinforcement and pouring of new deck in-situ concrete infill.
15. Construction of reinforced concrete parapet walls.
16. Removal of dewatering system from watercourse following concrete works.
17. Resurfacing on approaches to raise vertical alignment of existing road.
18. Application of spray applied waterproofing to new reinforced concrete deck
19. Installation of masonry cladding to both parapets.
20. Construction of raised concrete verges on both sides of the bridge
21. Surfacing works to the bridge and approaches.
22. Accommodation works to the southeast boundary wall and construction of new verges on all corners of the structure.
23. Installation of safety barriers on both approaches and across the bridge.
24. Application of road markings
25. Removal of traffic management and demobilisation from site

4. Planning Process

The proposed development site is located immediately upstream of a Natura 2000 site, the River Moy SAC (site code: 002298). In this respect, the initial assessment undertaken by AtkinsRéalis determined that it cannot be concluded beyond reasonable scientific doubt that the proposed works



would not, either individually or in combination with other plans or projects, give rise to any impacts which would constitute significant effects on River Moy SAC, with Appropriate Assessment deemed required.

Section 177AE(1)(a) of the Planning and Development Act, 2000, as amended states that where an appropriate assessment is required in respect of development by a local authority that is a planning authority, whether in its capacity as a planning authority or in any other capacity, the local authority shall prepare, or cause to be prepared, a Natura impact statement in respect thereof. Section 177AE (3) states that where a Natura impact statement has been prepared pursuant to subsection (1), the local authority shall apply to the Board for approval and the provisions of Part XAB of the Planning and Development Act, 2000, as amended, shall apply to the carrying out of the appropriate assessment.

In this context, the planning application for the proposed development is to be submitted to An Coimisiun Pleanála

5. Planning and Development Context

“The Mayo County Development Plan 2022-2028 sets out the roadmap for the overall proper planning and sustainable development of County Mayo over the plan period. While the Plan is in place for a six-year period, it is framed having regard to the long-term development objectives of the county up until 2040, to align with national and regional spatial plans.”

“This plan provides for, and manages, the physical, economic, and social development of the County, in the interests of the overall common good, and in compliance with environmental legislation. It includes a set of development objectives and standards, which set out where land is to be developed, and for what purposes (e.g. housing, retail, education, schools, employment, open space, amenity, conservation etc). It informs decisions on where public services such as roads and water infrastructure are to be provided and affects the type of buildings that can be constructed and how land is utilised. It influences many facets of daily economic and social life, in terms of where people can live, what services and facilities are available and where job opportunities are to be sited.”

The Strade area is not referenced in the Mayo County Development Plan and is not listed as a rural village (Tier V) in the settlement hierarchy. The Mayo County Development Plan identifies several Strategic Aims, the key one of relevance to the proposed development is:

“Strategic Road Network - To maintain the strategic function, capacity and safety of the national roads network, including planning for future capacity enhancements, and to ensure that the existing extensive transport networks, are maintained to a high level to ensure quality levels of service, safety, accessibility and connectivity to transport users. “

Section 6.4.2.1 of the Plan also outlines the following with regards to national routes:

“Significant investment and improvements in the existing road infrastructure have been made by the Local Authority, in terms of upgrades, realignments, maintenance, traffic management



measures, traffic calming measures and road safety measures. It is important to protect, maintain and enhance the carrying capacity of the national road network in County Mayo, as deemed necessary and as resources allow.”

The Plan supports the protection and maintenance of the carrying capacity of the national road network. This is evidenced through the following objectives and policies outlined in the Plan:

Movement and Transport Policies

MTP 20 - To enhance regional accessibility between key urban centres of population and their regions through the protection of the capacity, efficiency and safety of the national road network in County Mayo.

6. Assessment of Proposed Development

An Appropriate Assessment (AA), Environmental Impact Assessment (EIA), Cultural Heritage Impact Assessment (CHIA) and Hydraulic Assessment were undertaken for the proposed development with the reporting included with the planning application.

6.1 Appropriate Assessment

The existing Strade River Bridge lies immediately upstream of Natura 2000 site, the River Moy SAC (site code: 002298). In this respect, the initial assessment undertaken by AtkinsRéalis determined that it cannot be concluded beyond reasonable scientific doubt that the proposed works would not, either individually or in combination with other plans or projects, give rise to any impacts which would constitute significant effects on River Moy SAC.

The Appropriate Assessment (AA) undertaken by AtkinsRealis, the Natura Impact Statement for which is included with the planning application, has provided an assessment of all potential direct or indirect impacts which have the potential to cause adverse effects on European sites, specifically River Moy SAC (site code: 002298). Where the potential for adverse effects on the SAC were identified, mitigation measures have been prescribed. The measures ensure that impacts from the proposed works are avoided or minimised such that they will not adversely affect the integrity of the site. These include:

- An Ecological Clerk of Works (ECoW) will be appointed and will supervise all aspects of the critical works on site, in particular initial site set up, dam/ silt fence installation, and pouring of concrete. The ECoW will be a suitably qualified and experienced ecologist, which will be appointed by the successful Contractor. The ECoW will ensure compliance of mitigation measures on site and liaise with IFI and NPWS staff where required.
- A dry working area will be provided in the watercourse at the development site by setting up a dam system to provide protection to the watercourse during the works.
- All operations will be in accordance with, but not limited to, the following guidelines: -



- C532 Control of water pollution from construction sites. Guidance for consultants and contractors (Masters-Williams et al., 2001),
- SP156 Control of water pollution from construction sites – guide to good practice (Murnane, 2002),
- C750 Groundwater control: design and practice (Preene et al., 2016)
- Guidance on Protection of Fisheries during Construction Works in and Adjacent to Waters (IFI, 2016).

The conclusion of the NIS states the following:

Given the prescription of the mitigation measures detailed in Section 7 of this NIS, it can be concluded beyond reasonable scientific doubt that the proposed development will not, either individually or in combination with other plans or projects, give rise to any impacts which would constitute adverse effects on the River Moy SAC or any other Natura 2000 site, in view of their conservation objectives.

Therefore, it is the recommendation of the authors of this report that An Coimisiun Pleanála, as the competent authority in this case, may determine that the proposed development, either individually or in combination with other plans or projects, will not adversely affect the integrity of any Natura 2000 site, provided that the mitigation prescribed in this NIS is fully and properly implemented.

6.2 Environmental Impact Assessment

The Environmental Impact Assessment Screening Report (EIA) for the proposed development is included in the planning documents submitted with this application. The EIA Screening has been carried out in accordance with the Planning and Development Regulations as amended 2001- 2025 (which give effect to the provisions of EU Directive 2014/52/EU). The report assessed the impact of the proposed works in conjunction with committed developments in the surrounding area.

The conclusion of the EIA Screening Report states the following:

Based on all available information, and taking account of the scale, nature and location of the proposed works, it is our opinion that the preparation of an EIAR is not a mandatory requirement (under Schedule 5, Part 1 and 2 of the Planning and Development Regulations 2001 - 2025). The proposed works is deemed a sub-threshold development; hence the potential for significant environmental effects arising as a result of the proposed works has been evaluated, in accordance with the requirements of Schedule 7A and Schedule 7 of the Planning and Development Acts 2001- 2025.

Key findings are summarised as follows:

- *Due to the limited nature of the works, it is considered that there will be no significant cumulative impacts with other developments in the general area.*
- *Limited noise, vibration and dust emissions may be generated during construction; however, this is anticipated to be minimal in effect and will cause no significant impacts.*
- *There will be no significant impact on biodiversity, groundwater, surface water or traffic; and,*
- *There will be no significant impacts on recorded monuments or historic features.*
- *In summary, no significant adverse impacts to the receiving environment will arise because of the proposed works.*



Therefore it is considered that the preparation of an EIAR is not required for the proposed development.

A copy of the Environmental Impact Assessment Screening Determination from Mayo County Council is included in Appendix A of this report.

6.3 Cultural Heritage Impact Assessment

The Cultural Heritage Impact Assessment Report (CHIA) undertaken by Richard Gillespie of Mayo County Council and TII for the proposed development is contained within the planning documents submitted with this application.

The executive summary of the CHIA Report states the following:

The proposed works will involve the demolition of the existing 1980's bridge deck and the construction of a new deck and parapets at the same location, reducing the height of the existing abutments and demolishing the central bridge pier and replacing the existing raised concrete apron below the bridge with a new reduced height apron. The works will encroach on the 'zone of notification' of one National Monument / Recorded Monument. It is on the outer edge of the Zone of Notification for MA070-067001- (Religious House - Dominican Friars); MA070-067004- (Graveslab); MA070-067005 (Religious House - Fransiscan Friars); MA070-067006-(Graveyard) and other associated monuments. Straide Abbey is also a National Monument in state ownership (no. 172) and as such is of National importance with a higher level of protection.

There are three Recorded Protected Structures (RPS) in the vicinity (Table 1.1). Strade Bridge (RPS No.0130) is the closest, c. 35 m from the development. There is no predicted impact on these structures however measures should be put in place to prevent inadvertent impacts from the project.

6.4 Hydraulic Assessment

The hydrology and hydraulics study for the proposed development has been undertaken in line with Office of Public Works (OPW) requirements. The OPW were consulted prior to the submission of an Arterial Drainage Act (1945) - Section 50 application which was accompanied by a hydraulic assessment report. The proposed development has been assessed to pass a 1% Annual Exceedance Probability (AEP) flood flow, equivalent to a 1 in 100-year event with a factor also included for climate change.

The existing Strade River Bridge is the primary hydraulic constraint in the river channel at the bridge location. The hydraulic assessment of the existing bridge determined a design flood level of 18.38mOD at the bridge, with the existing bridge soffit level of 18.1mOD below this design flood level. The 3 span protected masonry arch structure located 40m upstream is also providing a primary hydraulic constraint in the upstream river channel.

The proposed development improves the conveyance at the bridge location by removing the existing central pier and reducing the height of the raised concrete apron to reduce the design flood level to 18.31mOD.



The Hydraulic Assessment conducted by AtkinsRéalis (2025) concludes; *‘The proposed soffit level of the new bridge is 220mm above the soffit of the existing bridge and provides a single span opening with the pier removed to improve flow through the structure. The proposed bridge deck replacement therefore does not add any additional constraint to the existing channel with the upstream masonry arch bridge remaining the primary constraint. As the design flood level determined by hydraulic assessment did not consider any beneficial effects from the masonry arch bridge the proposed bridge structure is also future proofed against any future works to the masonry arch bridge’.*

The proposed development therefore does not negatively impact the flood levels at the bridge location or further upstream. The OPW granted consent to the Section 50 application for the proposed development with the confirmation of approval appended to the hydraulic assessment report included with this application.

7. Conclusion

The proposed development is in line with planning policy outlined in the Mayo County Development Plan 2022-2028 and the wider national and regional planning policies. The proposed rehabilitation works to the existing Strade River Bridge protects the capacity, efficiency and safety of the national road network in County Mayo in line with policy MTP 20.

The EIA Screening report concludes that the proposed development would not be likely to have significant effects on the environment, subject to mitigation.

The NIS concludes that given the full and proper implementation of the mitigation prescribed in the NIS, there is no reasonable scientific doubt remaining as to the absence of adverse effects on River Moy SAC, or any other Natura 2000 site, in view of their conservation objectives.

The CHIA outlines that there is no predicted impacts from the development with measures to be put in place to prevent inadvertent impacts.

The hydraulic assessment concludes that the proposed development improves conveyance through the existing bridge and does not negatively impact flood levels upstream of the bridge.

The proposed development will provide a significantly improved and safer road bridge in Strade, Co. Mayo in line with planning policy, and is in the interests of the proper planning and sustainable development of the area.



APPENDICES

Appendix A. Environmental Impact Assessment Screening Determination





Environmental Impact Assessment (EIA) Screening Determination

Mayo County Council – Task Order No 315, National Road Bridge Assessments and Strengthening Scheme 2023

N58 Strade River Bridge Rehabilitation Works

Atkins Realis were commissioned by Mayo County Council to prepare an Environmental Impact Assessment (EIA) Screening Report in respect of the ***Proposed Rehabilitation Works at N58 Strade River Bridge in Strade, County Mayo.***

The proposed works to the existing Strade River Bridge structure to increase the load carrying capacity and structural integrity of the bridge are as follows:

- Existing bridge superstructure proposed to be demolished with a new single span replacement deck constructed to align with the retained substructure
- Proposed replacement deck will be formed of precast prestressed concrete beams with an in situ concrete deck infill
- New independent foundation supports will be located behind the existing abutment walls with the proposed foundations comprising reinforced concrete bored cast in place piles and pile caps
- Existing pier and concrete apron to be demolished to improve conveyance through the structure with new reduced height (300mm) concrete apron constructed to maintain the existing low flow channel
- Existing carriageway width to be retained across the new superstructure with the raised verges widened to achieve a minimum width of 2m. Area of the project site is 0.2ha
- New 1.25m high reinforced concrete masonry clad parapets will be constructed over the length of the structure with safety barriers installed on both verges approaching and crossing the bridge

A review of the Characteristics of the Proposed Development, the Location of the Proposed Development and the Characteristics of Potential Impacts were undertaken in the Environmental Impact Assessment (EIA) Screening Report.

The EIA Screening Report concludes that the proposed development does not exceed the thresholds that trigger the mandatory requirement for an Environmental Impact Assessment Report (EIAR) and subsequently the proposed development is deemed to be a sub-threshold development. This sub-threshold development has been assessed in accordance with Schedule 7A of the Planning and Development Regulations 2001 (as amended).

The EIA Screening Report found there will be no significant adverse environmental effects arising from the project. Mayo County Council having considered the Environmental Impact Assessment (EIA) Screening Report has determined that the ***Proposed Rehabilitation Works at N58 Strade River Bridge in Strade, Co. Mayo,*** does not require an Environmental Impact Assessment Report (EIAR).

Dated this 6th day of Aug., 2025

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