Donegal County Council

PLANNING AND DEVELOPMENT REGULATIONS 2001

(as amended)

Nature and Extent of a proposed development in accordance with Part VIII of the above regulations by Donegal County Council.

(Available for Public Inspection and Download)

VRS Installation along the R238 at The Three Trees, Quigleys Point, Co Donegal

Part VIII Report

Donegal County Council

Central Technical Services

Lifford

Quality Control Sheet

Issue	Date	Prepared	Date	Checked
Draft v1.0	01/11/2023	P. Doherty	03/11/2023	C. Harley
Final Draft	13/11/2023	P. Doherty	17/11/2023	C. Harley
Final Issue	20/11/2023	P. Doherty	21/11/2023	C. Harley

Contents

0 EXECUTIVE SUMMARY

This report relates to the proposed installation of new Vehicle Restraint (VRS) along a section of carriageway for approximately 2km abutting the R238 regional road.

Works will take place in the townlands of The Three Trees, Quigleys Point in the Inishowen Municipal District of Co. Donegal.

This report provides a background to the proposed development, the nature and extent of the works being proposed and key features of the project.

The report is prepared in accordance with Part 8 of the Planning & Development Regulations 2001 (as amended).

1 INTRODUCTION

1.1 Project Background and Need for the Project

In collaboration with the Road Safety Authority (RSA), Department of Transport (DoT) and An Garda Siochana, Donegal County Council identifies Collision Prone Locations (CPL's) on regional and local roads that qualify for preventive remedial action funded by the DoT's annual Low-Cost Grant Allocations.

In partnership with An Garda Siochana, Donegal County Council have identified a section of the R238 in the townland of The Three Trees near Quigleys Point, Co Donegal as a "Collision Prone Location" therefore needing further assessment to determine if a treatable engineering solution can be applied to reduce or prevent further road traffic collisions that this location (Figure 1.1).

This section of the R238 under assessment is a common location for collisions and near misses. Currently no dedicated roadside safety system exists at this location to minimise the consequences of vehicles leaving the carriageway. As a result, this location has now been identified as a hazard location due to its proximity to the shoreline.

Donegal County Council therefore proposes to undertake a Road Safety Improvement Scheme (RSIS) as described in this report by providing a dedicated road safety measure in the form of a vehicle restraint system (VRS) along this section of the R238 to:

- Minimise the risk to occupants of vehicles which leave the carriageway and the risk of vehicles leaving the carriageway.
- To contain errant vehicles that either leave the carriageway or are likely to encroach into the path of oncoming vehicles.
- Providing adequate recovery space and ensuring that any collision that does occur in the roadside will be with an object that limits the impact forces on a vehicle's occupants to minor levels.
- Mitigate the consequence of the 'run-off' type crash thus creating a safer driving experience for road users traversing this section of the R238 between the Villages of Muff and Quigleys Point.
- Reducing the frequency and severity of collisions enhancing road safety.

1.2 Purpose of this Report

The purpose of this report is to outline the proposals associated with the R238 Road Safety Improvement Scheme (RSIS) at The Three Trees, Quigleys Point, Co Donegal.

This report is prepared in accordance with Part VIII of the Planning and Development Regulations 2001 (as amended).

1.3 Study Area

The project study area is located circa 1.5km south of the village of Quigleys Point (junction of the R238-47 with the R240-10) and approx 7km North of village of Muff. (*See Figure 1.1)*

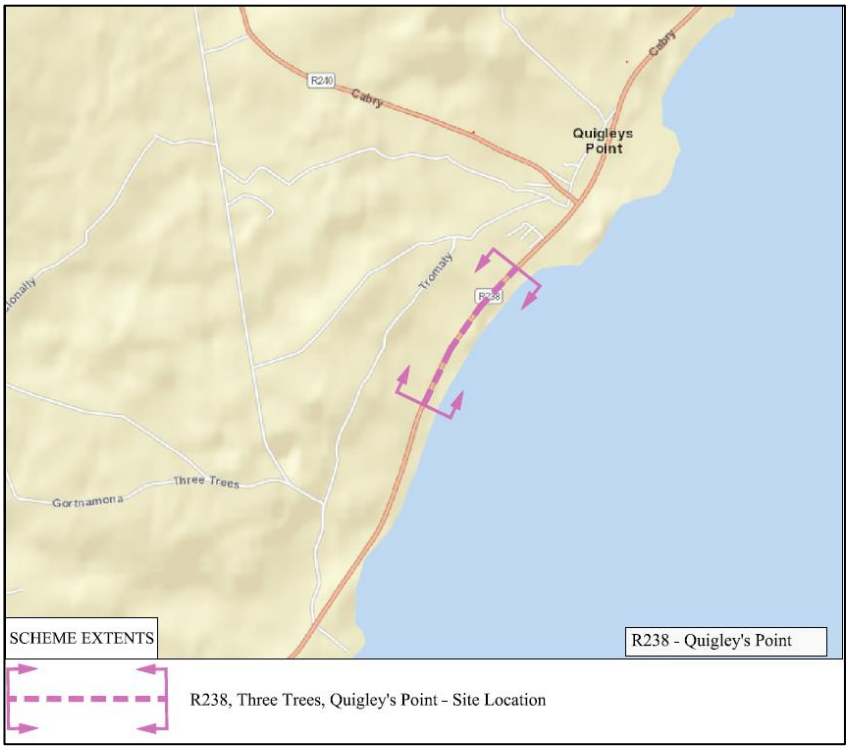

Figure 1.1 – Aerial view of location

2 PART VIII PLANNING PROCESS

Section 179 of Part XI of the Planning and Development Act 2000, (as amended); and Part 8 of the Planning and Development Regulations 2001, (as amended) set out the requirements in respect of certain classes of development by or on behalf of local authorities.

7 Articles – 79 to 85. Article 80(1)(K) lists the type of Developments to which Part 8 is required. The proposed Road Safety Improvement Scheme (RSIS) is covered under the above article.

2.1 Planning Site Notice

In accordance with the Article 81 the Local Authority shall:

(a) give notice of proposed development in a newspaper.

(b) erect site notices on the land on which the proposed development would be situated.

Donegal County Council Published a notice of the proposals in the Inish Times on **Wednesday, 22nd November 2023**.

A copy of the Planning Site Notice is shown in Appendix A: Planning Site Notice

2.2 Planning Consultations

Article 82(3) prescribes Statutory and Non-Statutory bodies to which a local authority should send notice of proposed development. These are summarised in the Appendix B: List of Statutory Bodies.

2.3 Part 8 Planning Documents

The following is the list of Part 8 Planning documents contained in this application:

- Planning Report (this document)
- Planning Site Notice (Appendix A)
- List of Statutory Bodies (Appendix B)
- Vehicle Restraint Risk Assessment Report (See Appendix C)
- Report for the Screening of Appropriate Assessment (Appendix D)
- EIA Preliminary Examination & Conclusion Report (Appendix E)
- Stage 1/2 Road Safety Audit Report and Exceptions Report (Appendix F); and
- Preliminary Design Drawings (Appendix G)

Drawing Number	Drawing Title	Revision
IE000842-RPS-IX-XX-D-C-0002-01	Location Plan	P01
IE000842-RPS-XP-XX-D-C-0003-01	Planning Boundary Overview	P01
IE000842-RPS-XP-XX-D-C-0003-02	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-03	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-04	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-05	Planning Boundary	P01
IE000842-RPS-SB-XX-D-C-0002-01	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-02	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-03	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-04	Proposed Safety Barrier (R238DL-SB02)	P01
IE000842-RPS-SB-XX-D-C-0002-05	Proposed Safety Barrier (R238DL-SB02)	P01
IE000842-RPS-SB-XX-D-C-0002-06	Proposed Safety Barrier (R238DL-SB02)	P01
IE000842-RPS-SB-XX-D-C-0002-07	Proposed Safety Barrier (R238DL-SB03)	P01
IE000842-RPS-SB-XX-D-C-0002-08	Proposed Safety Barrier (R238DL-SB04)	P01
IE000842-RPS-SB-XX-D-C-0002-09	Proposed Safety Barrier (R238DL-SB05)	P01
IE000842-RPS-SB-XX-D-C-0002-010	Proposed Safety Barrier (R238DL-SB05)	P01

Table 2.3.1 – List of Drawings (Appendix G)

2.4 Submission Process

Donegal County Council is required to make **full plans and particulars** of the proposed development available for inspection. These will be available from **Thursday 23rd November 2022** until **Thursday 21st December 2023** at the following locations:

- Inishowen Public Service Centre, Malin Road, Carndonagh, Lifford, Co. Donegal, F93 NR70.
- Lifford Public Service Centre, County House, The Diamond, Lifford, Co. Donegal, F93 Y622.
- Plans and particulars for this proposed development will also be available for inspection or download at the project specific page on the following Public Consultation website: **https://consult.donegal.ie/browse**

Submissions and observations with respect to the proposed development, dealing with the proper planning and development of the area in which the development is situated may be made in writing to **The County Secretariat Office, Donegal County Council, Lifford, County Donegal** or via the **"MAKE A SUBMISSION**" button on the project specific page on the **https://consult.donegal.ie/browse** website before **4.00pm on Monday, 15th January 2024.**

3 NATURE AND EXTENT OF PROPOSED DEVELOPMENT

3.1 Description of Existing Infrastructure

R238 Cross-Section (Carriageway and Verges): The section of the R238 under assessment is located within a rural environment and runs parallel to the shoreline of Lough Foyle SPA (European Conservation Designation). The R238 at this location comprises a wide, rural single carriageway with paved (bound) hard shoulders over some of its length and sections of unpaved (unbound) hard shoulders elsewhere. In places the road alignment hugs the shoreline and is supported by a masonry sea wall. In other places an existing earth bund of varying height separates the road from the shoreline. A gated Donegal County Council storage yard is also located mid-way along the eastern verge.

Land uses along this section include dispersed rural housing, businesses, and agriculture land use.

Drainage: road drainage is provided along the extents of the R238 within the area of the proposed works via over the edge drainage method and dissipation into the adjacent verge and embankments. Drainage from the adjacent properties is mainly via road gullies feeding into a public carrier drainage system with discharge into existing watercourses. Other local access roads are free draining to road edges.

This section of the R238 forms part of the main link from Northern Ireland to Inishowen with an AADT of 9251 vehicles per day.

Figure 3.1.1: R238 – View to the North

Figure 3.1.2: R238 – View to the South

3.2 Review of Collision History

Road traffic collision data is recorded by An Gardai Siochana and details the severity of collisions, when and where road collisions occur, who was involved, contributory actions and contributory factors. A review of Collision Statistics provided by RSA identifies a total of 11nr. Collisions recorded over a 10-year period between July 2011 – August 2020 along this section of the R238 (Figure 1.2.1). Of these, seven are recorded as Material Damage, two are recorded as minor injury while the remaining two are recorded as fatalities occurring in 2020 (Table 1.2.1).

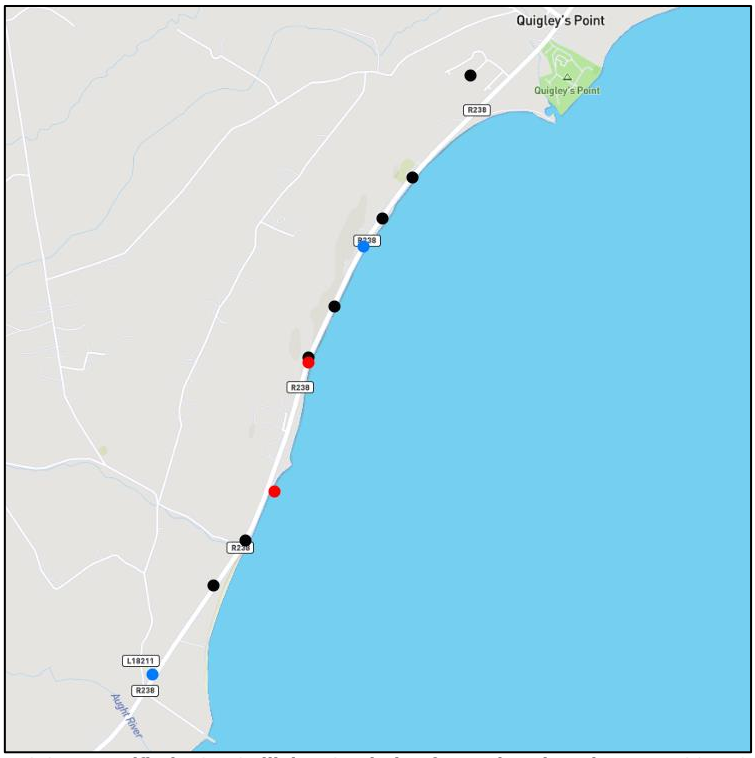

Figure 3.2.1 – Verified RSA Collision Statistics for Pedestrians between 2014 & 2020

Year	Fatal	Material	Minor
2011			1
2014			1
2015		1	
2016		1	
2018		1	
2019		3	
2020	2		1

Table 1.2.1 – Verified RSA Collision Statistics for all road users between 2014 & 2020

In addition to the above, An Garda Siochana have confirmed an additional 10nr. collisions for the period 2020 to-date not currently noted on the RSA Collision Map.

3.3 Speed Assessment

Donegal County Council undertook a traffic count and speed survey between the 29th July 2022 and the 5th August 2022 within the scheme extents. The survey data obtained confirmed that the 85th percentile speed for traffic travelling on the R238 is 93km/h and average daily traffic (ADT) of 9,251.

3.4 Nature and Extend of the Proposed Road Safety Improvement Scheme

A dedicated **VRS Risk Assessment Report** has been undertaken by RPS in accordance with the relevant TII Publications that involved carrying out a targeted assessment of this section of the R238 and looked at items such as operational speed, historical collision information, sinuosity, and clear zone. Hazards were identified, risk assessed and options to remove, mitigate or protect were examined. Since mitigating the hazards are not an option at this location, establishing a forgiving system was examined resulting in a dedicated Vehicle Restraint System (VRS) design methodology being undertaken in accordance with TII Publication DN-REQ-03079 (Appendix C).

The works proposed within the site extents will generally consist of the provision of a Vehicle Restraint System (VRS) and all other ancillary works including revised signs and lines design for this section of the R238 Regional Road at The Three Trees, Quigleys Point, Co Donegal in accordance with the relevant TII publications and Traffic Signs Manual as outlined in Table 3.4.1.

Title	Published By
DN-REQ-03034 The Design of Road Restraint Systems for Roads and Bridges (May 2019)	National Transport Authority
DN-REQ-03079 Design of Road Resistant Systems for Constrained Locations (May 2019)	Transport Infrastructure Ireland
DN-GE)-03060 Cross Sections and Headroom (May 2019).	Transport Infrastructure Ireland
Traffic Signs Manual	Department for Transport, Tourism and Sport, latest editions of relevant chapters

Table 3.4.1 – Relevant Standards applicable for the completion of the proposed RSIS

3.5 Project Objectives

The purpose of this project is the low-cost solution aiming at the improvement to the safety and comfort of the road user traversing this section of the R238.

The three main reasons for installing a VRS are:

i. To minimise injuries to the occupants of vehicles which leave the carriageway,

ii. To provide protection to third parties who may otherwise be adversely affected by errant vehicles, and

iii. To protect property, damage to which would result in the instability of a structure.

3.6 Project Specific Proposals

The project will include:

- Provision of a new Vehicle Restraint System (approx. 1,600m) including break points for vehicle accesses where required on the southern side of the existing R238.

- Reduction in hard shoulder width to allow sufficient working width of VRS and to avoid impact with sea wall within the scheme extents.

- Earthworks to remove sections of the existing raised earth mound or to import fill to build up verge where required within the scheme extents, to create a level verge to facilitate VRS installation.

- Removal of existing fence or replacement with timber post and tension mesh fence to CC-SCD-00320 where required to facilitate VRS installation within the scheme extents.

- Removal of Vegetation where required to facilitate VRS installation within the scheme extents.

- Revision of signs & lines throughout the scheme in accordance with Traffic Signs Manual (TSM).

Additional accommodation works may be required as follows:

- In order to accommodate a compliant VRS where the verge is sufficiently wide and level for both the setback and working width of a VRS system, earthworks will be required to either remove sections of the existing raised earth mound or to import fill to build up the falling verge.

- The adjacent sea wall is very close to the carriageway edge in places. In order to avoid impacting on the sea wall and impeding any future maintenance or repair works, it may be necessary to reduce the width of the existing wide hard shoulder.

4 PLANNING AND POLICY CONTEXT

4.1 Project Funding

The funding for the Road Safety Improvement Scheme (RSIS) has been submitted by Donegal County Council as part of the 2024 Low-Cost Grant Allocations from:

- The Department of Transport

4.2 Planning Policy Compliance

The project study area is located in the townland of The Three Trees, circa 1.5km south of the village of Quigleys Point (junction of the R238-47 with the R240-10), within the administrative area of Donegal County Council.

4.3 Donegal County Council Development Plan

In line with National Strategy, Donegal County Councils Road Safety Plan 2022 – 2030 is designed to ensure a collaborative, coordinated and consistent approach to improving road safety for all road users.

Donegal's strategic road network is identified on Map 8.1.2 (Figure 4.2.1.1) and in the Core Strategy comprises Trans European Transport Network roads (TEN-T), other National roads and a number of regional roads recognised by the Council including the R238 as being of strategic importance as these roads facilitate high volumes of vehicular traffic, allowing for the efficient movement of traffic between settlements within and outside of the County.

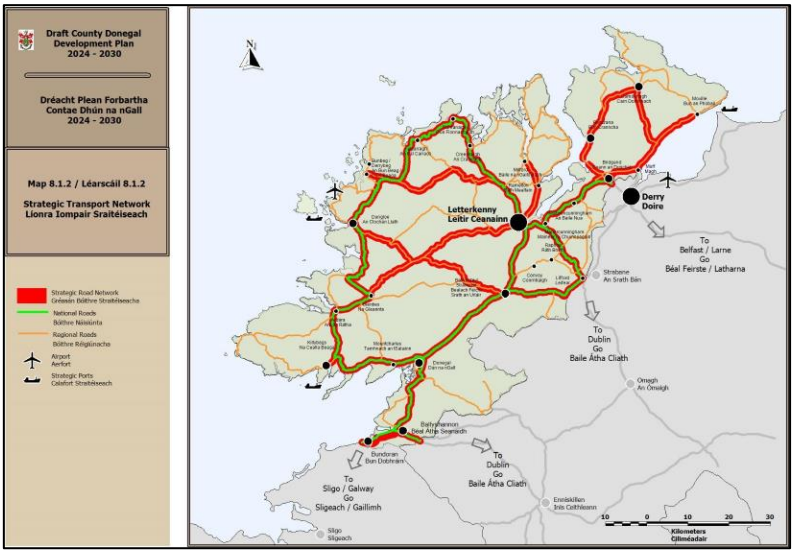

Figure 4.2.1.1 **– Donegal County Council Development Plan 2024 – 2030, Map: 8.1.2**

County Development Plan Objective under T-O-10 (Transportation Objective) aims to:

- *"safeguard the carrying capacity and safety of National and Regional roads"* including the R238.

Furthermore, County Development Plan under T-O-11 (Transportation Policy):

- It is policy of the Council to support and facilitate:
  - *"The appropriate development, extension and improvement of Donegal's transport network, including the Strategic Road Network (Map 8.1.2 refers)".*

5 ENVIRONMENTAL & ECOLOGICAL ASSESSMENT OF THE SCHEME

The Screening exercise was completed by Earthy Matters Environmental Consultants, Glenvar, Letterkenny, Co Donegal in compliance with the relevant European Commission and national guidelines. The potential impacts during the construction and operation of the proposed road works at The Three Trees have been considered in the context of the European Sites potentially affected, their qualifying interests, Special Conservation Interests and Conservation Objectives.

5.1 Appropriate Assessment Screening Report

In line with the requirements of Article 6(3) of the Habitats Directive, a Screening Statement for Stage 1 Appropriate Assessment for a Safety Barrier along the R238 in the townland of The Three Trees near Quigleys Point, Co Donegal was undertaken by Environmental Consultants on behalf of Donegal County Council.

The Stage 1 Appropriate Assessment concluded that:

1. The project **is not** directly connected to the management of any European sites.

2. The project, alone or in combination with other plans and projects **is not** likely to have significant effects on any habitats or species for which a European site was designated.

3. Negative impacts from the project are **not** foreseen on species or habitats for which European sites have been designated.

4. Therefore, a Stage 2 Appropriate Assessment **is not** required for this project.

Report for the Screening of Appropriate Assessment can be found in Appendix D of this report.

5.2 Screening for Environmental Impact Assessment (EIA)

Screening is the process of assessing the requirement of a project to be subject to Environmental Impact Assessment, based on project type and scale and on the significance or environmental sensitivity of the receiving environment.

EIA screening is mandatory for certain projects and for other projects that meet or exceed a stated threshold as set out in Annexes I and II of the Directive (and Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended). Projects that do not meet or exceed a stated threshold are subject to a preliminary assessment for the requirement, or not, for 'sub-threshold' EIA.

5.2.1 Roads Act 1993 (as amended)

The provision of the Roads Act 1993, as amended, will also apply to the proposed road development. Section 50 (1)(a) [Environmental Impact Assessment Report] requires a road development comprising any of the following road development types listed in Table 5.1 to be subject to an environmental impact assessment. For clarity, Cork County Council are considered to be the Road Authority for the purposes of Section 50 (1) of the Roads Act 1993, as amended.

Section 50(1) Roads Act Reference		EIA Required on the Bases
(1) Construction of a motorway		**No**. The proposed development consists of improvements to an existing regional road.
(2) Construction of a busway		**No**. The proposed development does not include a busway.
(3) Construction of a service area		**No.** The proposed development does not include any service area.
(4) Any prescribed type of proposed road development consisting of the construction of a proposed public road or the improvement of a public road. The types of road development are prescribed under Article 8 the Roads Regulations 1994 (S.I. No. 119 of 1994), as comprising;	The construction of a new road of four lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length on a rural area, or 500 metres or more in length an urban area.	**No.** The proposed Road Safety Improvement Scheme comprises of the installation of approx. 1.6km of a VRS along the eastern side of the R238 to enhance road safety which falls below the eight-kilometre threshold for rural areas.
	The construction of a new bridge or tunnel which would be 100 metres or more in length	There is no bridge or tunnel proposed as part of the development.
(5) Where An Bord Pleanála (ABP) considers that a proposed road development would be likely to have significant effects on the environment it shall direct the road authority to prepare an EIS.		**No**. The proposed development is being made under Part 8 (Requirements in Respect of Specified Development by, on behalf of, or in Partnership with Local Authorities) of the Planning and Development Regulations 2001, as amended.
(6) Where a road authority considers that a proposed road development would be likely to have significant effects on the environment it shall inform ABP in writing and where ABP concurs it shall direct the road authority to prepare an EIS		**No**. Not applicable based on the outcome of this screening assessment.
(7) Where a proposed road development would be located on certain environmental sites the road authority shall decide whether the proposed road	(i) a European Site within the meaning of Regulation 2 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011),	**No.** The proposed development site is not located within any European site however the site

<table>
<tr><td rowspan="4">development would be likely to have significant effects on the environment.
The sites concerned are:</td><td>(ii) land established or recognised as a nature reserve within the meaning of section 15 or 16 of the Wildlife Act 1976 (No. 39 of 1976),</td><td rowspan="5">of the proposed development is located within close proximity to Lough Foyle SPA which is designated a Special Protection Area (SPA) under the E.U. Birds Directive.

Due to distance and presence of a hydrological pathway, this European site is deemed within the zone of influence.

The Appropriate Assessment Screening Report prepared for this application confirms no significant effects to European Sites within proximity to the proposed development. Sites designated under the Wildlife Act are not adversely or significantly impacted by the proposed development.</td></tr>
<tr><td>(iii) land designated as a refuge for fauna or flora under section 17 of the Wildlife Act 1976 (No. 39 of 1976), or</td></tr>
<tr><td>(iv) land designated a natural heritage area under section 18 of the Wildlife (Amendment) Act 2000,</td></tr>
<tr><td>(v) A Nature Reserve within the meaning of sections 15 or 16 of the Wildlife Act, 1976</td></tr>
<tr><td colspan="2">If the road authority considers that significant environmental effects are likely, it shall inform ABP in accordance with section 50(1)(c)</td></tr>
<tr><td>(8) Where a decision is being made pursuant to this subsection on whether a road development that is proposed would or would not be likely to have significant effects on the environment, An Bord Pleanála, or the road authority or the Authority concerned (as the case may be), shall take into account the relevant selection criteria specified in Annex III.</td><td></td><td>No. Not applicable based on the outcome of this screening which has been assessed against the criteria specified in Annex III.</td></tr>
</table>

Table 5.1 – EIA Requirements under Section 50(1) of the Roads Act

Proposed road development also does not meet any descriptions or thresholds set out in Section 50(1) of the Roads Act 1993 (as amended) therefore there **is no mandatory requirement for EIA** is required.

However, as the proposed development is deemed within 'the zone of influence', It is therefore considered 'sub-threshold' for the purposes of Environmental Impact Assessment ("EIA") per Article 92 of the Regulations and the Council has concluded on the basis of a Preliminary Examination of the nature, location and size of the proposed development in accordance with Article 120 (1)(b)(i) thereof that there is ***no real likelihood*** of significant effects on the environment arising from the proposed development and that Environmental Impact Assessment **("EIA") is not required**.

Form 1 "Understanding the Proposal' and Form 2 the 'Preliminary Examination & Conclusion Report', are included in Appendix E of this report.

6 ROAD SAFETY AUDIT

6.1 Road Safety Audit

As per TII publication TII-GE-STY-01024, a Road Safety Audit (RSA) is required on any piece of road infrastructure which requires a design and as such, must be carried out by a competent Audit Team independent of the Designer. The Road Safety Audit is an evaluation of a road scheme during design, construction and early operation, to identify potential safety hazards which may affect any type of road user, and to suggest measures to eliminate or mitigate those problems.

RPS has been commissioned by Donegal County Council to provide a Vehicle Restraint System (VRS) on the R238 in the townland of The Three Trees just south of Quigleys Point in Co Donegal.

A Stage 1/2 Road Safety Audit (RSA) was carried out on behalf of Donegal County Council on the proposed VRS Scheme by CST Group. A number of items identified by the Audit Team have been accepted by the Designer and incorporated into the design. However, one item identified where the Designer has responded to the recommendation in the RSA with a reason cannot be accepted by the by the Audit Team. Alternatives proposed for this location were considered unsuitable through consultations between the LA and stakeholders.

As per TII publication TII-GE-STY-01024, For those cases where the Designer and the Audit Team cannot agree appropriate means of addressing a safety problem identified by the audit, an Exception Report must be prepared on each disputed item in the audit report.

The item has therefore been extracted from the final Stage 1/2 RSA Report and as such, an Exceptions Report has been prepared by RPS for approval by Donegal County Council.

The **Stage 1/2 Road Safety Audit Report** and the **Exceptions Report** are included in Appendix F of this report.

A further Stage 3 Safety Audit will then be carried out on completion of the construction stage.

7 RECOMMENDATIONS

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the objective information provided in the above reports, it is concluded beyond reasonable scientific doubt that the proposed road improvement works, individually or in combination with other plans/projects are not likely to have a significant effect on a European site (Natura 2000 site). It is therefore considered that a Stage 2 Appropriate Assessment under Section 177V of the Planning and Development Act 2000 (as amended), is not required.

As per Article 92 of the Regulations and the Council has concluded on the basis of a Preliminary Examination of the nature, location and size of the proposed development in accordance with Article 120 (1)(b)(i) thereof that there is no real likelihood of significant effects on the environment arising from the proposed development and that Environmental Impact Assessment ("EIA") is not required. Where however any person considers that the proposed development to be carried out by the Council would be likely to have significant effects on the environment, he or she may at any time before the expiration of 4 weeks beginning of the date of publication of this notice apply under Article 120(3)(b)

of the Regulations to An Bord Pleanala (64 Marlborough Street, Rotunda, Dublin 1, D01 V902) for a screening determination as to whether the development would be likely to have such effects.

8 CONSTRUCTION

The construction stage of the scheme is likely to take approximately 24 months. The construction will be carried out on a phased basis so that traffic disruption is kept to a minimum. Traffic management will be required to allow reconstruction of the online sections (hard shoulder repairs / access crossings) and construction of the tie-ins and landowner access will also have to be maintained during construction.

No road closures will be permitted during the construction phase. It is proposed that the road will remain open to traffic at all times during construction, and this will be achieved by using temporary diversions and short one-way shuttle systems to complete the online sections and tie-ins.

Construction of the proposed VRS will require transportation, handling and lifting of significant prefabricated elements. The use of prefabricated units facilitates the speed of construction and minimises the time required for works over water and with poured concrete adjacent to water. The access requirements for transportation of elements to site have been investigated and confirmed that the R238 is suitable for transportation of same.

9 CONCLUSION

The information contained in this report, together with the drawings provided describe the nature, extents and principal features of the proposed works as required under Part 8 of the Planning & Development Regulations 2001 (as amended).

The proposals which are the subject of this Part 8 Planning Process provide a unique opportunity to deliver a low-cost project aiming at the improvement to the safety and comfort of the road users.

Provision of a Vehicle Restraint System (VRS) along the eastern verge of the R238 at The Three Trees, Quigleys Point, Co Donegal will:

I. Minimise injuries to the occupant's vehicles which leave the carriageway.
II. Provide protection to third parties who may otherwise be adversely affected by errant vehicles, and
III. Protect property, damage to which would result in the instability of a structure.

The potential environmental impacts arising from the works have been considered and it is concluded that construction works associated with the scheme will have no significant impact on the receiving environment if constructed in accordance with the design and good practice.

APPENDIX A – PLANNING SITE NOTICE

Comhairle Contae Dhún na nGall
Donegal County Council

Site Notice

PLANNING AND DEVELOPMENT ACT 2000 – SECTION 179
PLANNING AND DEVELOPMENT REGULATIONS 2001 – ARTICLE 81

NOTICE PURSUANT TO ARTICLE 81 OF PART 8 OF THE ABOVE REGULATIONS ("the Regulations"), RELATING TO A PROPOSED DEVELOPMENT BY DONEGAL COUNTY COUNCIL

Project Name: R238 VRS INSTALLATION AT QUIGLEYS POINT

TAKE NOTICE that Donegal County Council ("the Council") proposes to carry out the development specified in paragraph (b) below and in relation thereto:-

(a) The location of the development is on a site shown on a site location map included in the plans and particulars referred to at paragraph (e) below, which site is on lands generally to R238 Regional Road.

(b) The nature and extent of the proposed development is as follows:-

- Provision of a new Vehicle Restraint System (approx. 1,600m) including break points for vehicle accesses where required on the eastern side of the existing R238.
- Reduction in hard shoulder width to allow sufficient working width of VRS and to avoid impact with sea wall within the scheme extents.
- Earthworks to remove sections of the existing raised earth mound or to import fill to build up verge where required within the scheme extents, to create a level verge to facilitate VRS installation.
- Removal of existing fence or replacement with timber post and tension mesh fence.
- Removal of Vegetation where required to facilitate VRS installation within the scheme extents.
- All other ancillary and tie in works to relevant standards.

All associated ancillary site works shall be located within the townland of The Three Trees in the Inishowen Municipal District.

(c) The proposed development is sub-threshold for the purposes of Environmental Impact Assessment ("EIA") per Article 92 of the Regulations and the Council has concluded on the basis of a Preliminary Examination of the nature, location and size of the proposed development in accordance with Article 120 (1)(b)(i) thereof that there is no real likelihood of significant effects on the environment arising from the proposed development and that

Environmental Impact Assessment ("EIA") is not required. A copy of this Preliminary Examination and conclusion will be available for inspection or purchase along with the documents referred to at paragraph (e) below.

Where however any person considers that the proposed development to be carried out by the Council would be likely to have significant effects on the environment, he or she may at any time before the expiration of 4 weeks beginning of the date of publication of this notice apply under Article 120(3)(b) of the Regulations to An Bord Pleanala (64 Marlborough Street, Rotunda, Dublin 1, D01 V902) for a screening determination as to whether the development would be likely to have such effects.

(d) In order to ascertain whether the proposed development required Appropriate Assessment ("AA") the Council carried out a screening of same in accordance with Article 250(1) of the Regulations and made a determination in view of best scientific knowledge that the development individually or in combination with other plans or projects would not be likely to have a significant effect on a European site in view of the site's conservation objectives and that AA was not required. A copy of this determination including the main reasons and considerations on which the determination was based will be available for inspection or purchase along with the documents referred to at paragraph (e) below.

Where however any person considers that the proposed development to be carried out by the Council would be likely to have a significant effect on a European Site, he or she may apply under Article 250(3)(b) of the Regulations to An Bord Pleanala (64 Marlborough Street, Rotunda, Dublin 1, D01 V902) for a determination as to whether the development would be likely to have such significant effect and the Board will make a determination on the matter as soon as possible. Any application for such determination in order to be considered by the Board must state the reasons for the forming of the view that the development would be likely to have a significant effect on a European Site.

(e) Plans and particulars of the proposed development will be available for inspection online at www.donegalcoco.ie or for inspection at the Council's offices below and purchase (at a fee not exceeding the reasonable cost of making a copy) at:

Location	Address	Telephone/email	Opening Hours
County House, Donegal County Council Inishowen Public Services Centre,	County House, Lifford, Co. Donegal, F93 Y622 Malin Road, Crandonagh, Co. Donegal, F93 NR70	Tel: 0749153900 Email: roaddesignplanning@donegalcoco.ie	9:00am – 12.30pm and 1.00pm – 4.30pm from Monday to Friday.

The said plans and particulars will be available for inspection as above from 9am Thursday 23rd November 2023 until 4pm on Thursday, 21st December 2023 (both dates inclusive).

(f) Submissions and observations with respect to the proposed development, dealing with the proper planning and sustainable development of the area in which the development is situated may be made in writing to The County Secretariat Office, Donegal County Council, Lifford, County Donegal, or via the "MAKE A SUBMISSION" button on the project specific page on the https://consult.donegal.ie/browse website before **4.00pm on Monday, 15th January 2024**. **Please mark the front of the envelope with the project name as per the above schedule.**

Bryan Cannon
A/Director of Service
Roads & Transportation,
Donegal County Council,
County House,
Lifford.

APPENDIX B – LIST OF STATUTORY BODIES

Part 8 - R238, VRS Installation, Quigleys Point

Referral's list

Prescribed Body	External Referral's	Internal Referral's
An Taisce	✓	
Department of the Environment, Climate and Communications	✓	
Department of Housing, Local Government and Heritage (DOHLGaH)	✓	
Department of Rural and Community Development	✓	
EPA - Environmental Protection Agency	✓	
Fáilte Ireland	✓	
Inland Fisheries Ireland (IFI)	✓	
HSA - Health & Safety Authority	✓	
The Heritage Council	✓	
HSE-National Email Address	✓	
Irish Water	✓	
Northern & Western Regional Assembly	✓	
Area Roads Engineer (Inishowen MD)		✓
Local Water Services		✓
Chief Fire Officer		✓
Loughs Agency		✓
Senior Executive Engineer (Roads Section Inishowen MD)		✓

APPENDIX C – VEHICLE RESTRAINT RISK ASSESSMENT REPORT

MAKING COMPLEX EASY
A TETRA TECH COMPANY

R238 AT THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL

VRS Risk Assessment Report

IE000842-RPS-RP-XX-R-C-0002
S3.P02
15 August 2023

VRS Risk Assessment Report

Document status

Status	Revision	Purpose of document	Authored by	Reviewed by	Approved by	Review date
S3	P01	Review & Comment	KMC	PD	ROC	09/08/2023
S3	P02	Review & Comment	KMC	PD	ROC	15/08/2023

Approval for issue

ROC	15 August 2023

Prepared by:

RPS

Prepared for:

Donegal County Council

Dublin | Cork | Galway | Sligo | Kilkenny
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RPS Engineering Services Limited, registered in Ireland No. 99795
The Registered office of each of the above companies is West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7

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1 INTRODUCTION

1.1 General

RPS have been commissioned by Donegal County Council (DCC) to carry out a Vehicle Restraint System (VRS) risk assessment along a 1.7km section of the southbound verge of the R238 at the Three Trees, just south of Quigleys Point, Co. Donegal.

This report summarises the findings of this VRS risk assessment which was carried out based on the guidance set out in TII Publication DN-REQ-03079 *(Design of Road Restraint System for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) – May 2019).* The report assesses the physical constraints, design issues, site-specific challenges encountered, the need for a VRS and gives options for what mitigation measures might be considered. The assessment process included a site visit carried out by RPS on July 20th, 2023. A copy of the risk assessment sheet is detailed in Appendix A.

The assessment is intended to assist DCC in making a determination on whether or not a VRS is required, and if so, to guide the detailed design on suitable options, but does not propose a designed VRS layout or configuration.

1.2 Site Location and Extents

The site is located just south of Quigleys Point, Co. Donegal at an area known locally as the 'Three Trees' as shown in Figure 1-1 below. The site extents covers approximately 1.7km of the R238 southbound verge along the shoreline of Lough Foyle and commence immediately south of a large pull-in area immediately south of the village before terminating at a fisheries access approximately 100m south of the L1821 priority junction.

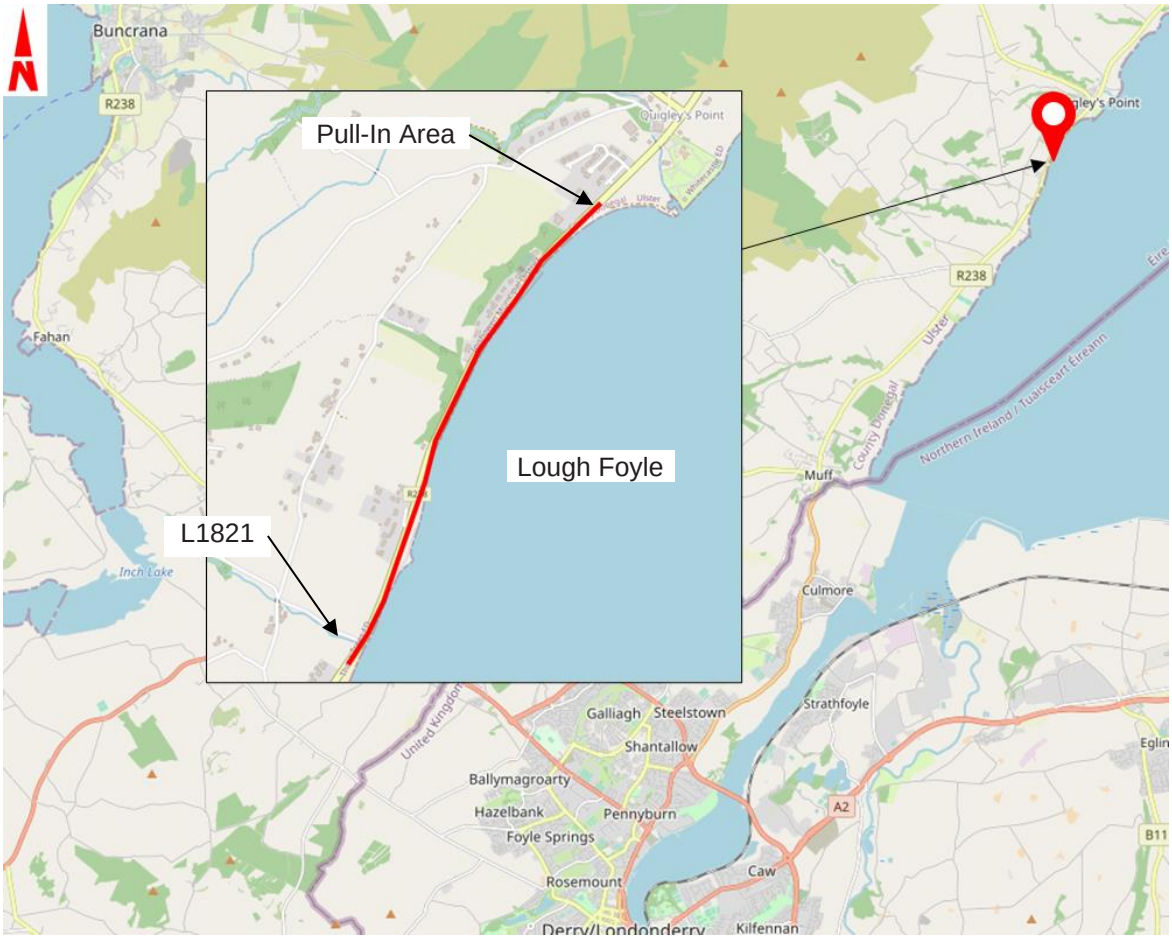


Figure 1-1: Site Location and Extents (shown in red) *(Source: openstreetmap.org)*

1.3 Existing Route and Site Description

The R238 commences in Muff, Co. Donegal and extends around the Inishowen peninsula, terminating in Bridge End. The section of the R238 under assessment comprises a wide, rural single carriageway with paved (bound) hard shoulders over some of its length and sections of unpaved (unbound) hard shoulders elsewhere.

This section of the R238 has a posted speed limit of 100km/h and travels along the shoreline of Lough Foyle. In places the road alignment hugs the shoreline and is supported by a masonry sea wall. In other places an existing earth bund of varying height separates the road from the shoreline. A gated Donegal County Council storage yard is also located mid-way along the eastern verge.

Photographs of the existing R238 are shown in Figure 1-2 and Figure 1-3.

RPS were provided with the results of a speed survey undertaken by DCC over a 5-day period from 29th July 2022 until 5th August 2022 within the scheme extents. The data from this counter shows an 85th percentile speed of 93km/h and average daily traffic (ADT) of 9,251. Additionally, collision data for the site extents was also provided by DCC. This data indicates that a total of 11 No. collisions were recorded over a 10-year period between July 2011 – August 2020 along this section of the R238.

Figure 1-2: R238 – View to the South

Figure 1-3: R238 – View to the North

1.4 VRS Risk Assessment Methodology

The requirements for assessing the need for retrofitting VRS are provided in DN-REQ-03079 *(Design of Road Restraint System for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) – May 2019)*.

The following is an outline of the methodology undertaken for this assessment:

- Undertake a site survey to identify all existing hazards;
- Establish if the hazard(s) is within the clear zone as defined within DN-GEO-03036;
- Establish if forgiving roadside principles can be implemented to remove or mitigate the hazard;
- Rank the hazard(s) as High, Medium, or Low as per guidance set out in Appendix C of DN-REQ-03079;
- Calculate the sinuosity of the section of road based on the horizontal geometry;
- Assess the collision rate threshold for the section of road;
- Assess the risk of a vehicle leaving the road based on the calculated sinuosity ranking and the collision rate ranking; and
- Assess the overall risk rating.

Based on the above, a determination on the inclusion or omission of a VRS at a given location can be made. In certain cases (i.e. where the overall risk rating is calculated as 'Medium' and the hazard is ≥ 2m from the carriageway edge), the professional judgement of the VRS assessor is required for the inclusion or omission of the VRS.

1.5 Collision Rate

Chapter 5 of DN-REQ-03079 (May 2019) describes the use of collision rates calculated by TII for the national road network as part of the risk assessment process. As the R238 is a regional road, no published collision rates were available at the time of this assessment. Therefore, a collision rate calculation was undertaken using the number of collisions recorded along the R238 assessment location. The collision rate was calculated using the equation below:

$$\textit{Collision Rate per 10 Million Vehicle Kilometres} = \frac{\textit{No of Collisions/year} \times 10^7}{\textit{365 days} \times \textit{AADT} \times \textit{Route Length (km)}}$$

The calculated collision rate was then compared to the collision rate by reference population for all roads in Co. Donegal, as outlined by the Road Safety Authority Collision Facts 2012 as 1.1 per 10 million kilometres of travel for the year 2012. It was considered this was the most appropriate collision rate to compare the R238 to as TII average collision rates relate to national roads only.

The collision rate on the R238 using the collision data provided by DCC was found to be 1.92 per 10 million kilometres of travel, where:

- Number of collisions = 11
- Number of Years = 10
- AADT = 9,251
- Route Length (kms) = 1.7

The calculated collision rate of 1.92 per 10 million kilometres of travel is 1.7 times over the average collision rate for all roads in Co. Donegal. Therefore, a collision rate threshold of ‘above the expected collision rate’ was used for the VRS risk assessment (full details are tabulated in Appendix A.

2 VRS RISK ASSESSMENT

Each roadside hazard (as defined in Appendix C of DN-REQ-03079, May 2019) identified during the site visit has been risk assessed in accordance with Chapter 5 of DN-REQ-03079 to determine if the hazard can be mitigated or requires protection by VRS. The full workings of this VRS risk assessment are set out in Appendix A.

For the purposes of this assessment, a number of sections (segment lengths) of the R238 southbound verge were identified as having similarities in terms of road environment, cross section, and hazard severity. Therefore the approx. 1.7km section was divided into five discrete sub-sections as follows:

- Section A CH 0 – CH 79
- Section B CH 79 – CH 1210
- Section C CH 1210 – CH 1285
- Section D CH 1285 – CH 1392
- Section E CH 1392 – CH 1715

The tables which follow in Section 2.1 provide a general summary of the VRS risk assessment, including designer's determination, for each of these five sections. The determinations or findings are also shown on a set of drawings of the site included in Appendix B.

2.1 VRS Risk Assessment Summary

2.1.1 R238 Section A

Table 2-1: Risk Assessment Summary - Section A

Location:	R238 – southbound verge **Section A, CH 0 – CH 79**
VRS Risk Assessment to Chapter 5 of DN-REQ-03079	
Site Description / Observations	• Existing speed limit = 100km/h • ADT = 9,251 85th percentile speeds = 93km/h • Approx. 3.5m traffic lanes, with approx. 3.5m hard shoulder (paved) • Generally straight alignment • Overtaking permitted in both directions • (Google Streetview Link: https://goo.gl/maps/9cSWKgXGKuXXCPxn9)
Photos	 
Hazard Assessment	Hazards include: • Water of likely depth > 0.6m (Lough Foyle shoreline) Hazard is located outside the 8m Clear Zone (inside of bend or straight).
Collision History Assessment	(Not required as hazard is outside Clear Zone)
Risk Rating	(Not required as hazard is outside Clear Zone)
Can mitigation measures be implemented?	(Not required as hazard is outside Clear Zone)
Designer's Determination *(Section 5.7 DN-REQ-03079)*	As the existing hazard is located outside the Clear Zone, no hazard mitigation or VRS protection is required

2.1.2 R238 Section B

Table 2-2: Risk Assessment Summary - Section B

Location:	R238 – southbound verge **Section B, CH 79 – CH 1210**
	VRS Risk Assessment to Chapter 5 of DN-REQ-03079
Site Description / Observations	• Existing speed limit = 100km/h • ADT = 9,251 85th percentile speeds = 93km/h • Approx. 3.5m traffic lanes, with approx. 3.1m – 3.5m hard shoulder (paved) • Generally straight alignment • Overtaking permitted from CH 0 – 795, overtaking prohibited from CH 795 - 1725 • (Google Streetview Link: https://goo.gl/maps/WvixGXS4oiBXUGj18)
Photos	 
Hazard Assessment	Hazards include: • Drainage features such as culvert headwalls and transverse ditches that are not detailed to be traversed safely *(Hazard Ranking of Medium)* • Steep embankment slopes, steeper than 1:2 and ≥ 1m height *(Hazard Ranking of High)* • Water of likely depth > 0.6m (Lough Foyle shoreline) *(Hazard Ranking of High)* • Trees with a girth of 314mm or more measured at 0.3m above the ground *(Hazard Ranking of High)* • Monument (Substantial fixed objects e.g., walls extending above the ground by more than 150mm with projections or recesses ≤ 100mm and running parallel to the road) *(Hazard Ranking of High)* All hazards are located within the 8m Clear Zone (inside of bend or straight) **Overall Hazard Ranking** = **High** (based on Appendix C of DN-REQ-03079)
Collision History Assessment	• Location is considered to be above the expected collision rate • Based on the above, the **Collision Rate Ranking = Medium**
Risk Rating	• Based on existing road alignment, Sinuosity Ranking = **Low** • Risk of Vehicle leaving the Road = **Low** (Table 5.1 of DN-REQ-03079) • Therefore, **Overall Risk Rating = Medium** (Table 5.2 of DN-REQ-03079)
Can mitigation measures be implemented?	No, while the existing trees could be removed, the steep embankment slope and water of likely depth > 0.6m hazards cannot be readily mitigated due to the proximity of the Lough Foyle shoreline to the carriageway edge
Designer's Determination	Overall Risk Rating is '**Medium'** From paragraph 5.7 of DN-REQ-03079: *If the hazard is within 2m of the carriageway edge, it shall be mitigated or a VRS shall be provided. If the hazard is ≥ 2m from the*

(Section 5.7 DN-REQ-03079)	*carriageway edge, the Designer shall assess the hazard level and the risk of the vehicle leaving the road on site and determine if a VRS is required.* Although all hazards are located ≥ 2m from the carriageway edge, it is considered that a VRS is required due to the following site-specific factors: • The tidal nature of Lough Foyle and therefore the varying depth (and proximity) of water at the carriageway edge; • The height of the R238 carriageway above the Lough Foyle shoreline (the drop varies from approximately 1.5m to >4m); • High observed traffic volumes and high ADT figures recorded; • High observed and 85th percentile recorded traffic speeds; and • Reported collision involving a vehicle leaving the carriageway at this location. Therefore, in light of the risk assessment undertaken in addition to the observations made on site, it is determined that a VRS is required at this location. ***Note on VRS provision:*** *In order to accommodate a compliant VRS where the verge is sufficiently wide and level for both the setback and working width of a VRS system, earthworks will be required to either remove sections of the existing raised earth mound or to import fill to build up the falling verge.* *The adjacent sea wall is very close to the carriageway edge in places. In order to avoid impacting on the sea wall and impeding any future maintenance or repair works, it may be necessary to reduce the width of the existing wide hard shoulder.*

2.1.3 R238 Section C

Table 2-3: Risk Assessment Summary - Section C

Location:	R238 – southbound verge **Section C, CH 1210 – CH 1285**
	VRS Risk Assessment to Chapter 5 of DN-REQ-03079
Site Description / Observations	• Existing speed limit = 100km/h • ADT = 9,251 85th percentile speeds = 93km/h • Approx. 3.5m traffic lanes, with a 0.7m hard strip and 3.8m unbound hard standing area • Generally straight alignment • Overtaking prohibited in both directions • (Google Streetview Link: https://goo.gl/maps/4Ka8TV9E7D2sQ8JP9)
Photos	 
Hazard Assessment	Hazards include: • Steep embankment slopes, steeper than 1:2 and ≥ 1m height (typically > 4-6m high approximately) • All fences (including timber post and rail fences) except those to CC-SCD-00320 or CC-SCD-00321 Steep embankment slope is located outside the 8m Clear Zone (inside of bend or straight). The timber post and rail fence is located within the 8m Clear Zone. **Hazard Ranking = High** (based on Appendix C of DN-REQ-03079).
Collision History Assessment	• Location is considered to be above the expected collision rate • Based on the above, the **Collision Rate Ranking = Medium**
Risk Rating	• Based on existing road alignment, Sinuosity Ranking = **Low** • Risk of Vehicle leaving the Road = **Low** (Table 5.1 of DN-REQ-03079) • Therefore, **Overall Risk Rating** = **Medium** (Table 5.2 of DN-REQ-03079)
Can mitigation measures be implemented?	Yes, the timber post and rail fence (the hazard within the Clear Zone) is in poor condition and does not appear to define a boundary or retain livestock. It is considered that this hazard could therefore be removed or replaced with a passively safe fencing option such as the timber post and tensioned mesh fence as per CC-SCD-00320 of TII Publications.
Designer's Determination ***(Section 5.7 DN-REQ-03079)***	Overall Risk Rating is '**Medium'** From paragraph 5.7 of DN-REQ-03079: *If the hazard is within 2m of the carriageway edge, it shall be mitigated or a VRS shall be provided. If the hazard is ≥ 2m from the carriageway edge, the Designer shall assess the hazard level and the risk of the vehicle leaving the road on site and determine if a VRS is required.*

	The existing timber post and rail fence represents a hazard. However as the hazard can be either mitigated or removed, it is determined that there is no requirement for a VRS.

2.1.4 R238 Section D

Table 2-4: Risk Assessment Summary - Section D

Location:	R238 – southbound direction **Section D, CH 1285 – CH 1392**
VRS Risk Assessment to Chapter 5 of DN-REQ-03079	
Site Description / Observations	• Existing speed limit = 100km/h • ADT = 9,251 85th percentile speeds = 93km/h • Approx. 3.5m traffic lanes, with a 0.7m hard strip and a 3.7 - 4m unbound hard standing area • Generally straight alignment • Overtaking prohibited in both directions • (Google Streetview Link: https://shorturl.at/blpMX)
Photos	 
Hazard Assessment	Hazards include: • Steep embankment slopes, steeper than 1:2 and ≥ 1m height (typically 1.5m to >2m high approximately) • Trees having a girth of 314mm or more measured at 0.3m above the ground Additionally, there is an existing DCC storage yard located at the toe of the existing embankment hazard adjacent to the Lough Foyle shoreline. All hazards are located within the 8m Clear Zone (inside of bend or straight) **Hazard Ranking = High** (based on Appendix C of DN-REQ-03079).
Collision History Assessment	• Location is considered to be above the expected collision rate • Based on the above, the **Collision Rate Ranking** = **Medium**
Risk Rating	• Based on existing road alignment, Sinuosity Ranking = **Low** • Risk of Vehicle leaving the Road = **Low** (Table 5.1 of DN-REQ-03079) • Therefore, **Overall Risk Rating = Medium** (Table 5.2 of DN-REQ-03079)
Can mitigation measures be implemented?	While the hazard posed by the existing trees could be removed, the steep embankment slope cannot be readily mitigated given the presence of the storage yard and the Lough Foyle shore line.
Designer's Determination ***(Section 5.7 DN-REQ-03079)***	Overall Risk Rating is '**Medium'**. From paragraph 5.7 of DN-REQ-03079: *If the hazard is within 2m of the carriageway edge, it shall be mitigated or a VRS shall be provided. If the hazard is ≥ 2m from the carriageway edge, the Designer shall assess the hazard level and the risk of the vehicle leaving the road on site and determine if a VRS is required.*

	Although the existing trees could be removed, it is not feasible to mitigate the existing embankment hazard given the constraints noted above. It has therefore been determined that a VRS is required at this location.

2.1.5 R238 Section E

Table 2-5: Risk Assessment Summary - Section E

Location:	R238 – southbound verge **Section E, CH 1392 – CH 1715**
VRS Risk Assessment to Chapter 5 of DN-REQ-03079	
Site Description / Observations	• Existing speed limit = 100km/h • ADT = 9,251 85th percentile speeds = 93km/h • Approx. 3.5m traffic lanes, with a 0.2m hard strip and a 3.1m - 3.5m unbound hard standing area • Generally curvilinear alignment with horizontal radius >800m • Overtaking prohibited in both directions • (Google Streetview Link: https://goo.gl/maps/ESkpKmqWe4zDLUki9)
Photos	 
Hazard Assessment	Hazards include: • Drainage features such as culvert headwalls and transverse ditches that are not detailed to be traversed safely *(Hazard Ranking of Medium)* • Steep embankment slopes, steeper than 1:2 and ≥ 1m height (typically 1.5m to >2m high approximately) *(Hazard Ranking of High)* • Water of likely depth > 0.6m (Lough Foyle shoreline) *(Hazard Ranking of High)* All hazards are located within the 9.6m Clear Zone (Outside of bend >800m radius). **Overall Hazard Ranking = High** (based on Appendix C of DN-REQ-03079).
Collision History Assessment	• Location is considered to be above the expected collision rate • Based on the above, the **Collision Rate Ranking** = **Medium**
Risk Rating	• Based on existing road alignment, Sinuosity Ranking = **Low** • Risk of Vehicle leaving the Road = **Low** (Table 5.1 of DN-REQ-03079) • Therefore, **Overall Risk Rating = Medium** (Table 5.2 of DN-REQ-03079)
Can mitigation measures be implemented?	The steep embankment slope and the water of likely depth > 0.6m hazard cannot be readily mitigated due to the proximity of the Lough Foyle shoreline to the carriageway edge.
Designer's Determination ***(Section 5.7 DN-REQ-03079)***	Overall Risk Rating is '**Medium'**. From paragraph 5.7 of DN-REQ-03079: *If the hazard is within 2m of the carriageway edge, it shall be mitigated or a VRS shall be provided. If the hazard is ≥ 2m from the carriageway edge, the Designer shall assess the hazard level and the risk of the vehicle leaving the road on site and determine if a VRS is required.*

	Although all hazards are located ≥ 2m from the carriageway edge, it is considered that a VRS is required due to the following site-specific factors: • The tidal nature of Lough Foyle and therefore the varying depth (and proximity) of water at the carriageway edge; • The height of the R238 carriageway above the Lough Foyle shoreline (varies from approximately 1.5m to >2m); • High observed traffic volumes and high ADT figures recorded; • High observed and 85th percentile recorded traffic speeds; and • Reported collision involving a vehicle leaving the carriageway at this location. Therefore, in light of the risk assessment undertaken in addition to the observations made on site, it is determined that a VRS is required at this location. ***Note on VRS provision:*** *In order to accommodate a compliant VRS where the verge is sufficiently wide and level for both the setback and working width of a VRS system, earthworks will be required to either remove sections of the existing raised earth mound or to import fill to build up the falling verge.* *The adjacent sea wall is very close to the carriageway edge in places. In order to avoid impacting on the sea wall and impeding any future maintenance or repair works, it may be necessary to reduce the width of the wide hard standing area.*

3 SUMMARY AND COST ESTIMATE

3.1 Summary of Proposed Interventions

The VRS risk assessment carried out in accordance with Chapter 5 of DN-REQ-03079 (May 2019), and as presented in Table 2-1 to 2-5 above has identified a number of hazards located within the required Clear Zone(s). This has resulted in a number of proposed interventions (either hazard mitigation or VRS provision) being required from CH 79 to CH 1715.

Table 3-1 below summarises these interventions (and associated works) and identifies where they are required.

Table 3-1: Summary of Works Required

Summary of Interventions Required	
Section A *(CH 0 – CH 79)*	• (None)
Section B *(CH 79 – CH 1210)*	• New VRS over approx. 1,131m including break points for any vehicle accesses required • Earthworks to remove sections of the existing raised earth mound or to import fill to build up the verge, to create a level verge and allow VRS installation • Reduction* in hard shoulder width to allow sufficient working width of VRS system and avoid impact with sea wall (e.g. reduction of hard shoulder to 2.5m and the installation of cast-in post sockets within the hard shoulder) • Vegetation/tree removal
Section C *(CH 1210 – CH 1285)*	• Fencing removal or replacement with timber post and tension mesh fence to CC-SCD-00320
Section D *(CH 1285 – CH 1392)*	• New VRS over approx. 107m • Earthworks to remove sections of the existing raised earth mound to allow compliant VRS installation • Vegetation removal
Section E *(CH 1392 – CH 1715)*	• New VRS over approx. 323m • Earthworks to remove sections of the existing raised earth mound to allow compliant VRS installation • Reduction* in hard standing width to allow sufficient working width of VRS system and avoid impact with sea wall (e.g. breakup, excavation, reinstatement of a 0.6m wide strip of the hard-standing area with fill/topsoil and traditional concrete VRS foundation construction) • Vegetation removal

** In some locations in Section B and E, the existing masonry sea wall is located approx. 0.9m from the edge of the carriageway. It is considered that the installation of a new VRS should avoid impacting directly on the sea wall structure. Therefore, it is considered necessary and feasible to reduce the existing approx. 3.1m hard shoulder or hard standing areas to 2.5m, which is standard for a national Type 1 single carriageway (from TII Publication DN-GEO-03036, Cross Sections and Headroom). This should be confirmed during detailed design.*

Based on the findings of this VRS risk assessment it is recommended that VRS be provided or hazard mitigation implemented in accordance with TII Publications DN-REQ-03034 *The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges (May 2019),* DN-REQ-03079 *Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) (May 2019)* and DN-GEO-03036 *Cross Sections and Headroom (May 2019)* as outlined in Table 3-1 above.

3.2 Outline Cost Estimate

Based on the findings of Table 3-1 above, an outline cost estimate has been prepared for the proposed intervention works required. A summary of this cost estimate is outlined below in Table 3-2.

Table 3-2: Summary of Outline Cost Estimate

Outline Works Cost Estimate

Note: For the purposes of this assessment, high level cost estimates have been developed from the risk assessment process undertaken. A detailed design has not been undertaken in order to develop detailed cost estimates.

Section B

Description	*Estimate Cost (Ex. VAT)*
CC-SPW-00100 Preliminaries	€23,888
CC-SPW-00200 Site Clearance	€3,553
CC-SPW-00300 Fencing and Environmental Noise Barriers	-
CC-SPW-00400 Road Restraints Systems	€114,210
CC-SPW-00600 Earthworks	€14,698
CC-SPW-01200 Traffic Signs and Road Markings	€250
Subtotal (Ex. VAT)	**€156,599**

Section C

Description	*Estimate Cost (Ex. VAT)*
CC-SPW-00100 Preliminaries	€1,834
CC-SPW-00200 Site Clearance	€3,652
CC-SPW-00300 Fencing and Environmental Noise Barriers	€5,923
CC-SPW-00400 Road Restraints Systems	-
CC-SPW-00600 Earthworks	€616
CC-SPW-01200 Traffic Signs and Road Markings	-
Subtotal (Ex. VAT)	**€12,025**

Section D

Description	*Estimate Cost (Ex. VAT)*
CC-SPW-00100 Preliminaries	€3,433
CC-SPW-00200 Site Clearance	€1,920
CC-SPW-00300 Fencing and Environmental Noise Barriers	-
CC-SPW-00400 Road Restraints Systems	€15,840
CC-SPW-00600 Earthworks	€1,311
CC-SPW-01200 Traffic Signs and Road Markings	-
Subtotal (Ex. VAT)	**€22,504**

Section E

Description	Estimate Cost (Ex. VAT)
CC-SPW-00100 Preliminaries	€7,856
CC-SPW-00200 Site Clearance	€2,907
CC-SPW-00300 Fencing and Environmental Noise Barriers	-
CC-SPW-00400 Road Restraints Systems	€35,820
CC-SPW-00600 Earthworks	€4,915
CC-SPW-01200 Traffic Signs and Road Markings	-
Subtotal (Ex. VAT)	**€51,498**

Summary

Section	Estimate Cost (Ex. VAT)
Section B	€156,599
Section C	€12,025
Section D	€22,504
Section E	€51,498
Total (Ex. VAT)	**€242,626**

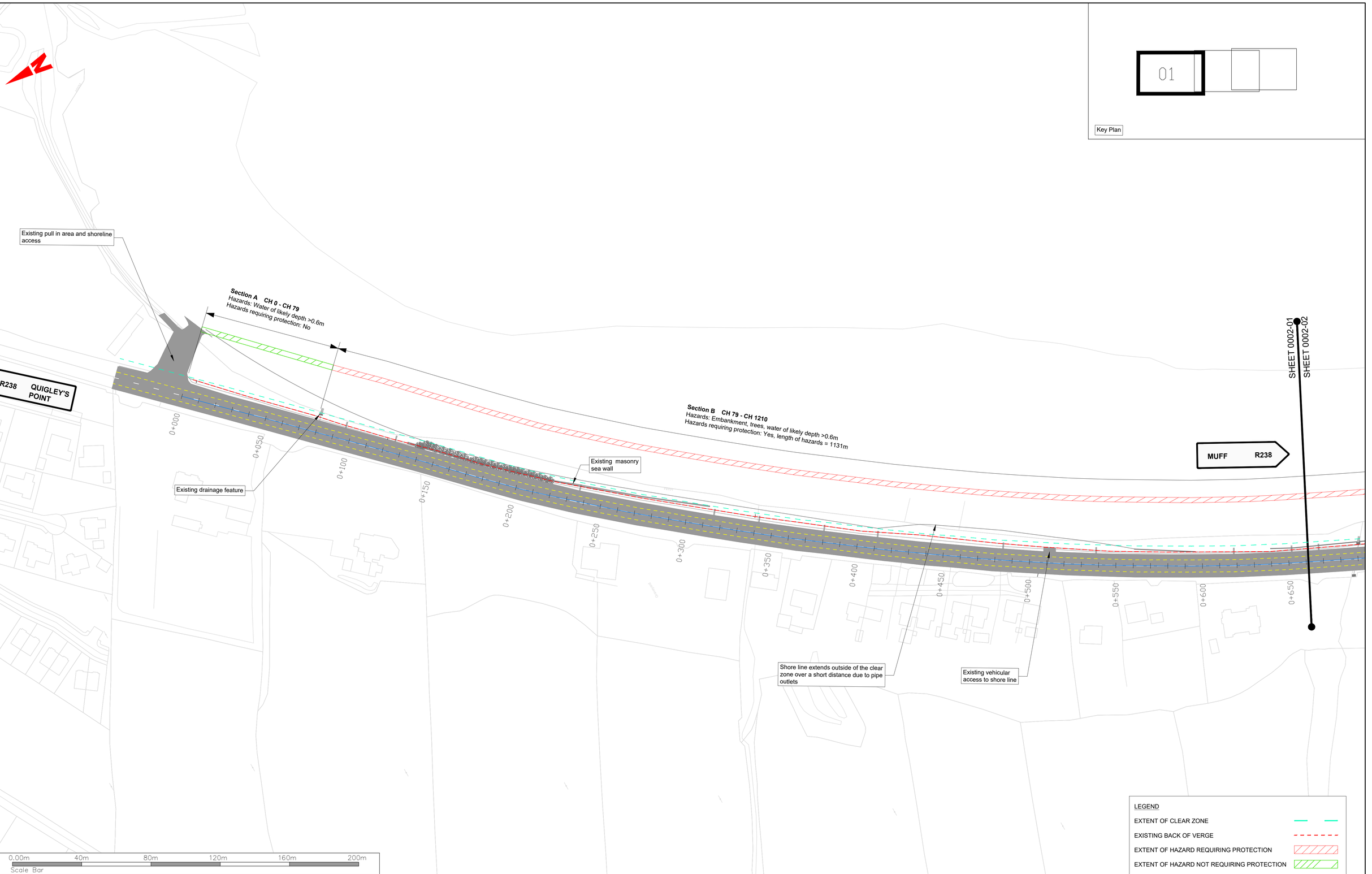
The above cost estimates are subject to the following assumptions:

- Cost estimates have been developed from the risk assessment process undertaken. A preliminary design or detailed design has not been undertaken for the VRS;
- A N2/A/W2 VRS has been assumed in the cost estimate, subject to detailed design. During detailed design, it will be investigated if an increased working width can be used for the VRS. If so, these would reduce the installation cost;
- Any potential maintenance or repairs of the existing sea wall is excluded from this estimate;
- This cost estimate assumes that the designed VRS does not interface with the existing sea wall and that all works can be undertaken within the existing road boundary;
- The earthworks estimate assumes the removal and disposal of all materials off site. However, savings could be achieved with the reuse of any identified acceptable material;
- Temporary Traffic Management, Project Supervisor for the Construction Stage and safety file related costs are assumed to be included within the Preliminaries;
- This cost estimate does not include for the design or alteration of any existing utility services. During detailed design a search of existing utilities should be undertaken. This cost estimate has assumed no utilities will be impacted by any selected VRS system;
- This cost estimate assumes the design of a typical steel VRS. If an alternative system type is required, this could add additional cost;
- VRS cost estimates are based on the recent TII VRS Framework rates in addition to CC-GMP-00054 TII Schedule of Rates 2023.

Appendix A
VRS Risk Assessment

Barrier Ref.	RPS Hazard ID (A1,An, B1,Bn etc.)	Type of Works	Design Speed (km/h) (Ch 1, DN-GEO-03031)	Operational Speed (km/h) (Appendix A of DN-REQ-03079)	Based on a Site Survey, is the suggested operational speed appropriate for the site? (Y/N)	If 'N', what is the current operational speed? (km/h)	Posted Speed Limit (km/h)	Speed used in Clear Zone Calculation (km/h) (Ch 4, DN-REQ-03079)	Horizonal Radius	Clear Zone Width (m) (Table 3.1, Ch. 3, DN-GEO-03036)	Hazard Type	Hard Shoulder Width(m)	Distance to Hazard from Edge of Black(m)	Is Hazard within the Clear Zone? (Y/N)	Hazard Ranking	Sinuosity Index	Sinuosity Ranking	Collision Rate Threshold	Collision Rate Ranking	Risk of a Vehicle Leaving the Road	Overall Risk Rating	Distance to Hazard (m)	Risk Assessment Recommendation (Ch.5 DN-REQ-03079)	Can the Hazard be Mitigated? (Y/N)	VRS to be Installed (Y/N)	Reasons for Installing/ Not Installing the VRS	Other Comments
Section A Ch 0 - Ch 79	A1 - Water Hazard	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	3.5	12.0	N											N	Hazard is outside the Clear Zone	-
Section B Ch 79 - Ch 1210	B1 - Culvert Ch 80	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Drainage Items such as culvert headwalls and transverse ditches that are not detailed to be traversed safely	3.5	3.4	Y	Medium	1.000	Low	Above Expected Rate	Medium	Low	Low	6.83	Safety barrier is not required	N	N	Overall risk rating is Low	-
-	B2 - Embankment Slope Ch 79 - Ch 140	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Steep Embankment Slopes, steeper than 1:2 and≥1.0m height	3.3	1.1	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	4.43	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B3 - Trees Ch 140 - Ch 220	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Trees having a girth of 314mm or more measured at 0.3m above the ground	3.1	0.4	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	3.50	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	Y	Y	See Other Comments	Trees can be mitigated however, the water and embankment hazard still remain. These hazards are located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B4 - Water Hazard Ch 130 - Ch 200	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	3.0	3.5	Y	High	1.001	Low	Above Expected Rate	Medium	Low	Medium	6.48	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B5 - Water Hazard Ch 200 - Ch 410	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	3.2	4.8	Y	High	1.001	Low	Above Expected Rate	Medium	Low	Medium	7.99	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B6 - Water Hazard Ch 410 - Ch 550	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	3.1	8.0	N											Y	See Other Comments	In this location there is a short widening of the verge caused by two outlet pipes and therefore the water hazard locally moves outside the clear zone
-	B7 - Water Hazard Ch 550 - Ch 1050	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	2.9	1.9	Y	High	1.001	Low	Above Expected Rate	Medium	Low	Medium	4.76	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	Distance to water hazard varies across the section examined however the hazard is located within the 8m clear zone throughout. The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B8 - Monument Ch 1030	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Substantial fixed objects e.g. walls extending above the ground by more than 150mm with projections or recesses > 100mm and running parallel to the road	3.1	1.9	Y	High	1.001	Low	Above Expected Rate	Medium	Low	Medium	5.04	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	Y	Y	Overall risk rating is Medium and hazard cannot be mitigated	Existing monument could be mitigated however, the water and embankment hazard still remain. These hazards are located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B9 - Water Hazard Ch 1050 - Ch 1210	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Water of likely depth > 0.6m	3.2	7.0	N											Y	Overall risk rating is Medium and hazard cannot be mitigated	At this section, the existing shoreline begins to move away from the R238 due to the presence of a DCC storage facility. As a result, the water hazard moves outside the clear zone. However as the embankment hazard still remains, it was determined that a VRS is required.
-	B10 - Embankment Slope Ch 550 - Ch 1210	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Steep Embankment Slopes, steeper than 1:2 and≥1.0m height	2.9	1.9	Y	High	1.002	Low	Above Expected Rate	Medium	Low	Medium	4.80	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	Existing embankment hazard formed by a sea wall running parallel to the R238. Distance to wall varies across the section examined however the slope and subsequent drop to the water hazard is within the clear zone throughout. The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
Section C Ch 1210 - Ch 1285	C1 - Embankment Slope Ch 1210 - Ch 1285	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Steep Embankment Slopes, steeper than 1:2 and≥1.0m height	0.7	8.6	N											N	Hazard is outside the Clear Zone	-
-	C2 - Timber P&R Fence Ch 1210 - Ch 1285	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	All fences (including timber post and rail fences) except those to CC-SCD-00320 or CC-SCD-00321	0.7	3.8	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	4.50	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	Y	N	See Other Comments	The Hazard can be mitigated and therefore no VRS is required
Section D Ch 1285 - Ch 1392	B12 - Embankment Slope Ch 1285 - Ch 1392	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Steep Embankment Slopes, steeper than 1:2 and≥1.0m height	0.7	4.4	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	5.08	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	Existing DCC storage facility located at the base of the embankment slope beneath the level of the R238 carriageway. The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
-	B13 - Trees Ch 1285 - Ch 1392	Retrofit Work - Engineered Road					100	100	Inside of bend or Straight	8.0	Trees having a girth of 314mm or more measured at 0.3m above the ground	0.7	4.4	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	5.08	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	Y	Y	Overall risk rating is Medium and hazard cannot be mitigated	Existing trees could be removed however as the existing embankment hazard cannot be easily mitigated (presence of a DCC storage facility), a VRS is recommended.
Section E Ch 1392 - Ch 1715	E1 - Embankment Slope Ch 1392 - Ch 1715	Retrofit Work - Engineered Road					100	100	Outside of bend ≥ 800m	9.6	Steep Embankment Slopes, steeper than 1:2 and≥1.0m height	0.2	4.6	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	4.76	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	Existing embankment hazard formed by a sea wall running parallel to the R238. Distance to wall varies across the section examined however the slope and subsequent drop to the water hazard is within the clear zone throughout. The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required
	E2 - Culvert Ch 1620	Retrofit Work - Engineered Road					100	100	Outside of bend ≥ 800m	9.6	Drainage Items such as culvert headwalls and transverse ditches that are not detailed to be traversed safely	0.2	3.8	Y	Medium	1.000	Low	Above Expected Rate	Medium	Low	Low	4.02	Safety barrier is not required	N	N	Overall risk rating is Low	-
	E3 - Water Hazard Ch 1392 - Ch 1715	Retrofit Work - Engineered Road					100	100	Outside of bend ≥ 800m	9.6	Water of likely depth > 0.6m	0.2	4.6	Y	High	1.000	Low	Above Expected Rate	Medium	Low	Medium	4.80	Designer to assess hazard level and risk of the vehicle leaving the road on site and determine if a safety barrier is required	N	Y	Overall risk rating is Medium and hazard cannot be mitigated	The hazard is located ≥ 2m from the carriageway edge, the hazard level and the risk of a vehicle leaving the road was assessed on site and it was determined a VRS is required

Appendix B
VRS Risk Assessment Drawing



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Client

Comhairle Contae Dhún na nGall
Donegal County Council

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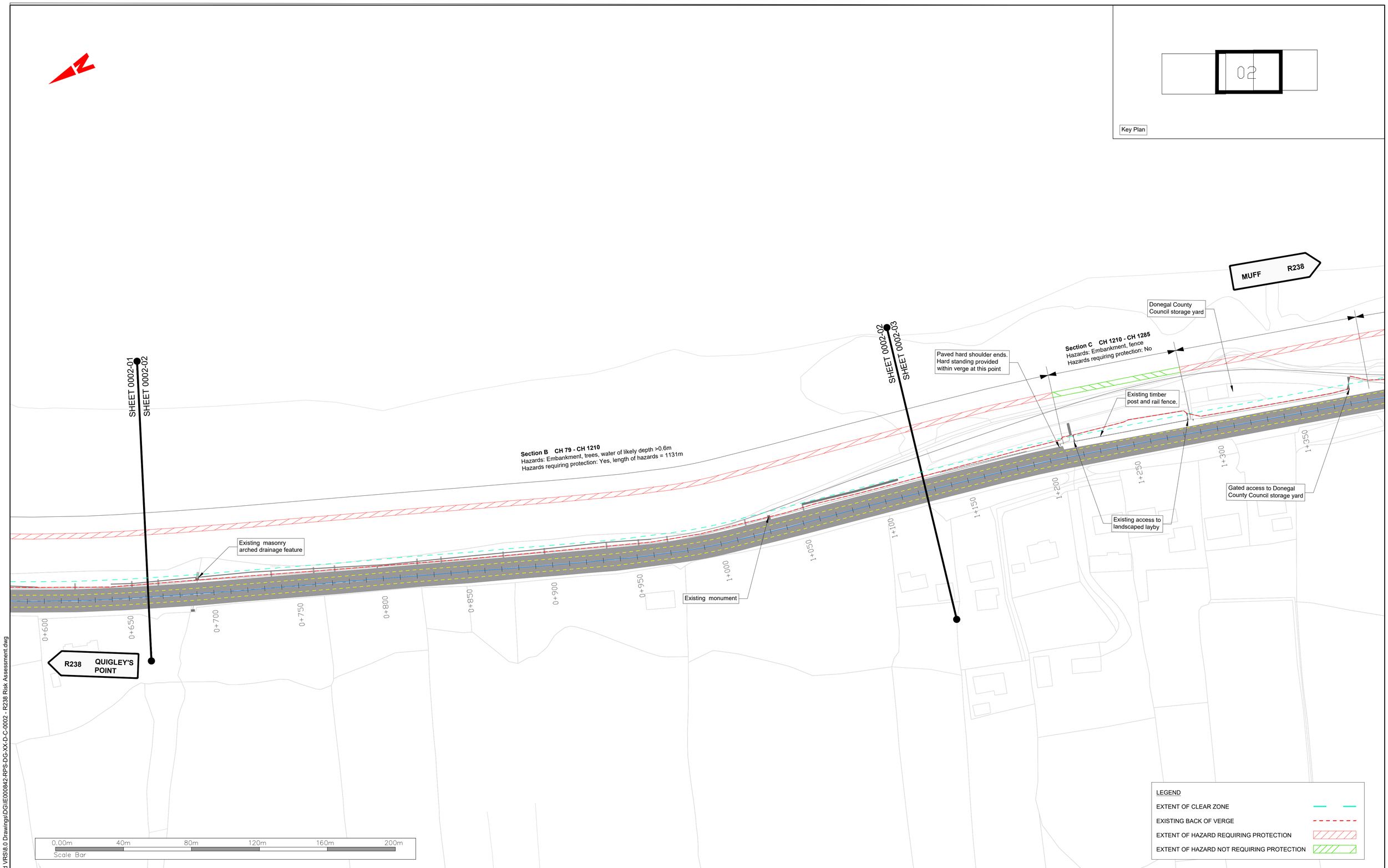
Rev	Date	Drn	Chk	Amendment / Issue	App
S3.P01	08.08.23	KMC	PD	REVIEW AND COMMENT	ROC

A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	01 of 03
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	VRS RISK ASSESSMENT
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-DG-XX-D-C-0002-01
Status	S3
Rev	P01



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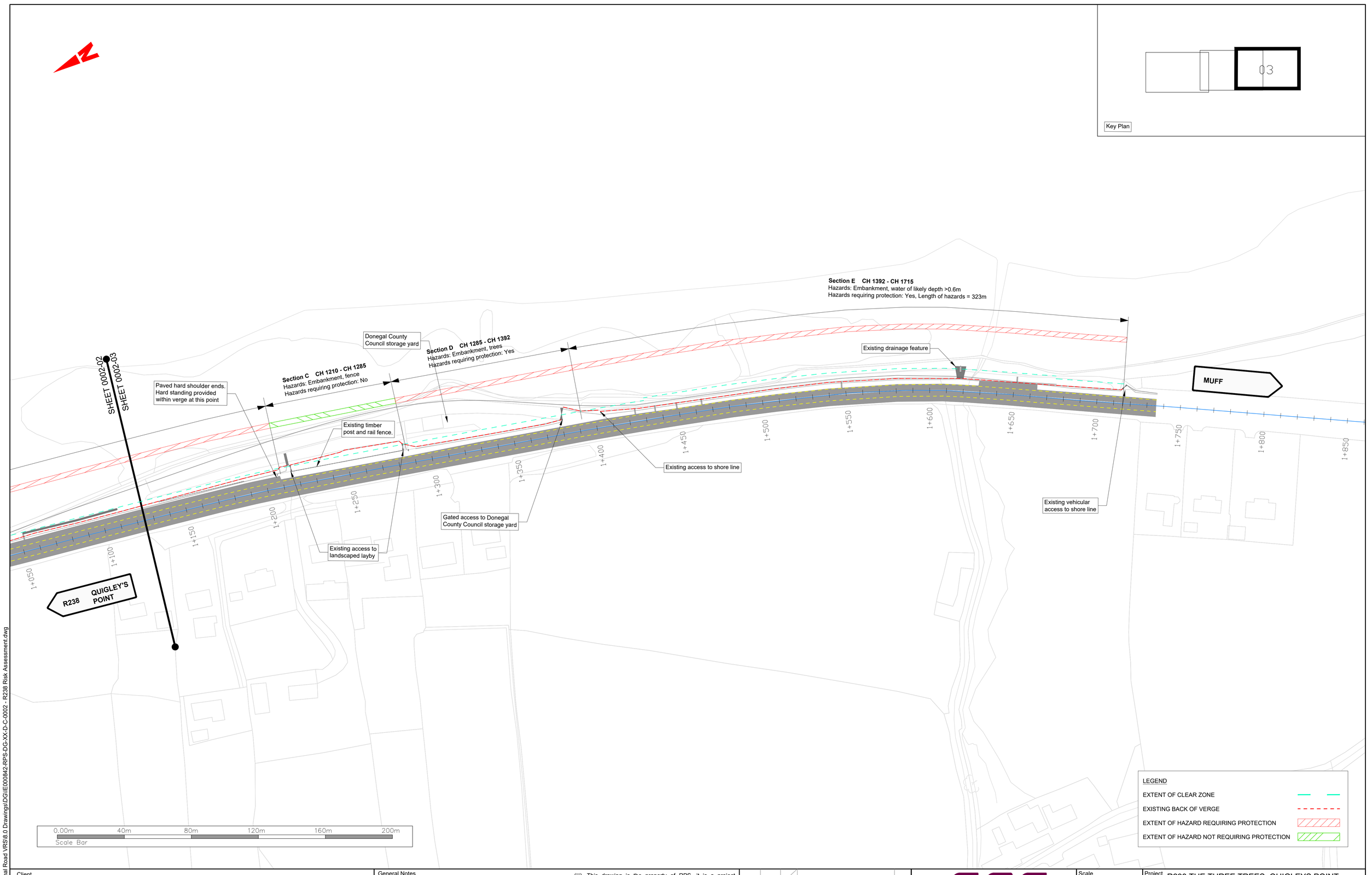
Rev	Date	Dim / CHK	Amendment / Issue	App
S3.P01	08.08.23	KMC / PD	REVIEW AND COMMENT	ROC

A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S.@ A3
Created on	AUGUST 2023
Sheets	02 of 03
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	VRS RISK ASSESSMENT
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-DG-XX-D-C-0002-02
Status	S3
Rev	P01



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Scale	N.T.S. @ A1 N.T.S. @ A3
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File Identifier	IE000842-RPS-DG-XX-D-C-0002-03
Status	S3
Rev	P01

APPENDIX D – APPROPRIATE ASSESSMENT SCREENING REPORT

Screening Statement for Appropriate Assessment for a Safety Barrier along the R238 at Quigley's Point, Co. Donegal

To support the Appropriate Assessment process in line with the requirements of Article 6(3) of the EU Habitats Directive

Prepared by:

Earthy Matters Environmental Consultants
Glenvar,
Letterkenny,
Co. Donegal

Screening Statement for Appropriate Assessment for a Safety Barrier along the R238 at Quigley's Point, Co. Donegal

In line with the requirements of Article 6(3) of the EU Habitats Directive

Prepared for:

Donegal County Council

Prepared by:

Earthy Matters Environmental Consultants

Glenvar, Kerrykeel,

Letterkenny

Co. Donegal

www.earthymatters.ie

September 2023

CONTENTS

Appendices including all maps.

SUMMARY

Project title:	Construction of a Safety Barrier along the R238
Project proponent:	Donegal County Council
Project location:	Quigley's Point, R238
Conclusion	It has been scientifically and objectively concluded during the screening process that significant impacts on the following European Sites located within a 15 km radius and those beyond this radius but hydrologically connected, are considered unlikely as a result of proposed development: Lough Foyle SPA (IE004087) Lough Foyle SPA (UK9020031) River Faughan and tributaries SAC (UK0030361) Magheradrumman Bog SAC (00168) Lough Swilly SPA (IE_004075) Lough Swilly SAC (IE_002287) Magilligan SAC (UK_0016613) River Finn SAC (002301) River Foyle SAC (UK30320) Therefore, these European Sites can be screened out and it is deemed that it is not necessary to proceed to Appropriate Assessment.

INTRODUCTION

This document has been prepared by Earthy Matters Environmental Consultants on behalf of Donegal County Council to determine the potential impacts, if any, of a Safety Barrier along the R238 near Quigley's Point, Co. Donegal, on European sites (European conservation designation).

This document is a Screening Report for Appropriate Assessment and is in line with the requirement of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). As such, this report provides information required in order to establish whether or not the proposed development is likely to have a significant impact on any European site known in the vicinity as in the context of their conservation objectives and specifically on the habitats and species for which the European conservation site has been designated.

Context and stages of an Appropriate Assessment process

Article 6(3) of the Habitats Directive states:

"*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives*".

The Habitats Directive, via the Appropriate Assessment process promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage and designing the project to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects and no further practicable mitigation is possible, then it is rejected. If no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI), then compensation measures are required for any remaining adverse effects.

Following the obligations under Article 6(3), the European Commission's guidance promotes a four-stage process to complete the Appropriate Assessment and outlines the tests required at each stage. By taking the ecological impact assessment (in relation to the conservation objectives) in a step-by-step manner this report seeks to inform the screening process required as the first stage of the Appropriate Assessment procedure and also to provide full and detailed information as required for the second stage, namely Appropriate Assessment, should the competent authority decide that such an assessment is required.

Screening stage:

- Determination whether the project is directly connected with or necessary to the management of the European site.
- Description of the project.
- Identification of European sites potentially affected.
- Identification and description of individual and cumulative impacts likely to result from the project.
- Assessment of the significance of the impacts identified above on site integrity.
- Statement of Appropriate Assessment screening (as per Irish guidance): Exclusion of sites where no significant impacts are foreseen.

Methodology

This screening report includes the ecological impact assessment and testing required under the provisions of Article 6(3) by means of the first and second stages of Appropriate Assessment. In this context, a review of the potential, residual (indirect and direct) and cumulative impacts, as well as mitigation measures have been undertaken. It is based on an analysis of existing ecological information including documented information about the designated and non-designated areas involved, as well as a walk-over survey carried out by the author in September 2023. A habitat/vegetation assessment was undertaken by the author to assess the ecological interest of the area.

Guidance documents on the Appropriate Assessment process have been referred to during the preparation of this NIS. These include:

- NPWS (2012) Marine Natura Impact Statements in Irish Special Areas of Conservation. A Working Document. Department of Arts, Heritage and the Gaeltacht.
- NPWS (2009) Revised February 2010. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities.
- The European Communities (2002) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- The European Communities (2000) Managing Natura 2000: the provisions of Article 6 of the 'Habitats Directive' 92/43/EC.

OVERVIEW OF THE PROJECT AND THE RECEIVING ENVIRONMENT

Brief description of the project

Donegal County Council have proposed to erect a safety barrier (Vehicle Restraint System or VRS) at a location on the sea-side edge of the R238 near Quigley's Point, Co. Donegal. The exact location of the VRS in relation to the edge of the carriageway/tarmac, as well as VRS type, height and width are detailed in Appendix 1b and the Method Statement can be found in Appendix 1c. The proposed VRS will run between the locations 55°7'18.6"; -7°11'58.7" and 55°6'40.3"; -7°12'35.3" comprising a total 'straight' length of 1.444 m, plus an additional 'transition' barrier to each barrier terminal at every junction.

Below is a photographic example of a section of VRS recently installed along the N13 on the approach to the junction between Drumkeen and Stranorlar, which is similar to that proposed for Quigleys Point.

The existing sea wall, drainage/culvert and shore access will be retained. However, some existing timber post and rail fence will be removed, along with a portion of existing asphalt surface to facilitate the installation of the new barrier.

Five young trees (ash, alder and willow, 3 of girth 1.0–1.5 m and 2 of girth 0.5–1 m) will be removed from the verge (close to Quigley's end), as well as 68 m of dense shrub (mostly willow).

The safety barrier will be installed either using a driven post system or posts in concrete foundations. The type of foundation (i.e. driven or concrete) will be determined prior to installation and will be based on a testing procedure undertaken by the contractor and supervised by an independent chartered engineer.

Where concrete foundations are used, they are typically 600 mm wide × 600 mm long × 600 mm deep. However, this size may vary depending on the outcome of the testing regime noted above and the selected safety barrier system. The top of the concrete foundations will be kept 100 mm below ground level (retaining concrete within the foundation) and the verge will be reinstated with topsoil and then grass seeded. Any unsuitable material from the foundation excavations will be removed to the nearest approved landfill site.

Where required, re-profiling of the existing verge will be carried out to provide a gradual slope from the road pavement to the rear of the proposed working width. The new verge profile will be levelled and then grass seeded.

Temporary Traffic Management (TTM) will be required at the road level to protect workers and road users.

All works will be carried out following best practices that have been developed with this report and appear in the Construction Environmental Management Planned, which comprises all the environmental precautions of works carried out near rivers and streams. Inclusively, Donegal County Council and EPA guidelines will be followed if and where the route encounters invasive species.

Brief description of the receiving environment

The existing R238 is located very close to Lough Foyle at this location and adjoins Lough Foyle Special Protection Area (SPA), with a sea-wall separating the road verge from the lough. The entire road stretch is relatively level, with only one small degree slope nearer Muff. There are no lakes in the vicinity. The entire road stretch is within the Bogstown River sub-catchment. One stream, East Tromaty (order 1; IE_NW_40A010930), crosses the road over this stretch and enters Lough Foyle. The stream is piped and the construction of the VRS would not interfere with the culverts.

The soil type is mainly fine loamy over shale and slate bedrock. The area is characterised by a poor aquifer with *high vulnerability*.

The road verges are mostly 'artificial surfaces', namely tarmac or gravel or unfinished earth surfaces, or laneways/accesses to the sea beach (see photos in Appendix 5). For the most part, the verge merges with a natural habitat (see Appendix 2a) and that is mostly comprised of grasses or rosebay willowherb (*Epilobium* spp.). At the northern end of the road (Quigley's), the verge merges with a thin hedgerow of native species including ash (*Fraxinus excelsior*), rowan (*Sorbus aucuparia*), hawthorn (Crataegus *monogyna*), alder (*Alnus glutinosa*), birch (*Betula* spp.) and willow (*Salix* spp.). Five young trees (ash, alder and willow, 3 of girth 1.0–1.5 m and 2 of girth 0.5–1 m) will need to be removed for the installation of the VSR.

Invasive species have been recorded on the verges (Appendix 2b). While Japanese Knotweed (*Fallopia japonica*) colonies occur further south on the R238, there are none on this stretch of road.

A few specimens of Pampas grass (*Cortaderia sellaona*) were noted (see photo and location in Appendix 5). While recognised as an invasive species with medium risk, they should be carefully managed so that they do not spread further.

At this location, a clump of Himalayan balsam (*Impatiens glandulifera*) is also present. This is an invasive species with risk of high impact and should be carefully controlled if this route is chosen.

Finally, small colonies of monbrieta (*Crocosmia crocosmiflora*) were noted on the northern stretch, including the verges closest to Lough Foyle SPA (see photo and location in Appendix 5). While its status of invasiveness has not been assessed, these colonies should be removed by digging out and disposal of entire plants, corms and rhizomes appropriately, should this route be chosen.

Identification of designated sites within the zone of influence

All European sites, namely Special Area of Conservation (SAC) and SPA, located within a 15 km radius of the proposed development site in either Republic of Ireland (ROI) or in Northern Ireland (NI) were reviewed. Following the Guidance for Planning Authorities (NPWS, 2010) and adopting the precautionary principle in identifying these sites, it was determined that given the nature and location of the project vis-à-vis natural features and surrounding topography (coastal location near a sea inlet (Lough Foyle) all the European sites located outside the 15 km radius are not likely to be impacted by the proposed development (see map in Appendix 2c). However, we also identified European sites that are outside the 15 km radius but which are hydrologically connected to Lough Foyle, making them within the *zone of influence* of the project.

A total of **three SPAs:** Lough Foyle SPA in ROI (IE_004087); Lough Foyle SPA in NI (UK_9020031); Lough Swilly SPA (IE_004075), and **one SAC:** Magheradrumman Bog SAC (IE_00168), are located within the 15 km radius (see Table 1 and Appendices 2c, 2d).

The *zone of influence* is the 'effect area' over which changes could give rise to potentially significant impacts. The *zone of influence* over which the development may impact upon European Sites and their Qualifying Interests will differ for different ecological receptors depending on the pathway for potential impacts, as well as the specific nature of the habitats/species in question.

The proposed development site is not located within any European site but adjoins **Lough Foyle SPA** (IE_004087). Due to distance and presence of a hydrological pathway, this European site is deemed within the *zone of influence* and is screened in. **Lough Foyle SPA** (UK_9020031) is located 950 m from the proposed development and is also deemed within the *zone of influence*.

Magheradrumman Bog SAC is located 5.6 km upstream and in another sub-catchment, is deemed outside the *zone of influence* due to distance and the absence of hydrological pathways and can be screened out.

Thus, the European Sites that require investigation in this report are the Lough Foyle SPAs: IE_004087 and UK_9020031.

Table 1: Designated European sites within 15 km of the proposed development, as well as those located further away but hydrologically connected to Lough Foyle.

Site Name & Code	Distance from development	Qualifying features (i.e. reasons for designation) (*=Priority Annex I Habitats)	Do any potential source-pathway-receptor links exist between the development and the European site?
Lough Foyle SPA (IE004087)	Adjoins	• Red-throated Diver [A001] • Great Crested Grebe [A005] • Bewick's Swan [A037] • Whooper Swan [A038] • Greylag Goose [A043] • Light-bellied Brent Goose [A046] • Shelduck [A048] • Wigeon [A050] • Teal [A052] • Mallard [A053] • Eider [A063] • Red-breasted Merganser [A069] • Oystercatcher [A130] • Golden Plover [A140] • Lapwing [A142] • Knot [A143] • Dunlin [A149] • Bar-tailed Godwit [A157] • Curlew [A160] • Redshank [A162] • Black-headed Gull [A179] • Common Gull [A182] • Herring Gull [A184] • Wetland and Waterbirds [A999]	**Yes.** An existing Conservation Plan for Lough Foyle is now under review. This review will update existing management prescriptions and refine existing Conservation Objectives. The development adjoins the coast for a part and may be used by birds for which this SPA is designated and is therefore considered within the *zone of influence*. **Screened in**.
Lough Foyle SPA (UK9020031)	950 m S	• Wintering: Bar-tailed Godwit; Bewick's Swan; Golden Plover; Whooper Swan; Light-bellied brent geese + assemblages of species	**Yes.** The project is close to this SPA and adjoins the ROI side of Lough Foyle SPA and therefore is deemed within the *zone of influence*. **Screened in.**

Magheradrumman Bog SAC (00168)	5.6 km N	• Northern Atlantic wet heaths with Erica tetralix [4010] • Blanket bogs (* if active bog) [7130]	**No.** The project does not directly affect any land within this SAC, which is located uphill and in another sub-catchment. There are no hydrological pathways between source and receptors. This SAC can be **screened out**.

Description of the European sites and their Conservation Objectives

Lough Foyle SPA (IE004087) (see site synopsis in Appendix 3) comprises a section of the western shore of the lough and is part of the wider site complex that straddles the border between ROI and NI. It is a cross-border SPA that regularly supports in excess of 20,000 wintering waterbirds, the majority of which utilise the southern and eastern shorelines of Lough Foyle in Co. Derry (also designated in NI, see below). In ROI, the site has been selected as a SPA as it is part of an internationally important wetland site that regularly supports internationally important populations of three waterbird species namely whooper swan (*Cygnus cygnus*), light-bellied brent goose (*Branta bernicla*) and bar-tailed godwit (*Limosa lapponica*), and nationally important populations of a further 20 species (in total there are 24 special conservation interests listed for Lough Foyle SPA (see Appendix 3).

Wintering waterbirds have been surveyed at Lough Foyle as part of the Irish Wetland Bird Survey (I-WeBS) and its UK counterpart, the Wetland Bird Survey (WeBS), since 1994/95 and 1989/90, respectively. Count coverage of the western shore during I-WeBS has been variable over time. In addition, the majority of the wintering waterbirds that utilise this site occur along the southern and eastern shoreline in Co. Derry, which is designated as an SPA in NI (see Lough Foyle SPA (UK9020031) below).

The wetland habitats contained within this SPA are considered to be a Special Conservation Interest in their own right.

The Conservation Objectives for Lough Foyle SPA are as follows:

Objective 1: To maintain the favourable conservation condition of the non-breeding waterbird special Conservation Interest species listed for Lough Foyle SPA. This is defined by two attributes and targets:

Parameter	Attribute	Measure	Target	Notes
Population	Population trend	Percentage change as per population trend assessment using waterbird count data collected through Wetland Bird Surveys and other surveys.	The long term population trend should be stable or increasing	Waterbird population trends are presented in Part Four of this document.
Range	Distribution	Range, timing or intensity of use of areas used by waterbirds, as determined by regular low tide and other waterbird surveys.	There should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest other than that occurring from natural patterns of variation.	Waterbird distribution from the 2011/12 waterbird survey programme is reviewed in Part Five of this document.

Objective 2: To maintain the favourable conservation condition of the wetland habitat at Lough Foyle SPA as a resource for the regularly-occurring migratory waterbirds that utilise the site. This is defined by one attribute and target (area of wetland habitat).

Parameter	Attribute	Measure	Target	Notes
Area	Wetland habitat	Area (ha)	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 588 ha, other than that occurring from natural patterns of variation.	The wetland habitat area was estimated as 588 ha using OSI data and relevant orthophotographs.

Lough Foyle SPA (UK9020031) is a very large site that includes a large shallow sea lough (2,204 ha) and the estuaries of the rivers Foyle, Faughan and Roe. The site contains extensive intertidal areas of mudflats and sandflats (with mussel *Mytilus edulis* beds), saltmarsh and associated brackish ditches. The site supports populations of European importance of bar-tailed godwit (*Limosa lapponica* — 1,896 individuals, representing 10.8% of the wintering population in Ireland, average 5-year peak 1991/1992–1995/1996), Bewick's swan (*Cygnus columbianus bewickii* — 78 individuals, representing 3.1% of the wintering population in Ireland, average 5-year peak 1991/1992–1995/1996), golden plover (*Pluvialis apricaria* — 4,891 individuals, representing 2.4% of the wintering population in Ireland, average 5-year peak 1991/1992–1995/1996), and whooper swan (*Cygnus cygnus* — 890 individuals, representing 8.9% of the wintering population in Ireland, average 5-year peak 1991/1992–1995/1996). The site also supports populations of European importance of the migratory light-bellied Brent geese (*Branta bernicla hrota* — 3,730 individuals representing 18.6% of the wintering Canada/Ireland population, average 5-year peak 1991/1992–1995/1996), in addition to regularly supporting at least 20,000 waterfowl (and thereby qualifying as a wetland of international importance).

The site features for which the designation was made are:

Feature Type	Feature	Population (5-year average 1995-2000)	Population at time of designation (ASSI)	Population at time of designation (SPA)	SPA Review population	Common Standards Monitoring baseline
Species	Bewick's Swan wintering population	43	74	New (78)	78	10
Species	Whooper Swan wintering population [a]	811	905	890	890	566
Species	Golden Plover wintering population [b]	4511	4614	New	4891	2960
Species	Bar-tailed Godwit wintering	2059	2097	1896	1896	1535
Species	Light-bellied Brent Goose wintering	3765	3603	3730	3730	1765
Assemblage species	Great Crested Grebe wintering	148	278	220	220	28
Assemblage species	Cormorant wintering	106	120	Not listed	118	67
Assemblage species	Greylag Goose wintering population	391	85	67	67	22
Assemblage species	Shelduck wintering	468	321	287	287	174
Assemblage species	Wigeon wintering	9011	6153	8107	8107	3513
Assemblage species	Teal wintering population	660	718	751	751	403
Assemblage species	Mallard wintering	1606	1802	1694	1694	1154
Assemblage species	Eider wintering population	143	154	50	50	8

Assemblage species	Red-breasted Merganser wintering	135	96	73	73	26
Assemblage species	Oystercatcher wintering population	3101	2335	2045	2028	1683
Assemblage species	Lapwing wintering	4024	3601	3084	3084	1078
Assemblage species	Knot wintering population	499	433	412	441	135
Assemblage species	Dunlin wintering population	4991	5606	4847	5606	3666
Assemblage species	Curlew wintering	2263	2079	2152	2038	1710
Assemblage species	Redshank wintering	988	811	791	812	386
Waterfowl assemblage	Waterfowl Assemblage wintering population [a] (Component species: Bewick's Swan, Whooper Swan, Golden Plover, Bar- tailed Godwit, Light- bellied Brent Goose, Great Crested Grebe, Cormorant, Greylag Goose, Shelduck, Wigeon, Teal, Mallard, Eider, Red-breasted Merganser,	24952	36416	36599	37310	14905
Habitat[1]	Habitat extent					
Habitat[1]	Roost site locations					

Lough Foyle SPA (**UK9020031)** Condition Assessment 2014.

Species	2005/06	2006/07	2007/08	2008/09	2009/10	CSM	5 yr mean	% CSM	Status
Golden Plover	7640	9534	9211	8486	5091	2960	7992.40	**270.01**	Favourable
Bewick`s Swan	18	0	0	0	0	10	3.60	**36.00**	Unfavourable
Whooper Swan	1030	1042	1167	1240	2033	566	1302.40	**230.11**	Favourable
Bar-tailed Godwit	1133	2672	2300	2789	1501	1535	2079.00	**135.44**	Favourable
Light-bellied Brent Goose	3641	1778	3251	2550	3875	1765	3019.00	**171.05**	Favourable
Waterbird assemblage	38372	35032	33155	37562	28535	28494	34531.20	**121.19**	Favourable

The Conservation Objectives for this SPA are as follows:

To maintain or enhance the population of the Qualifying species.

To maintain or enhance the range of habitats utilised by the Qualifying species.

To ensure that the integrity of the site is maintained.

To ensure there is no significant disturbance of the species.

To ensure that the following are maintained in the long term:

-Population of the species as a viable component of the site.

-Distribution of the species within site.

-Distribution and extent of habitats supporting the species.

-Structure, function and supporting processes of habitats supporting the species.

Identification and significance of potential impacts

Only those features of the project that have the potential to impact on the features and Conservation Objectives of the identified European sites are considered. Any element of a plan or project that has the potential to affect the Conservation Objectives of a European Site's integrity, including its structure and function should be considered significant. The following issues were examined in relation to the potential impacts of the project (either alone or cumulative) on the identified European sites:

- Habitat loss due to land-take

The Safety Barrier adjoins Lough Foyle SPA for most of its extent. However, as the safety barrier is adjacent to an existing regional road, it does not cross or remove any open habitats that could be important features for the species for which this SPA was designated (e.g. roosting/feeding when Lough Foyle mudflats are covered). The removal of vegetation (small trees and small hedgerow) does not compromise habitats that are used by the bird species for which this SPA has been designated. The potential for accidental disturbance to the coastal habitats is deemed insignificant given the project's description following standard best practices (see Method Statement in Appendix 1c).

- Disturbance to birds

Disturbance near an SPA can result in loss of bird numbers using the area and therefore the construction works could affect local bird populations. The record of bird activities show that certain types of birds use the shore at low tide at these locations (A0L07 and A0L06 subsites in Appendix 4). These subsites are moderately used by five species at low tides with the lowest range of roosting records but include Light-bellied Brent Goose, Oystercatcher and Golden Plover foraging, as well as roosting for the Common, Herring and black-headed gull, lapwing and curlew (Appendix 4).

- ➔ While the verges are included in the SPA, these are not currently used by the birds for which the SPA has been designated.
- ➔ The construction activities will be carried out at high tide (when habitats are not exposed to birds), thus the temporary disturbance to habitats would, overall, be deemed insignificant.
- ➔ Since the road traffic at this location is already high and creates an existing background disturbance, the additional, temporary noise would be deemed insignificant.
- ➔ In addition, there is no light pollution associated with the project that would impact the birds.

Thus, no negative impacts are foreseen on bird populations, and the Qualifying Interests for Lough Foyle SPA (both in ROI and NI) will remain the same after the project.

- Habitat loss/degradation via water quality degradation

Disturbance of habitats near a European site may affect the designated habitats or associated species (birds) via indirect linkages via habitat disturbance due to water quality deterioration. In this case, the water quality of Lough Foyle may be impacted by the project, which could impact on bird populations within this SPA.

The Safety Barrier project will cross over one stream, the East Tromaty. However, the stream is piped at this location all the way into the Lough (see photos in Appendix 5). There is no pathway between the construction associated with the safety barrier and the stream. The implementation of good practices associated with road construction will prevent any significant negative impacts on the water quality of the Lough itself.

The Environmental Management practices associated with the Method Statement for this project aim to minimise inputs of pollutants to aquatic systems and avoid serious pollution incidents.

- ➔ They include good standards that conform to the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (www.fisheriesireland.ie).
- ➔ The contractors will be made aware of the boundaries of Lough Foyle SPA, as well as all the location of all streams, to prevent any damage or accidents that would impact the SPA directly or indirectly.
- ➔ No re-fuelling and maintenance of vehicles will take place on-site.
- ➔ Appropriate spill kits will be kept on site in strategic locations, such as close to refuelling areas, chemical handling areas or waste storage areas. Staff will be trained in their use and in deployment of the spill kits.
- ➔ There shall be no disposal of waste onto Lough Foyle shore or to any streams, ditch or storm drains.
- ➔ No excavated material should be disposed of within or at Lough Foyle SPA boundaries.

Thus, no negative impacts are foreseen on the water quality of Lough Foyle and, thus, the habitats within Lough Foyle and the Qualifying Interests will remain the same after the project.

- ➢ Habitat degradation/loss of species due to inadvertent dispersal of invasive and non-native species

Due to the presence of medium-risk invasive species, as well as non-native species (locations identified within the corridor route only as part of the preliminary ecological appraisal of the route and shown in Appendix 2b), measures to guard against dispersal must be adopted to protect habitats nearby within European sites.

- ➔ Contractors will be made aware of the location of past and current invasive species infestations and dispose properly of any excavated material at these locations.

Finally, the *zone of influence* for potential air quality impacts upon any European sites is conservatively assessed as less than 1 km. It is deemed that the Safety Barrier would not increase long-term level of noise pollution, while noise due to the construction activities would be insignificant given the short-term and local scale of the project.

The known Conservation Objectives for each relevant Qualifying Interest associated with the screened-in European sites are presented, and the potential impacts are summarised, in Table 2.

Table 2: Description, significance and mitigation of potential impacts on Qualifying Interests of the identified European sites. Note only the Qualifying Interests, as published on 30 September 2014, are provided here. Version 1 was assessed.

Qualifying interests	Conservation Objectives	Sensitivity	Potential threat from proposed development
Lough Foyle SPA (EI004087)			
Red-throated Diver [A001] Great Crested Grebe [A005] Bewick's Swan [A037] Whooper Swan [A038] Greylag Goose [A043] Light-bellied Brent Goose [A046] Shelduck [A048] Wigeon [A050] Teal [A052] Mallard [A053] Eider [A063] Red-breasted Merganser [A069] Oystercatcher [A130] Golden Plover [A140] Lapwing [A142] Knot [A143] Dunlin [A149] Bar-tailed Godwit [A157] Curlew [A160] Redshank [A162] Black-headed Gull [A179] Common Gull [A182] Herring Gull [A184] Wetland and Waterbirds [A999]	2014 - Version 1 To maintain the favourable conservation condition of the non-breeding waterbird special Conservation Interest species listed for Lough Foyle SPA. This is defined by 2 attributes and targets. To maintain the favourable conservation condition of the wetland habitat at Lough Foyle SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. This is defined by 1 attribute and target (area of wetland habitat)	-Habitat modification: Activities that modify discrete areas or overall habitats within the SPA. -Anthropogenic disturbances that occur in or near the site and are either singular or cumulative in nature. -Ex-situ factors: Habitats situated within the immediate hinterland of the SPA or in areas outside of the SPA but ecologically connected to the SPA.	- The project will require short-term, localised construction activities that will not encroach on any habitats within the SPA, which would result in the displacement of these birds or a reduction in their numbers. - The work zone on the verges of the existing road is wide and will not act as a barrier or modify the habitat. - The boundary of Lough Foyle SPA was defined to include the primary wetlands habitats of this site; the project does not encroach on any of this SPA or nearby habitats that would be used by the birds or habitats ecologically connected to this SPA. While works will be carried out near the 'supertidal' area (i.e. occurring above the mean high watermark and used by a range of waterbird species as roosting resource), it is deemed temporary and limited in extent vis-à-vis existing background anthropogenic activities (road). - Light pollution is deemed insignificant as it will remain the same as before. - Noise pollution is deemed insignificant due to a) the temporary nature of the project, b) the locale, and c) work will take place at high tide. **The Qualifying Interests will remain the same after the project.**

Lough Foyle SPA (UK9020031)			
Bar-tailed Godwit; Bewick's Swan; Golden Plover; Whooper Swan; Light-bellied brent geese + assemblages of species	2015 – Version 4 To maintain each feature in favourable condition through the following objectives: To maintain or enhance the population of the Qualifying species. To maintain or enhance the range of habitats utilised by the Qualifying species. To ensure that the integrity of the site is maintained. To ensure there is no significant disturbance of the species. To ensure that the following are maintained in the long term: - Population of the species as a viable component of the site - Distribution of the species within site - Distribution and extent of habitats supporting the species - Structure, function and supporting processes of habitats that support the species.	Adjoining land management (which provide hight tide roost locations) Aquaculture Boating Dredging	- The project will require short-term, localised construction activities that will not encroach on any habitats within the SPA, which would result in the displacement of these birds or a reduction in their numbers. - The proposed Safety Barrier will not impact on land that is required for Swans and Geese at high tide. - Light and noise impact are deemed insignificant.

Table 3: Finding of No Significant Effects report matrix.

Information about the project	
Brief description of the project	c. 1.5 km of Safety Barrier following the verge of R238 on the Lough Foyle side. Adjoins Lough Foyle SPA. No resource requirements (water abstraction etc.) and no atmospheric emissions other than emissions from the works vehicles. Short-term duration of construction.
Brief description of European sites within the likely scope of influence of the project	The European Sites considered necessary to investigate in this screened report are: - Due to proximity: Lough Foyle SPA in ROI (IE_004087); Lough Foyle SPA in NI (UK_9020031).
Is the project or plan directly connected with the management of any European site?	No.
Are there other projects or plans that together with the project being assessed could affect the site	No. There are no other known projects to be developed in the same location that would contribute with the proposed development to the deterioration of any European sites. The Northwest Greenway from Muff towards Quigley's Point has been screened for Appropriate Assessment (Earthy Matters Environmental Consultants 2021). It will not be located on this side of the road at this location.
Assessment of significance of effects	The scope of influence of the project is regarded to be insignificant due to the following factors: - Location and type of development (prescriptions). - Small construction footprint and associated work and thus limited disturbance. - Temporary, low impact disturbance to birds. Therefore, it is anticipated that the proposed project would not result in any direct or indirect disturbance to species or habitats associated with this SAC.
Describe the individual elements of the project likely to give rise to impacts on the European site.	No negative impacts are foreseen.
Describe any likely changes to the site arising as a result of: **- Reduction of habitat area within European sites:** **- Disturbance to key species:** **- Habitat fragmentation:**	 -None -Potential for disturbance in Lough Foyle SPA where the verges adjoin the shore has been assessed. The project Method Statement will ensure that no disturbance will occur. -There will be no fragmentation of habitats either estuarine, coastal or farmland or designated that could impact upon the Qualifying Interests of the identified European sites. - No mechanism to cause reduction in species density relating to

- Reduction in species density: **- Changes in key indicators of conservation value:**	SPA feature birds has been identified. - The main risk to water quality identified is accidental pollution incidents. Standard measures to protect the aquatic environment will be expected of the construction contractor(s) and will be written into the tender documents, which will reduce to insignificant the risk of any accidental discharges into Lough Foyle either directly or via ditches or drains.
Describe any likely impacts on the European site as a whole in terms of interference with the key relationships that define the structure or function of the site.	No likely significant impacts.

CONCLUSION

In order to determine the potential impacts, if any, of the development on any European Sites, an Appropriate Assessment Screening Exercise was undertaken and resulted in a statement of Appropriate Assessment (i.e. this Screening Report). The conclusion of the Screening process is that:

1. The project is **not** directly connected to the management of any European sites.
2. The project, alone or in combination with other plans and projects is **not likely** to have significant effects on any habitats or species for which a European site was designated.
3. Negative impacts from the project are not foreseen on species or habitats for which European sites have been designated.
4. Therefore, a **Stage 2 Appropriate Assessment is not required for this project.**

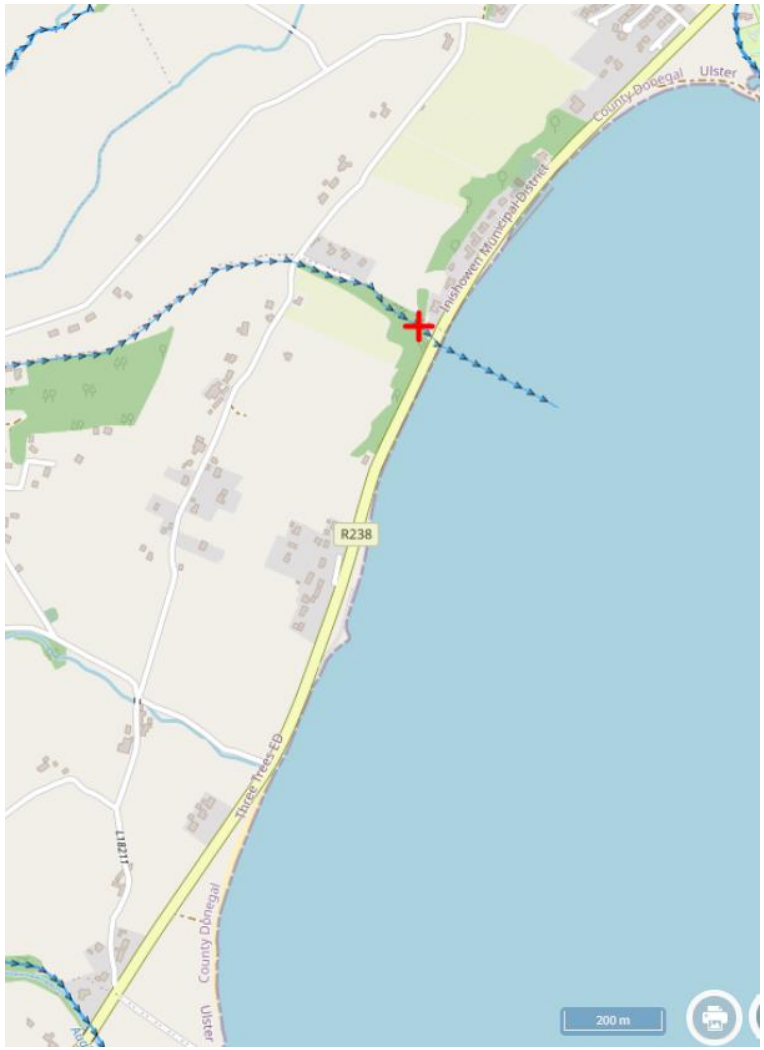
Field assessment and Screening assessment and report was carried out by Dr Florence Renou-Wilson (PhD, M.Sc. (Ag.), Dip. EIA&SEA Mngt).

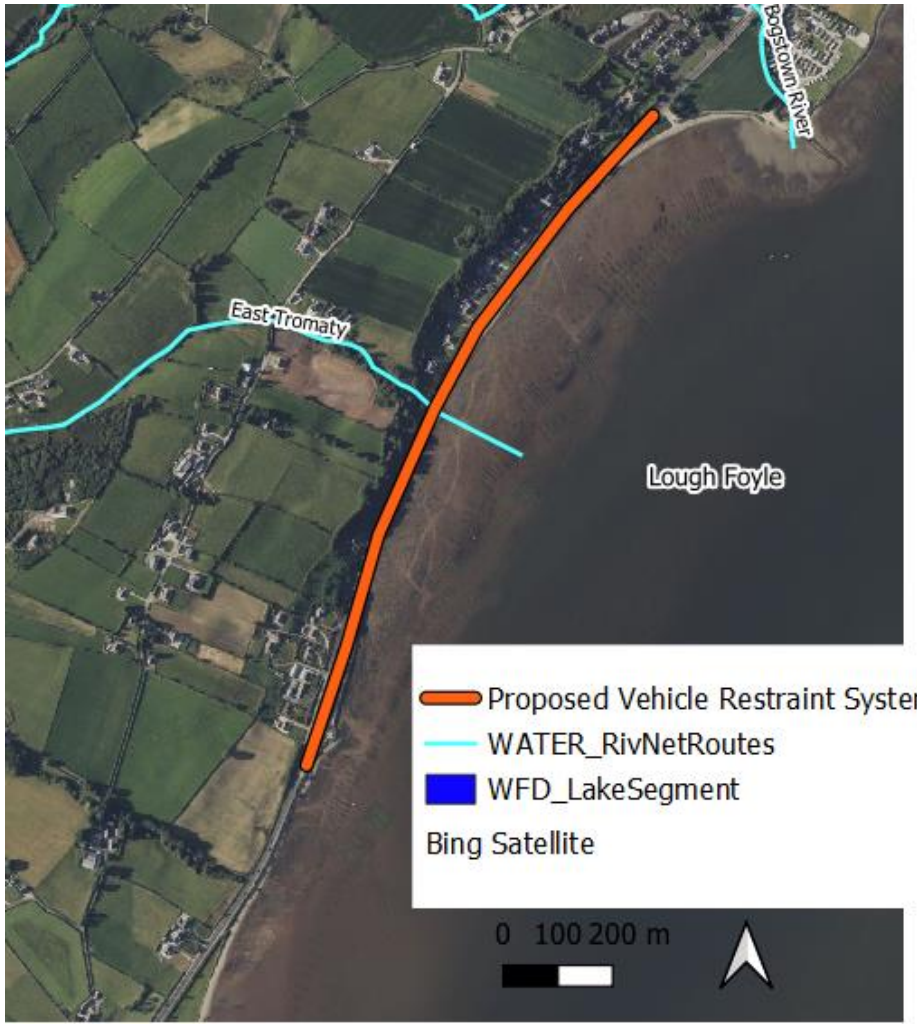
Glenvar, Sept 2023

References

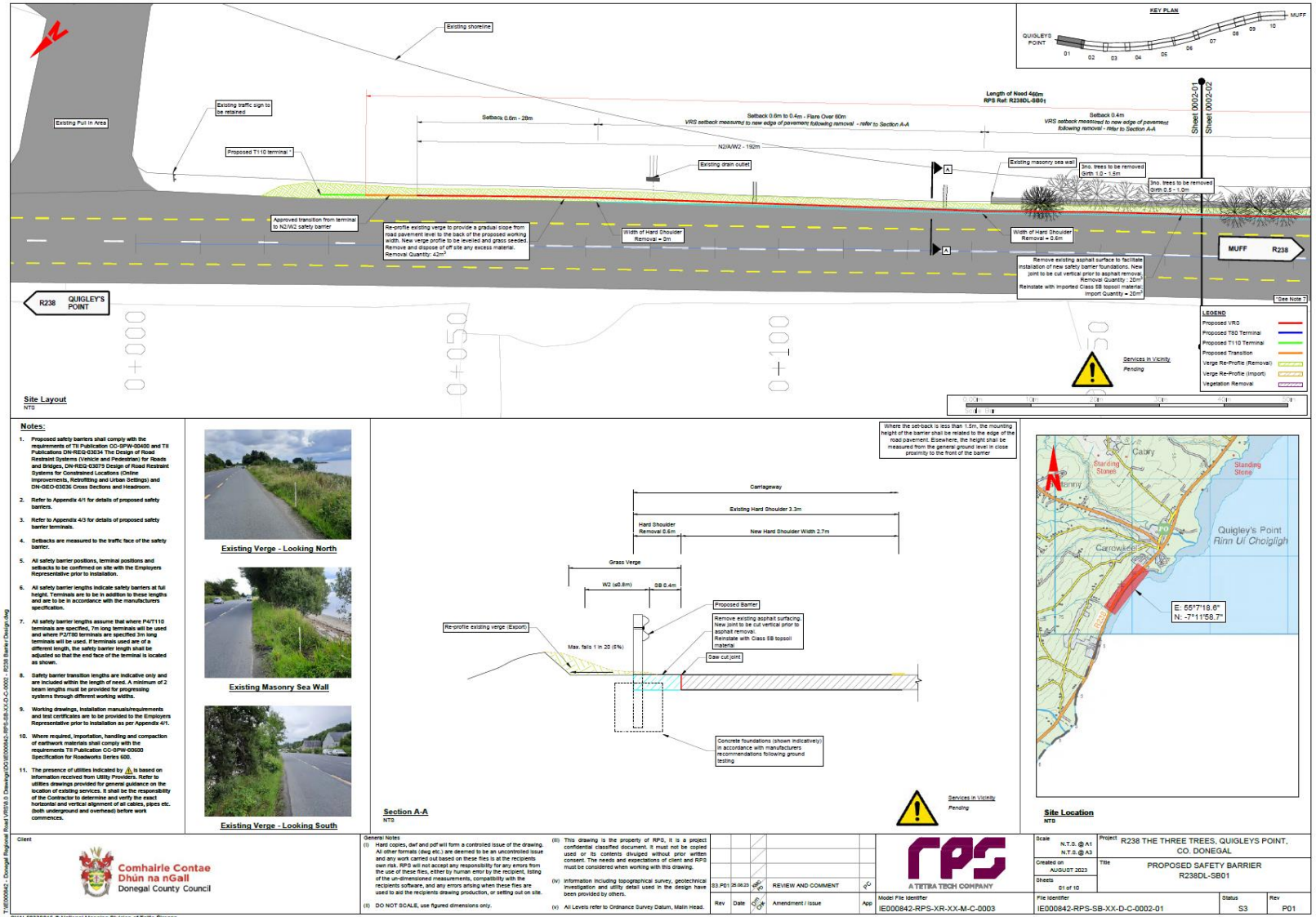
Earthy Matters Environmental Consultants. 2021. Greenway Muff-Quigleys Screening for Appropriate Assessment.
NPWS, 2014. Conservation objectives of Lough Foyle SPA 004087. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
NPWS, 2014. Lough Foyle SPA Conservation Objectives supporting document Version 1.
NPWS 2017 Conservation Objectives: River Finn SAC 002301. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
https://www.daera-ni.gov.uk/ for Conservation Objectives of Lough Foyle SPA, River Foyle and Tributaries SAC and River Faughan and Tributaries SAC.

Appendix 1a: Site location and aerial view of proposed Safety Barrier (Vehicle Restraint System).





Appendix 1b: Site layout drawings.



Notes:

1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
2. Refer to Appendix 4/1 for details of proposed safety barriers.
3. Refer to Appendix 4/3 for details of proposed safety barrier terminals.
4. Setbacks are measured to the traffic face of the safety barrier.
5. All safety barrier positions, terminal positions and setbacks to be confirmed on site with the Employers Representative prior to installation.
6. All safety barrier lengths indicate safety barriers at full height. Terminals are to be in addition to these lengths and are to be in accordance with the manufacturers specification.
7. All safety barrier lengths assume that where P4/T110 terminals are specified, 7m long terminals will be used and where P2/T80 terminals are specified 3m long terminals will be used. If terminals used are of a different length, the safety barrier length shall be adjusted so that the end face of the terminal is located as shown.
8. Safety barrier transition lengths are indicative only and are included within the length of need. A minimum of 2 beam lengths must be provided for progressing systems through different working widths.
9. Working drawings, installation manuals/requirements and test certificates are to be provided to the Employers Representative prior to installation as per Appendix 4/1.
10. Where required, importation, handling and compaction of earthwork materials shall comply with the requirements TII Publication CC-SPW-00600 Specification for Roadworks Series 600.
11. The presence of utilities indicated by ⚠ is based on information received from Utility Providers. Refer to utilities drawings provided for general guidance on the location of existing services. It shall be the responsibility of the Contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes etc. (both underground and overhead) before work commences.

Existing Verge - Looking North

Existing Masonry Sea Wall

Existing Verge - Looking South

Section A-A
NTS

Site Location
NTS

Client: Comhairle Contae Dhún na nGall / Donegal County Council

General Notes
(i) Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients own risk. RPS will not accept any responsibility for any errors from the use of these files, either by human error by the recipient, listing of the un-dimensioned measurements, compatibility with the recipients software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site.
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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date		Amendment / Issue	App
P01	28.08.23		REVIEW AND COMMENT	WC

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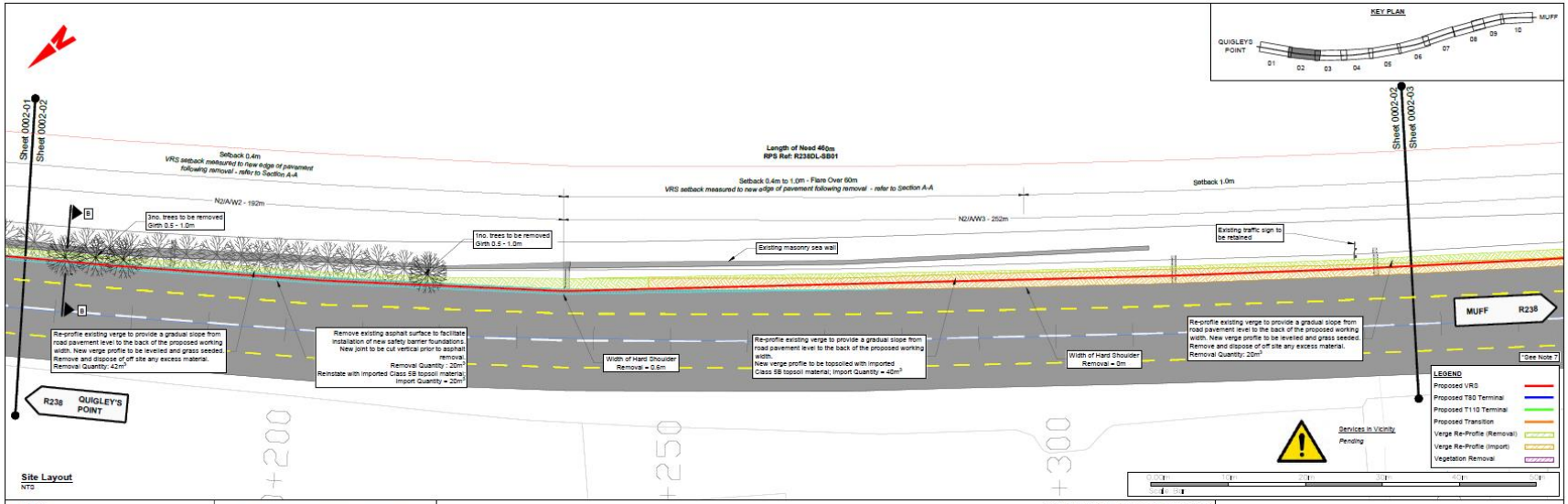
Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	01 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB01
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-01
Status	S3
Rev	P01



Site Layout
NTS

Notes:

1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
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3. Refer to Appendix 4/3 for details of proposed safety barrier terminals.
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9. Working drawings, installation manuals/requirements and test certificates are to be provided to the Employers Representative prior to installation as per Appendix 4/1.
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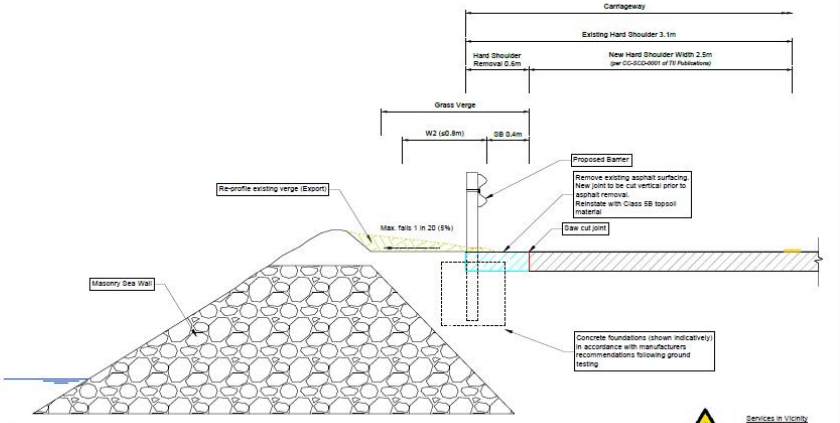
Existing verge

Existing verge looking south

Existing verge looking north



Section B-B
NTS

Site Location
NTS

Client
Comhairle Contae Dhún na nGall
Donegal County Council

Rev	Date	Drn	Chk	Amendment / Issue	App
P03	25.08.23	JMC	PC	REVIEW AND COMMENT	PC

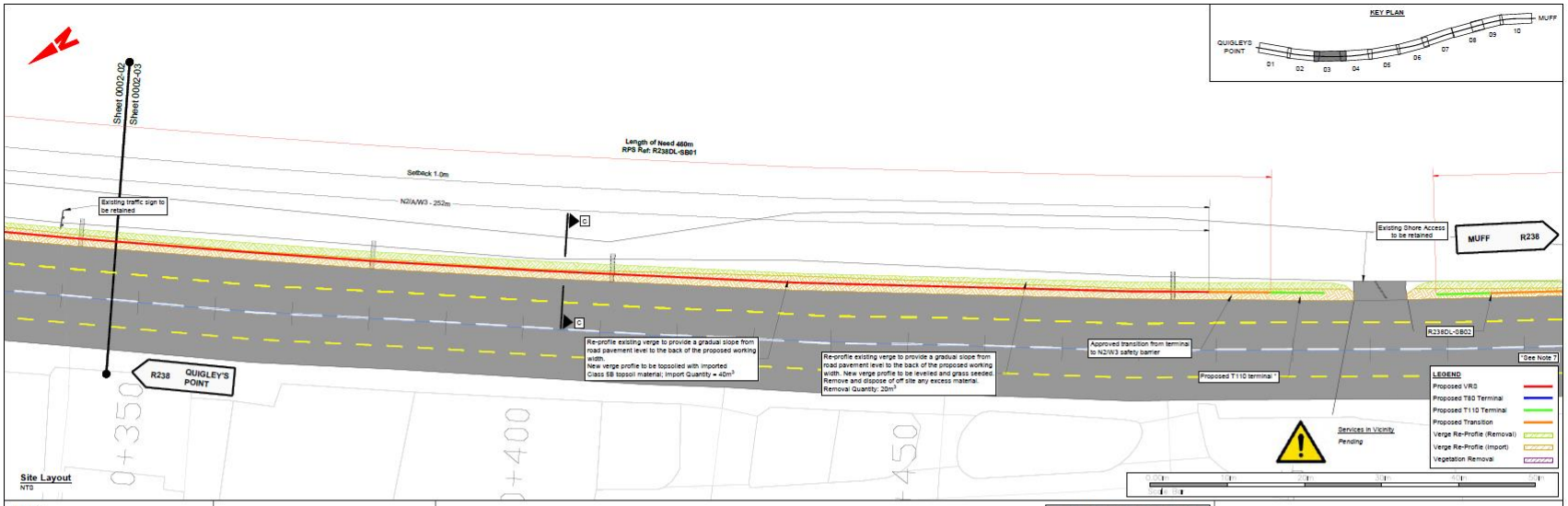
RPS A TETRA TECH COMPANY

Model File Identifier: IE000842-RPS-XR-XX-M-C-0003

Scale: N.T.S. @ A1, N.T.S. @ A3
Created on: AUGUST 2023
Sheets: 02 of 10

Project: R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title: PROPOSED SAFETY BARRIER R238DL-SB01

File Identifier: IE000842-RPS-SB-XX-D-C-0002-02
Status: S3
Rev: P01



Site Layout
NTS

Notes:

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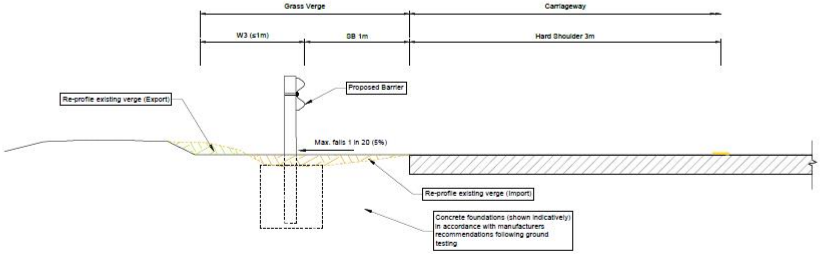
Existing verge looking north

Existing shore access to be retained

Existing verge looking north



Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier

Section C-C
NTS

Services in Vicinity
Pending

Site Location
NTS

Client
Comhairle Contae Dhún na nGall
Donegal County Council

General Notes
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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn	Chk	Amendment / Issue	App
S3.P01	25.08.23	MMC	PFC	REVIEW AND COMMENT	PFC

RPS
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Model File Identifier: IE000842-RPS-XR-XX-M-C-0003

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	03 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB01
File Identifier	IE000842-RPS-SB-XX-D-C-0002-03
Status	S3
Rev	P01

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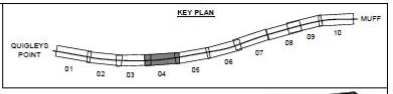
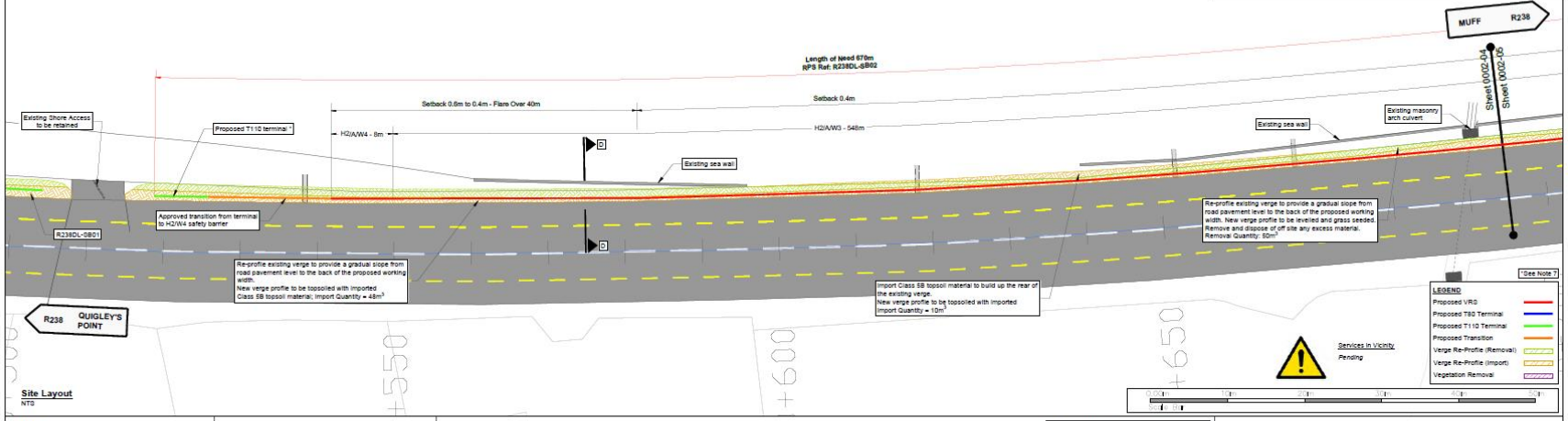
KEY PLAN





Site Layout
NTS

Notes:

1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
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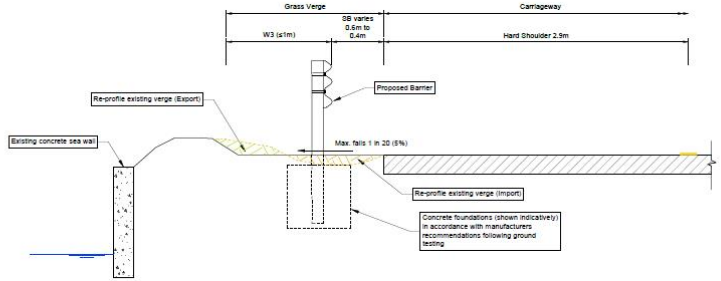
Existing shore access to be retained

Existing verge looking south

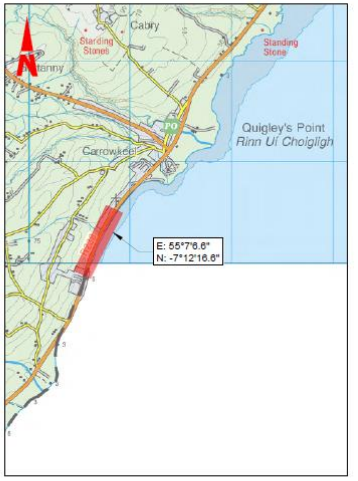
Existing concrete sea wall



Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier

Services in Vicinity
Pending

Section D-D
NTS



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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Rev	Date	By	Chk	Amendment / Issue	App
S3	P01	25.08.23	MC	REVIEW AND COMMENT	EC

A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	04 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB02
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-04
Status	S3
Rev	P01

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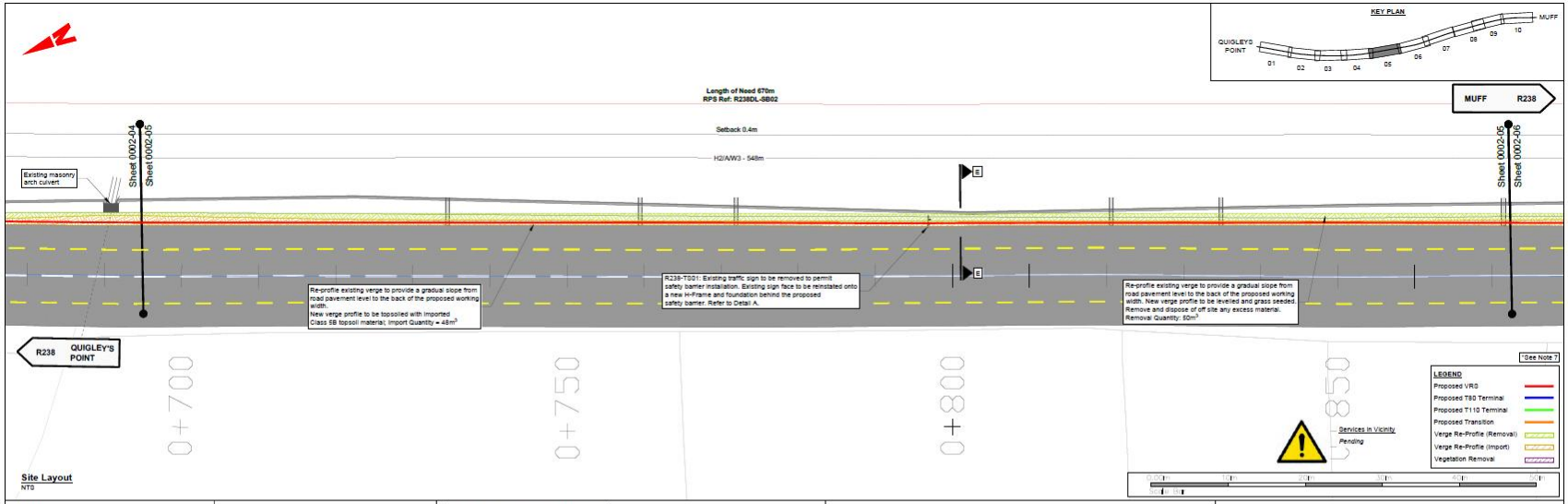

Site Layout
NTS

Notes:

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Existing masonry arch culvert

Existing TS01

Existing verge looking south

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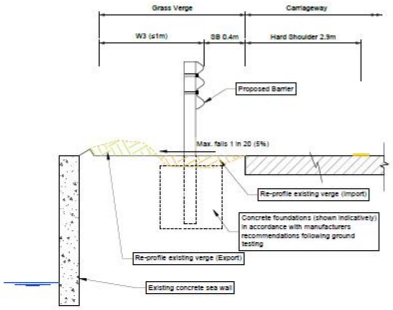
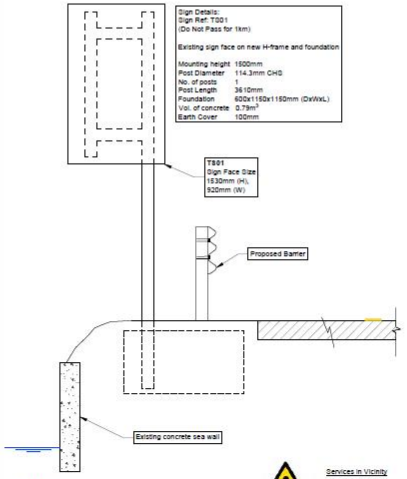


Section E-E
NTS



Detail A
NTS

Site Location
NTS

Client
Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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Rev	Date	By	Amendment / Issue	App
S3.P01	25.08.23	MC	REVIEW AND COMMENT	PC

RPS
A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	05 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB02
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-05
Status	S3
Rev	P01

Appendix 1c: Method Statement for the Installation of a Safety Barrier.

General:

- *The safety barrier will be installed either using a driven post system or posts in concrete foundations. The type of foundation (i.e. driven or concrete) will be determined prior to installation and will be based on a testing procedure undertaken by the contractor and supervised by an independent chartered engineer.*
- *Where concrete foundations are used, they are typically 600 mm wide × 600 mm long × 600 mm deep. This size may, however, vary depending on the outcome of the testing regime noted above and the selected safety barrier system. The top of concrete foundations will be kept 100 mm below ground level (retaining concrete within the foundation) and the verge will be reinstated with topsoil and then grass seeded. Any unsuitable material from the foundation excavations will be removed to the nearest approved landfill site.*
- *Temporary Traffic Management (TTM) will be required at road level to protect workers and road users.*
- *Heavy construction works (high noise level) will occur at high tide.*
- *Construction to follow good standards that conform to the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (www.fisheriesireland.ie).*
- *The contractors will be made aware of the boundaries of Lough Foyle SPA, as well as all the location of all streams, to prevent any damage or accidents that would impact the SPA directly or indirectly.*
- *Appropriate spill kits will be kept on site in strategic locations, such as close to refuelling areas, chemical handling areas or waste storage areas. Staff will be trained in their use and in deployment of the spill kits.*
- *There shall be no disposal of waste onto Lough Foyle shore or to any streams, ditch or storm drains.*
- *No excavated material should be disposed of within or at Lough Foyle SPA boundaries.*

Installation of a Safety Barrier

Installation of Driven Posts:

- *Beams will be laid out on the ground to form the guide to line and location of posts.*
- *Posts will be manually positioned by the installer and/or driving machine operator over the predetermined insertion point and the hammer of the driving machine will be lowered onto the head of the post.*
- *The machine operator will engage the driving hammer and in a smooth and continuous pattern drive the post into the substrate until directed to stop by the banksman.*

Installation of Posts in Concrete:

- *The footings will be excavated using an excavator and spoil material will be spread neatly on the verge (if the material is deemed suitable). If this is not possible, then excess spoil material will be removed to a licensed landfill site.*

- *The footings will be excavated to a depth and diameter specified and confirmed by the client/main contractor prior to the commencement of work on site.*
- *The installer will fill the excavated footing with concrete to the required level (approximately 100 mm below the existing ground surface level).*
- *The installer will fill all footings and when completed will start at the first footing and we use an electric poker vibrator compact to remove air pockets from the concrete.*
- *Posts will be manually placed into the concrete footing, the post mounting height will be checked by the installer, and the post will be aligned vertically using a spirit level.*
- *Where the post footings are inserted into filter drains, loose material or unstable ground conditions, a formwork bin will be placed into the excavated footing by the installer.*
- *The installer will smooth the concrete footing around the post using a float.*

Installation of Beams

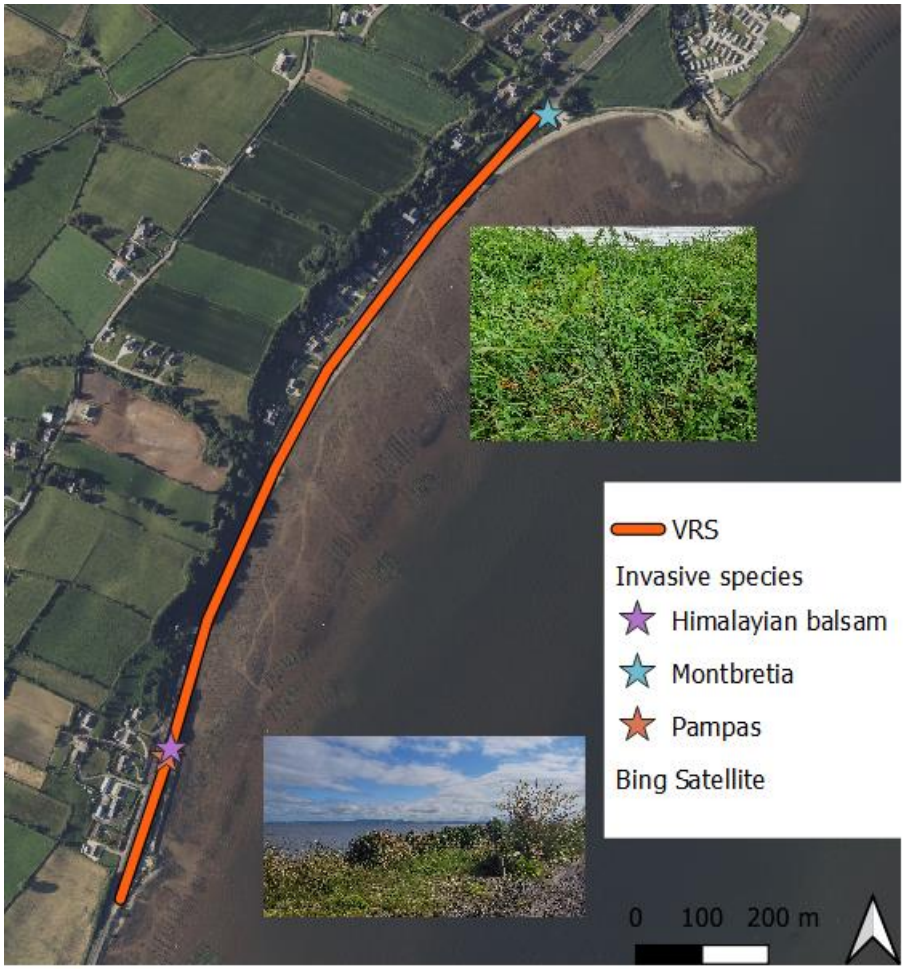
- *Once the posts are adequately cured/driven, the installers will manually lay the beams out at each post interval.*
- *The installer will hang the beams onto the posts using the post screws.*
- *The installer will couple together the beams.*
- *The beams will be assembled using hand-tightened lap screws, nuts and washers.*
- *The installer will remove the slack from the lap joint where the system requires it.*
- *The installer will tighten all bolts on the beam and post connection using an electrical-powered torque socket and drill, ensuring that all the bolts are tightened to the appropriate torque before proceeding to the next beam.*

Removal of Spoil from Site:

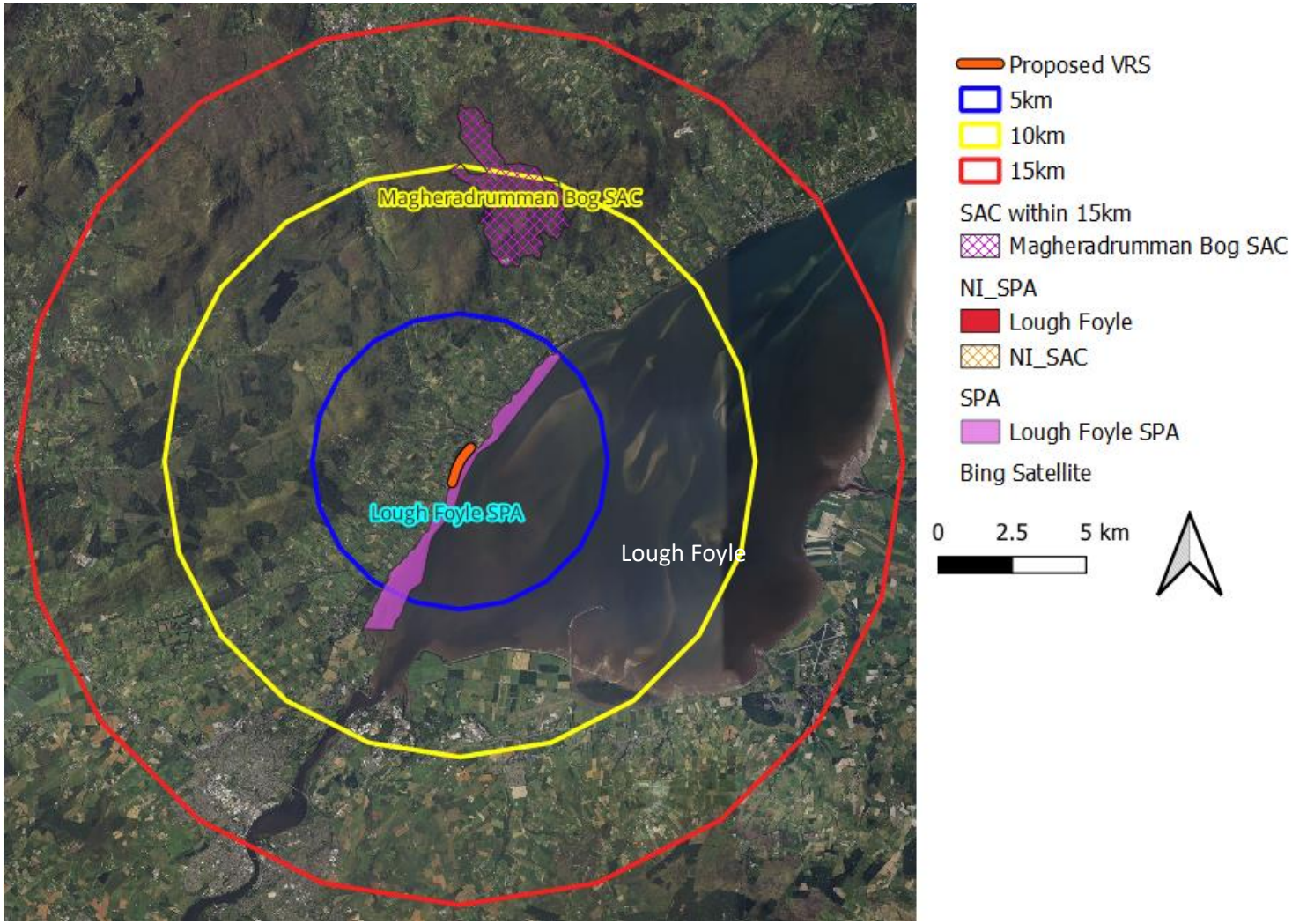
- *If spoil is to be removed from site, it shall be removed by a licensed haulier to a licensed and approved landfill site.*

Appendix 2a: Habitats found on the road verges along the proposed safety barrier.

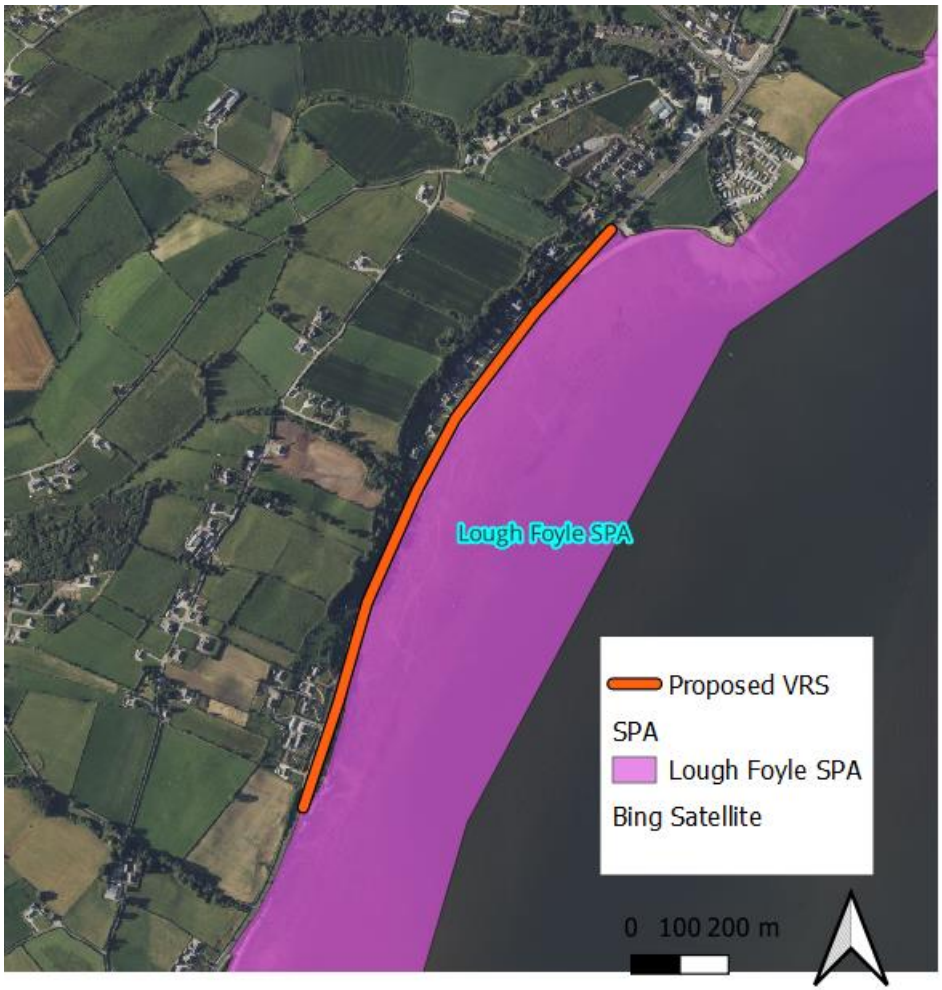
Appendix 2b: Invasive species locations along the verges of the proposed safety barrier.



Appendix 2c: Location of safety barrier (VRS) vis-à-vis European Sites (SAC and SPA) within 5, 10 and 15 km radius.



Appendix 2d: Site location vis-à-vis European Sites (SAC and SPA) in close proximity to the proposed safety barrier.



Appendix 3: Site Synopsis and Conservation Objectives of identified European sites.

SITE NAME: LOUGH FOYLE SPA SITE CODE: 004087

The site comprises a section of the western shore of Lough Foyle from Muff to north of Vances Point in Co. Donegal. The site is part of the larger cross-border Lough Foyle complex which regularly supports in excess of 20,000 wintering waterbirds.

The majority of the wintering waterbirds that utilise this site occur along the southern and eastern shoreline of Lough Foyle in Derry, which is also designated as an SPA in Northern Ireland.

The site is selected as a Special Protection Area (SPA) under the E.U. Birds Directive, as it is part of an internationally important wetland site that regularly supports in excess of 20,000 wintering waterbirds. The assemblage of birds that utilise Lough Foyle includes internationally important populations of Whooper Swan (811), Light-bellied Brent Goose (3,765) and Bar-tailed Godwit (2,059), and nationally important populations of a further 18 species: Great Crested Grebe(148), Bewick's Swan (43), Greylag Goose (391), Shelduck (468), Wigeon (9,011), Teal (660), Mallard (1,635), Red-breasted Merganser (82), Oystercatcher (3,101), Golden Plover (4,562), Lapwing (4,024), Knot (499), Dunlin (4,991), Curlew (2,265), Redshank (988), Black-headed Gull (2,212), Common Gull (2,846) and Herring Gull (1,261) – all counts are five year mean peaks for the entire Lough Foyle complex during the period 1995/96 to 1999/2000. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Lough Foyle SPA is of high ornithological importance as it is part of an internationally important wetland site that regularly supports internationally important populations of Whooper Swan, Light-bellied Brent Goose and Bar-tailed Godwit, and nationally important populations of a further 18 species.

30.11.2010

Conservation Objectives for Lough Foyle SPA [004087]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

- [wintering] *Gavia stellata*
- [wintering] *Podiceps cristatus*
- [wintering] *Cygnus columbianus*
- [wintering] *Cygnus cygnus*
- [wintering] *Anser anser*
- [wintering] *Branta bernicla hrota*
- [wintering] *Tadorna tadorna*
- [wintering] *Anas penelope*
- [wintering] *Anas crecca*
- [wintering] *Anas platyrhynchos*
- [wintering] *Somateria mollisima*
- [wintering] *Mergus serrator*
- [wintering] *Haematopus ostralegus*
- [wintering] *Pluvialis apricaria*
- [wintering] *Vanellus vanellus*

Citation:

NPWS (2011) Conservation objectives for Lough Foyle SPA [004087]. Generic Version 3.0. Department of Arts, Heritage & the Gaeltacht.

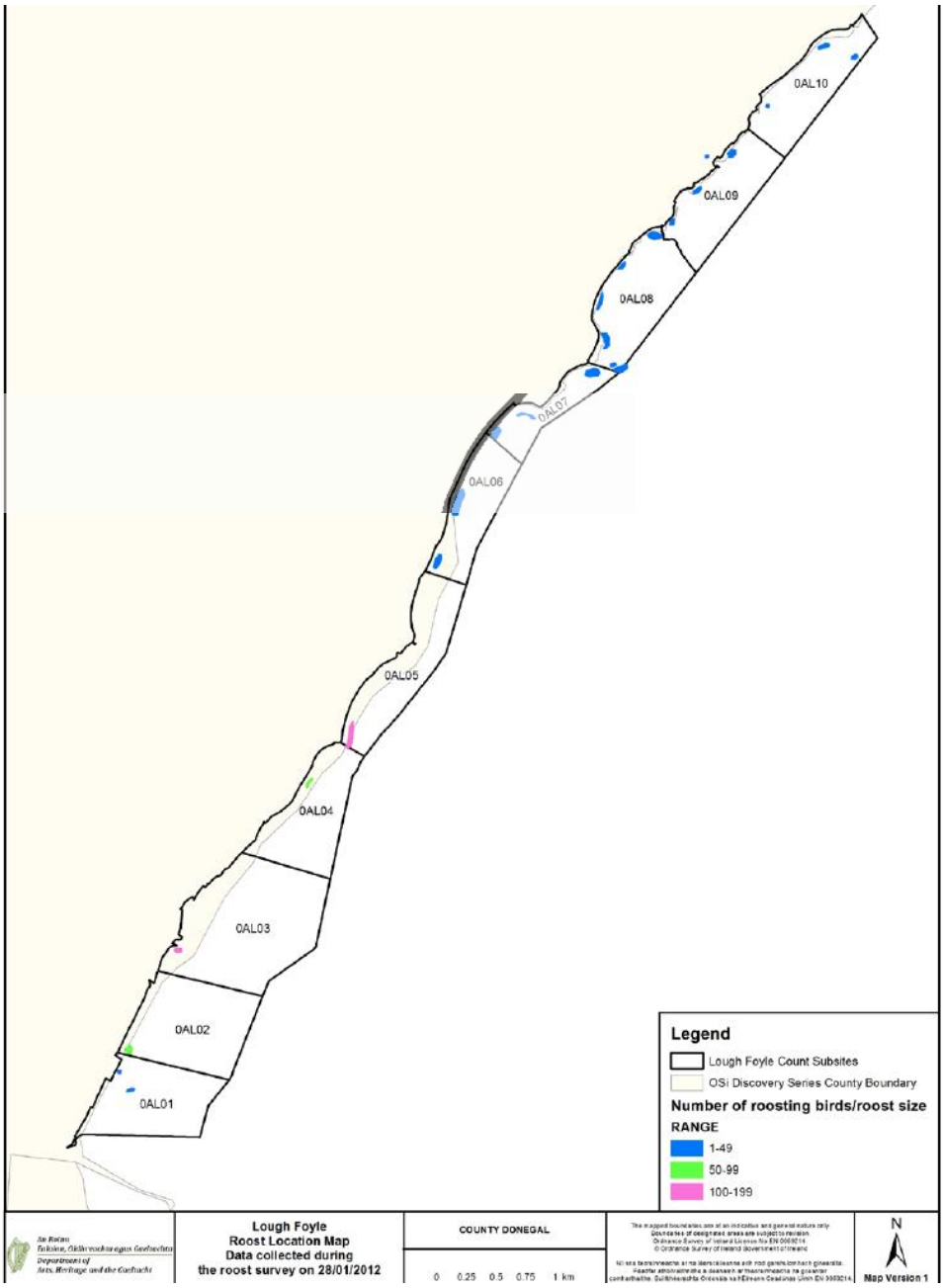
For more information please go to: www.npws.ie/protectedsites/conservationmanagementplanning

An Roinn Ealaíon, Oidhreachta agus Gaeltachta
Department of Arts, Heritage and the Gaeltacht
18 July 2011 Generic Conservation Objective

- [wintering] *Calidris canutus*
- [wintering] *Calidris alpina*
- [wintering] *Limosa lapponica*
- [wintering] *Numenius arquata*
- [wintering] *Tringa totanus*
- [wintering] *Chroicocephalus ridibundus*
- [wintering] *Larus canus*
- [wintering] *Larus argentatus*
- [] Wetlands & Waterbirds

Appendix 4a: Proposed Safety Barrier in grey) vis-à-vis location of Conservation Objectives (NPWS 2014).

Lough Foyle SPA Conservation Objectives supporting document Version 1 (NPWS, 2014).



Lough Foyle

(1) Summary data and roost location map from the high tide survey on 28th January 2012.

(Please see Sections 5.3.1 and 5.3.2 for further details on methods/limitations)

Subsite	No. roost locations	No. species	species
0AL01	2	2	CU, TT
0AL02	1	4	CU, MA, WN, UW,
0AL03	1	3	BH, CM, RK
0AL04	1	2	CU, OC
0AL05	1	5	CM, HG, L., OC, PB
0AL06	2	5	BH, CM, CU, PB, RK
0AL07	3	5	BH, CM, LB, PB, RK
0AL08	6	6	BH, CM, E., LB, MA, PB
0AL09	4	3	BH, CU, RK
0AL10	3	2	E., L.

Lough Foyle – Waterbird Survey Programme 2011/12 – Count Subsites

Subsite Code	Subsite Area (ha)
0AL01	58
0AL02	70
0AL03	110
0AL04	55
0AL05	59
0AL06	45
0AL07	29
0AL08	58
0AL09	52
0AL10	52
TOTAL	588

Legend

Count subsite boundaries & broad habitat types

- Intertidal
- Subtidal
- Supratidal and associated habitats

- **Light-bellied Brent Goose Foraging**
- **Light-bellied Brent Goose Roosting/Other**

1 dot = 1 bird

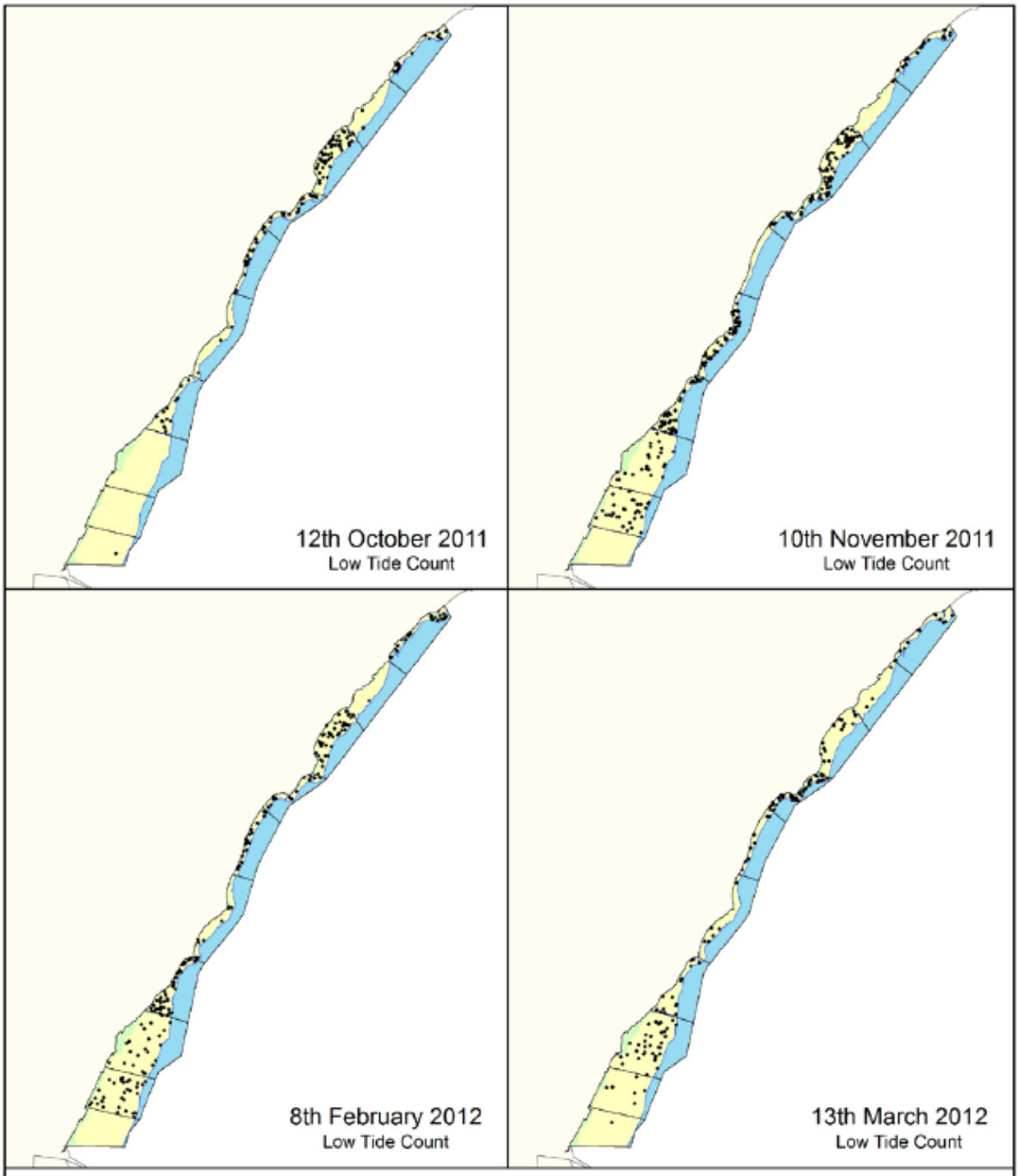
0 1 2 3 km

An Roinn Ealaíon, Oidhreachta agus Gaeltachta
Department of Arts, Heritage and the Gaeltacht

LOUGH FOYLE
CONSERVATION OBJECTIVES
LIGHT-BELLIED BRENT GOOSE
DISTRIBUTION DOT DENSITY DIAGRAMS
Map to be read in conjunction with the NPWS Conservation Objectives SPA Supporting Document.

N

Map Version 1
Date: Sep 14



Legend

Count subsite boundaries & broad habitat types

- Intertidal
- Subtidal
- Supratidal and associated habitats

Oystercatcher Foraging

1 dot = 1 bird

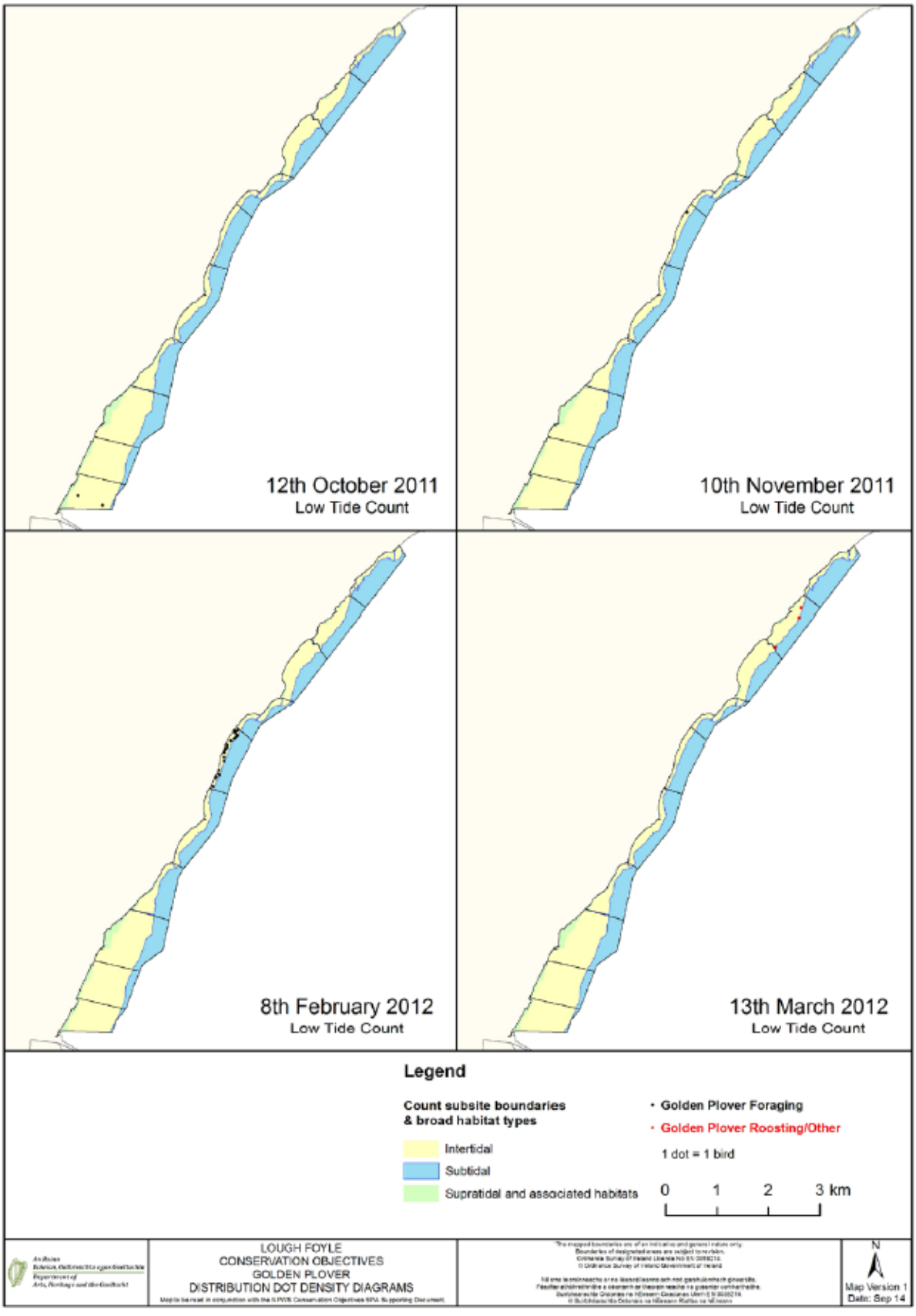
0 1 2 3 km

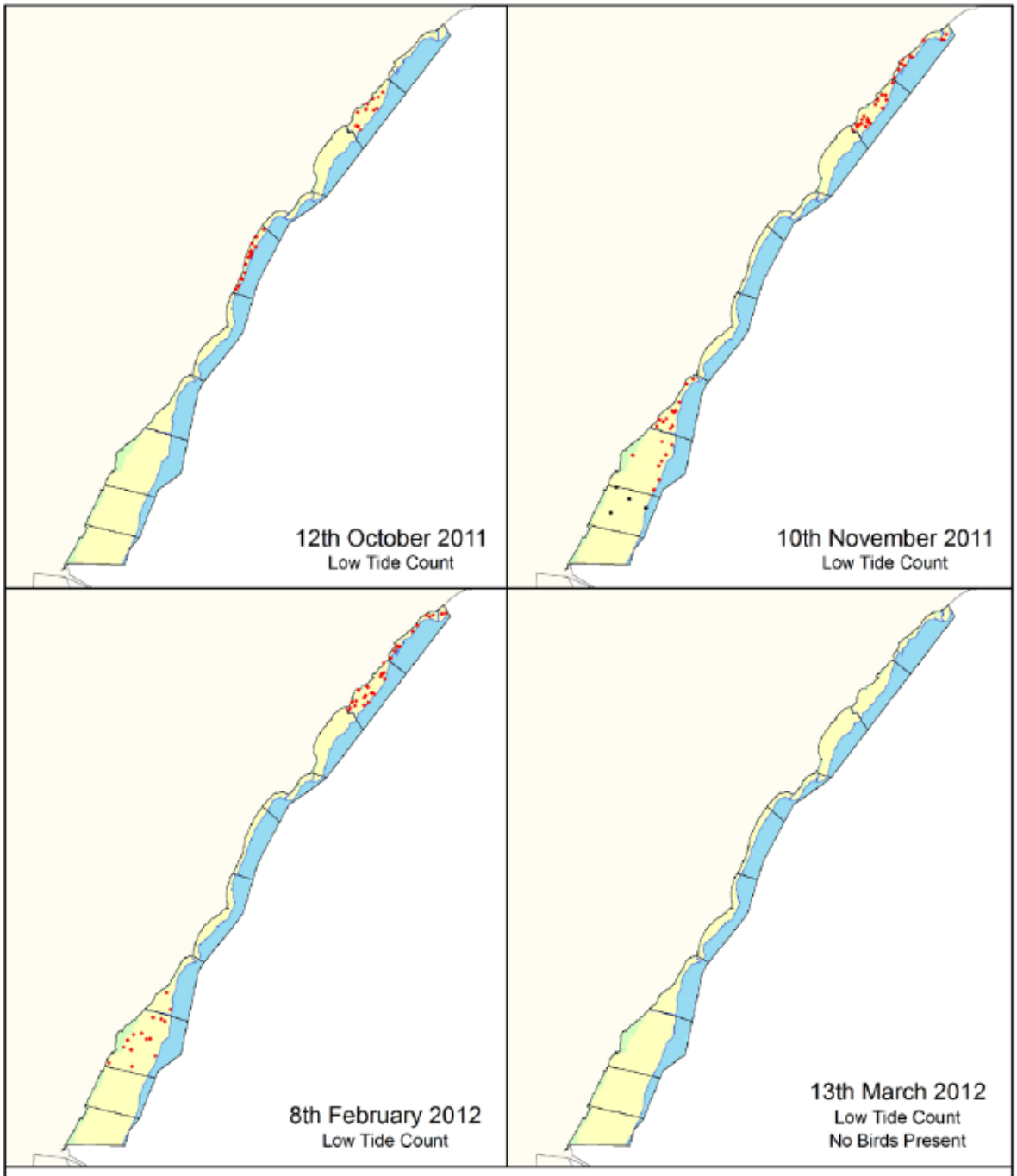
LOUGH FOYLE
CONSERVATION OBJECTIVES
OYSTERCATCHER
DISTRIBUTION DOT DENSITY DIAGRAMS

Maps to be read in conjunction with the N PWS Conservation Objectives SPA Supporting Document.

N

Map Version 1
Date: Sep 14


12th October 2011
Low Tide Count
10th November 2011
Low Tide Count
8th February 2012
Low Tide Count
13th March 2012
Low Tide Count
Legend
Count subsite boundaries & broad habitat types
Intertidal
Subtidal
Supratidal and associated habitats
Golden Plover Foraging
Golden Plover Roosting/Other
1 dot = 1 bird
0 1 2 3 km
LOUGH FOYLE
CONSERVATION OBJECTIVES
GOLDEN PLOVER
DISTRIBUTION DOT DENSITY DIAGRAMS
N
Map Version 1
Date: Sep 14



Legend

Count subsite boundaries & broad habitat types

- Intertidal
- Subtidal
- Supratidal and associated habitats

- **Lapwing Foraging**
- **Lapwing Roosting/Other**

1 dot = 1 bird

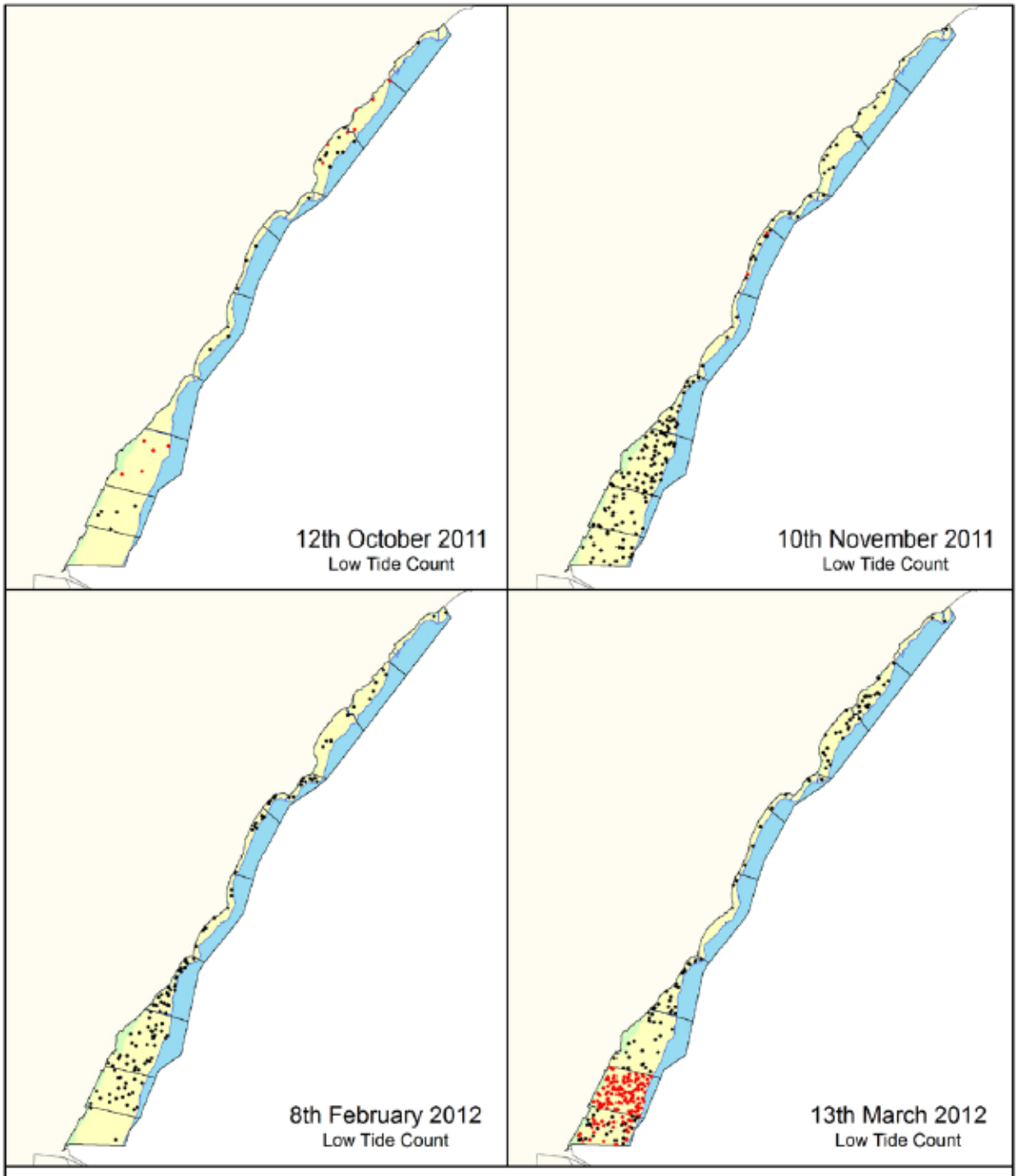
0 1 2 3 km

LOUGH FOYLE
CONSERVATION OBJECTIVES
LAPWING
DISTRIBUTION DOT DENSITY DIAGRAMS

Maps to be read in conjunction with the N PWS Conservation Objectives SPA Supporting Document.

N

Map Version 1
Date: Sep 14



Legend

Count subsite boundaries & broad habitat types

- Intertidal
- Subtidal
- Supratidal and associated habitats

- Curlew Foraging
- Curlew Roosting/Other

1 dot = 1 bird

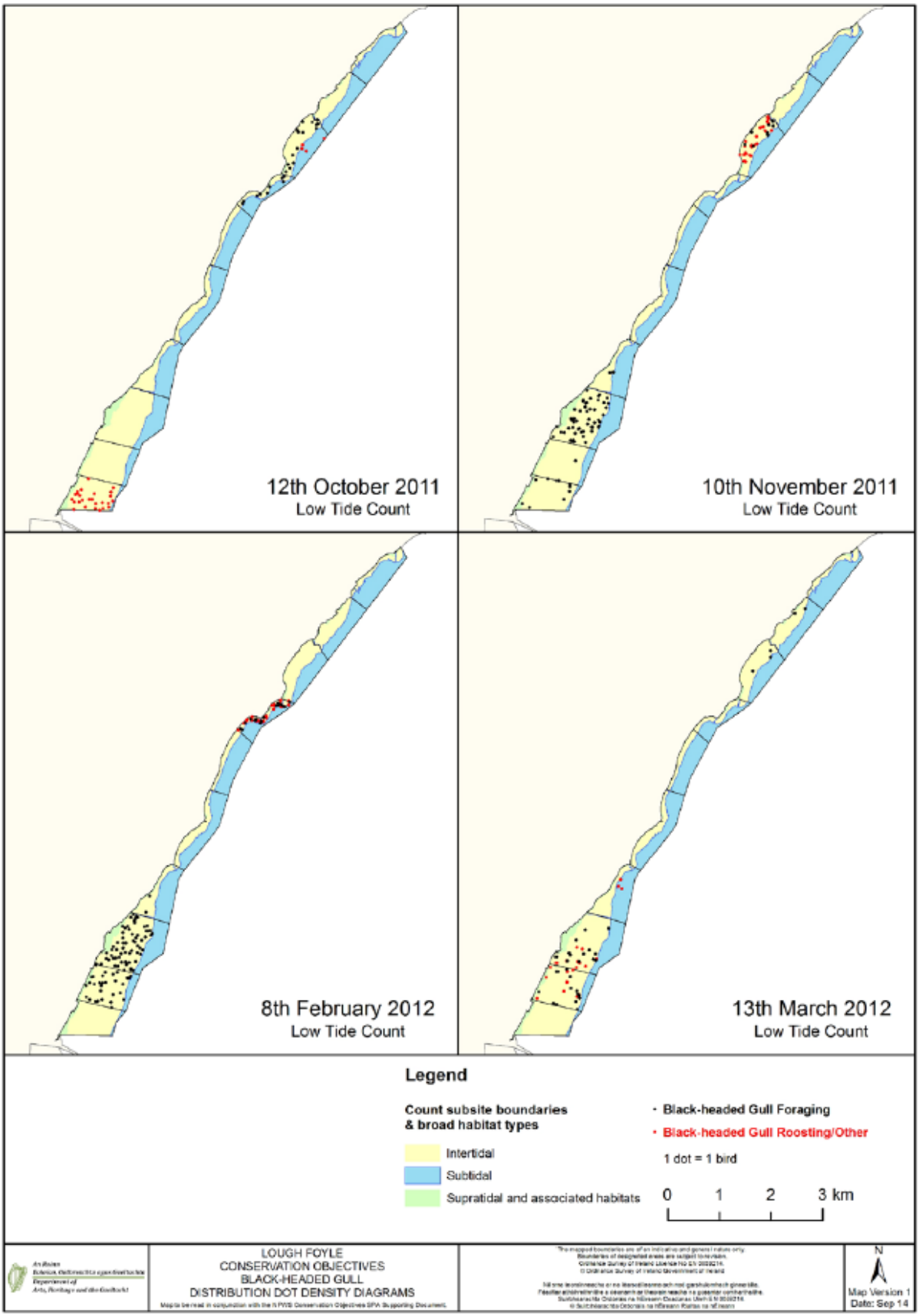
0 1 2 3 km

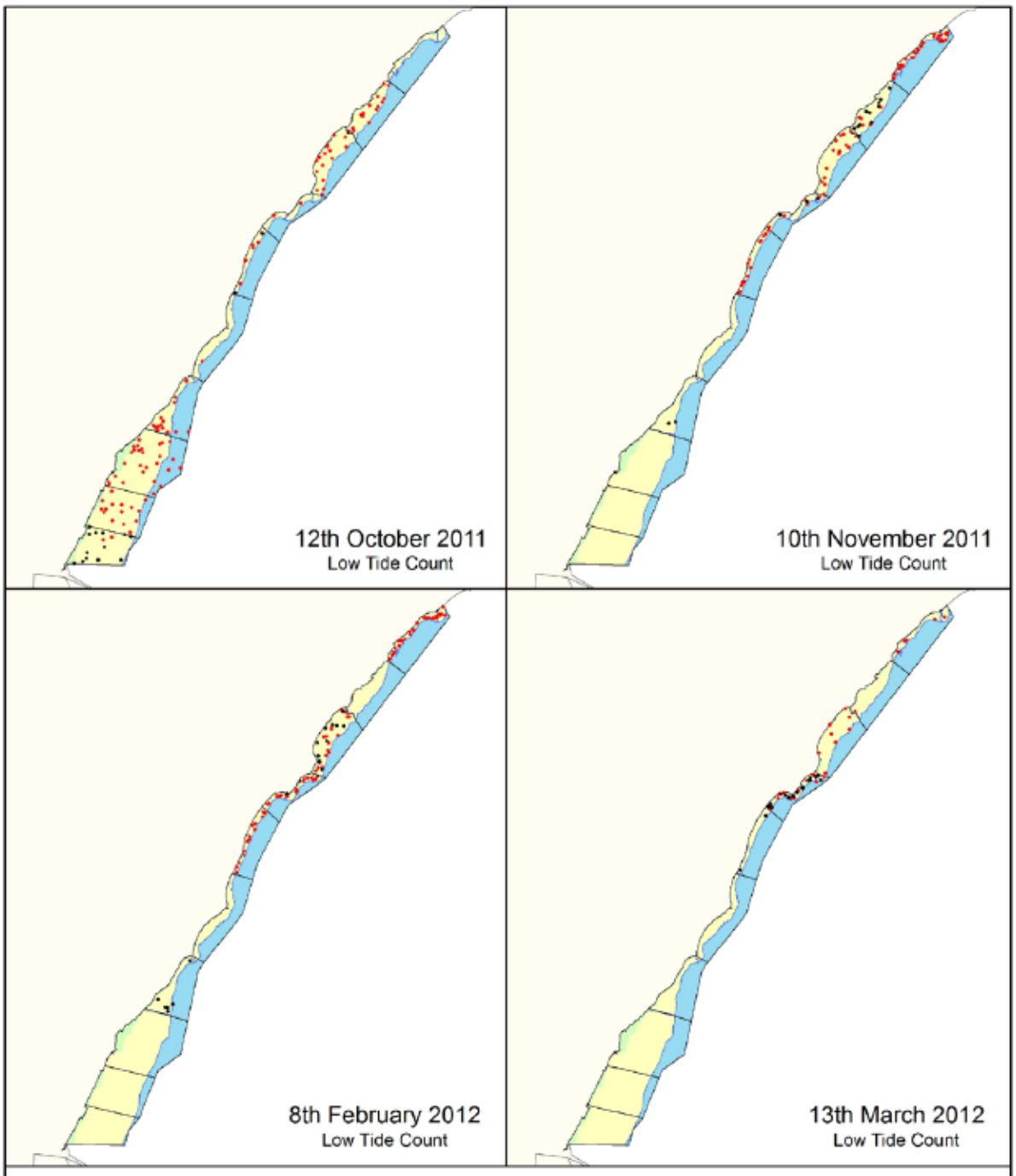
LOUGH FOYLE
CONSERVATION OBJECTIVES
CURLEW
DISTRIBUTION DOT DENSITY DIAGRAMS

Map to be read in conjunction with the NPWS Conservation Objectives SPA Supporting Document.

N

Map Version 1
Date: Sep 14


12th October 2011
Low Tide Count
10th November 2011
Low Tide Count
8th February 2012
Low Tide Count
13th March 2012
Low Tide Count
Legend
Count subsite boundaries & broad habitat types
Intertidal
Subtidal
Supratidal and associated habitats
Black-headed Gull Foraging
Black-headed Gull Roosting/Other
1 dot = 1 bird
0 1 2 3 km
LOUGH FOYLE
CONSERVATION OBJECTIVES
BLACK-HEADED GULL
DISTRIBUTION DOT DENSITY DIAGRAMS
Maps to be read in conjunction with the N PWS Conservation Objectives SPA Supporting Document.
N
Map Version 1
Date: Sep 14



Legend

Count subsite boundaries & broad habitat types

- Intertidal
- Subtidal
- Supratidal and associated habitats

- **Common Gull Foraging**
- **Common Gull Roosting/Other**

1 dot = 1 bird

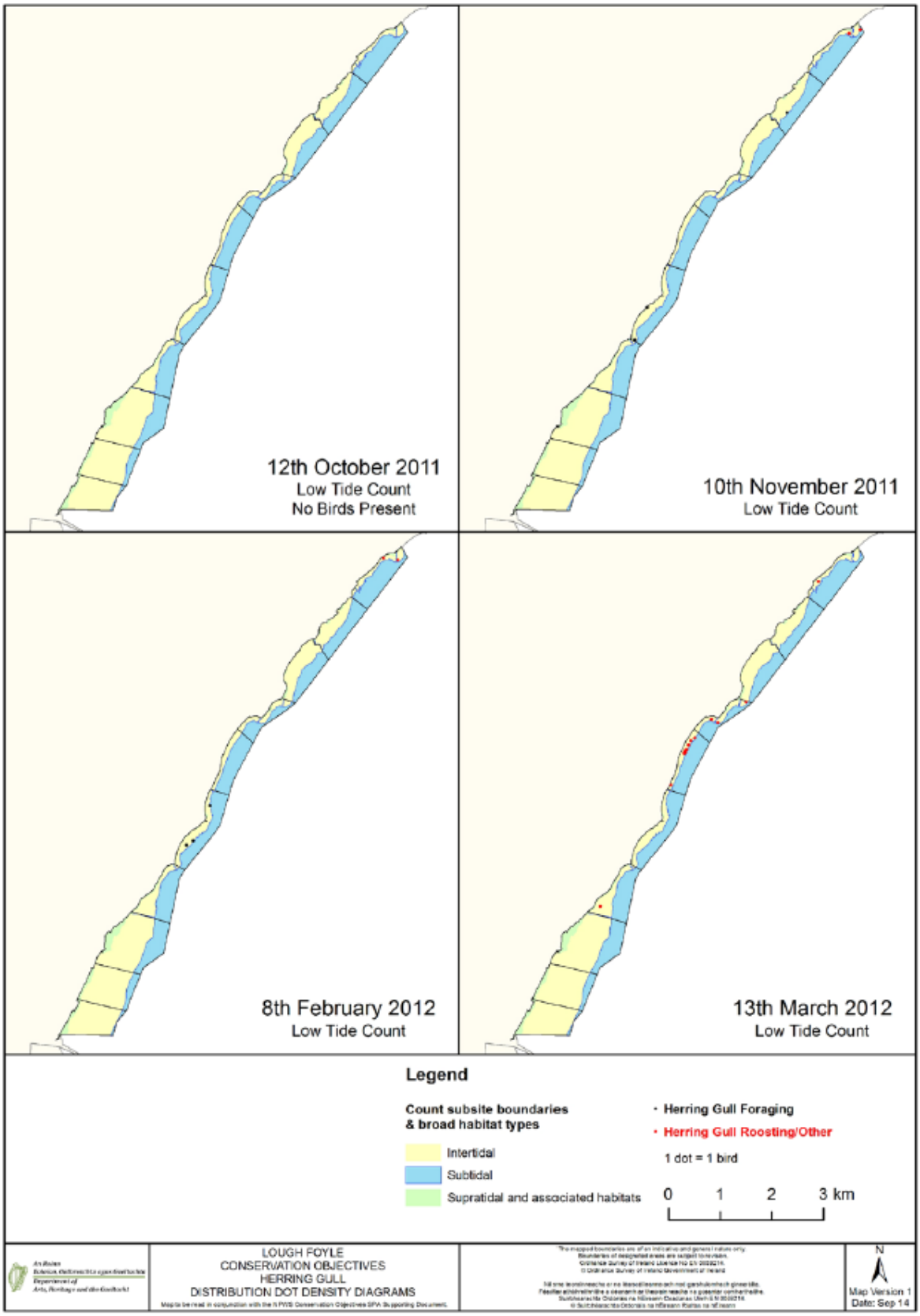
0 1 2 3 km

LOUGH FOYLE
CONSERVATION OBJECTIVES
COMMON GULL
DISTRIBUTION DOT DENSITY DIAGRAMS

Maps to be read in conjunction with the NPWS Conservation Objectives SPA Supporting Document.

N

Map Version 1
Date: Sep 14


12th October 2011
Low Tide Count
No Birds Present
10th November 2011
Low Tide Count
8th February 2012
Low Tide Count
13th March 2012
Low Tide Count
Legend
Count subsite boundaries & broad habitat types
Intertidal
Subtidal
Supratidal and associated habitats
Herring Gull Foraging
Herring Gull Roosting/Other
1 dot = 1 bird
0 1 2 3 km
LOUGH FOYLE
CONSERVATION OBJECTIVES
HERRING GULL
DISTRIBUTION DOT DENSITY DIAGRAMS
N
Map Version 1
Date: Sep 14

Appendix 5: Photos from the proposed location at Quigley's Point southward.

Typical verge bordering the R238 where the safety barrier is proposed (facing west).

Sea-side verge with hedgerow that adjoins Lough Foyle SPA (facing west).

Access to beach from verge (to remain open) (facing south).

Outlet of East Tromaty stream piped under the road (facing south).

Seawall between Lough Foyle and the road (facing west) including memorial.

Verge transitioning from grassy to hedgerow (willow) including memorial (facing west).

Narrow land between road and Lough Foyle with extensive cover of *Epilobium* spp. (facing south).

Narrow land between the road and Lough Foyle with colonies of Pampas grass and Himalayan balsam (facing south).

End of report

APPENDIX E – EIA PRELIMINARY EXAMINATION & CONCLUSION REPORT

Comhairle Contae Dhún na nGall
Donegal County Council

EIA Preliminary Examination & Conclusion in respect of the Proposed Vehicle Restraint System (VRS) Installation along the R238 in the townland of The Three Trees near Quigleys Point, Co Donegal

Form 1 (Non-Statutory): - Understanding the Proposal)

Step 1: Establishing if the proposal is a *'sub-threshold development'*:	
File Reference No:	**DL/BS/24/002**
Development Summary:	The proposed Part 8 scheme entitled '**R238 VRS INSTALLATION AT QUIGLEYS POINT'** comprises the installation of a Vehicle Restraint System (VRS) along the eastern side of the R238 in the townland of The Three Trees near Quigleys Point, Co Donegal. The nature and extent of the proposed development is as follows:- • Provision of a new Vehicle Restraint System (approx. 1,600m) including break points for vehicle accesses where required on the eastern side of the existing R238. • Reduction in hard shoulder width to allow sufficient working width of VRS and to avoid impact with sea wall within the scheme extents. • Earthworks to remove sections of the existing raised earth mound or to import fill to build up verge where required within the scheme extents, to create a level verge to facilitate VRS installation. • Removal of existing fence or replacement with timber post and tension mesh fence. • All other ancillary tie-in works to relevant TII standards. All associated ancillary site works shall be located within the townland of The Three Trees in the Inishowen Municipal District.

Was a Screening Determination carried out under Section 176A-C?	☐ Yes, no further action required ✓ No, Proceed to **Part A**

A. Schedule 5 Part 1 - Does the development comprise a project listed in Schedule 5, **Part 1**, of the Planning and Development Regulations 2001 (as amended)? (Tick as appropriate)	
☐ Yes, specify class [insert here]	**EIA is mandatory** No Screening required
✓ No	Proceed to **Part B**
B. Schedule 5 Part 2 - Does the development comprise a project listed in Schedule 5, **Part 2**, of the Planning and Development Regulations 2001 (as amended) **and** does it meet/exceed the thresholds? (Tick as appropriate)	
✓ No, the development is not a project listed in Schedule 5, Part 2	**No Screening required**
☐ Yes the project is listed in Schedule 5, Part 2 **and** meets/exceeds the threshold, specify class (including threshold): [specify class & threshold here]	**EIA is mandatory.** No Screening required
☐ Yes the project is of a type listed **but** is *sub-threshold*:	Proceed to **Part C**
C. If Yes, has Schedule 7A information been prepared?	
☐ Yes, Schedule 7A information & a Screening Report has been Prepared	**Screening Determination required**
✓ No, Schedule 7A information/screening report has not been prepared.	**Preliminary Examination required.**

Form 2:- Preliminary Examination & Conclusion Report

Step 2: Preliminary Examination: The planning authority shall carry out a preliminary examination of, at the **least, the nature, size or location of the development.**		
	Comment:	**Yes/No/ Uncertain:**
Nature of the development: *Is the nature of the proposed development exceptional in the context of the existing environment?*	The section of the R238 under assessment is located within a rural environment and runs parallel to the shoreline of Lough Foyle SPA (European Conservation Designation). The R238 at this location comprises a wide, rural single carriageway with paved (bound) hard shoulders over some of its length and sections of unpaved (unbound) hard shoulders elsewhere. In places the road alignment hugs the shoreline and is supported by a masonry sea wall. In other places an existing earth bund of varying height separates the road from the shoreline. A gated Donegal County Council storage yard is also located mid-way along the eastern verge. Land uses along this section include dispersed rural housing, businesses, and agriculture land use. Completion of the project will result in: • Provision of a new Vehicle Restraint System (approx. 1,600m) including break points for vehicle accesses where required on the southern side of the existing R238. The three main reasons for installing a VRS are: • To minimise injuries to the occupants of vehicles which leave the carriageway. • To provide protection to third parties who may otherwise be adversely affected by errant vehicles, and • To protect property, damage to which would result in the instability of a structure. It is not exceptional in the context of the existing environment, given its predominant nature as enhancement of road safety and establishing a forgiving roadside at this section of the R238 which focuses in part on progressively embedding the safe systems approach into national, regional and local road networks throughout the County.	**No**

Will the development result in the production of any significant waste, or result in significant emissions or pollutants?	No significant waste streams will be generated by the proposed development in its construction or operation phase. Standard best practice measures in accordance with the Donegal County Development Plan 2018-2024 (as varied) (Objective MRCM-O-2 refers) will be employed during construction for safe and effective site waste management. The Environmental Management practices associated with the Method Statement for this project aim to minimise inputs of pollutants to aquatic systems and avoid serious pollution incidents. • They include good standards that conform to the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (www.fisheriesireland.ie). • The contractors will be made aware of the boundaries of Lough Foyle SPA, as well as all the location of all streams, to prevent any damage or accidents that would impact the SPA directly or indirectly. • No re-fuelling and maintenance of vehicles will take place on-site. • Appropriate spill kits will be kept on site in strategic locations, such as close to refuelling areas, chemical handling areas or waste storage areas. Staff will be trained in their use and in deployment of the spill kits. • There shall be no disposal of waste onto Lough Foyle shore or to any streams, ditch or storm drains. • No excavated material to be disposed of within or at Lough Foyle SPA boundaries. It is envisaged that there will be municipal waste generated by staff on site during completion of works. This will be in the form of organic food waste, dry mixed recyclables, non-recyclables, and glass from the construction related welfare facilities, but this is not considered a significant issue and can be managed in line with best practice. **Thus, no negative impacts are foreseen on the water quality of Lough Foyle and, thus, the habitats within Lough Foyle and the Qualifying Interests will remain the same after the project.**	**No**

Size of the development: Is the **size** of the proposed development exceptional *in the context of the existing environment?* *Are there cumulative considerations having regard to other existing and/or permitted projects?*	The proposed development involves installing a new Vehicle Restraint System (approx. 1,600m) and all other ancillary works abutting the eastern side of the existing R238 at The Three Trees, Quigleys point, Co Donegal. The site is located within a rural environment. As per Section 50(1) of the Roads Act 1993, as amended, the subthreshold criteria for prescribed types of road development in an urban area is 500m of four or more lanes (dual carriageway) or for developments in the rural context, a length of 8km or greater. In the context of Schedule 5, Part 1 & Part 2 of the Planning and Development Regulations 2001, (as amended), it is concluded that the proposed Road safety Improvement scheme: ➢ Is not a development of a class specified in Schedule 5, Part 1 and therefore does not require a mandatory EIA. ➢ As paragraph 10(dd) of Schedule 5, Part 2 is the only reference to road development is listed for *"All private roads which would exceed 2km in length"* and as such the Road Safety Improvement Scheme (RSIS) is not applicable as the works proposed are on existing public road (R238) under the control of Donegal County Council. In this regard, the nature scale and scope of the proposed development is not exceptional and does not trigger the requirement criteria for EIA.	**No**
Location: *Is the proposed development located on, in, adjoining or does it have the potential to impact on an ecologically sensitive site or location?*[1]	The proposed development site is not located within any European site but adjoins **Lough Foyle SPA**. The Lough Foyle SPA is selected as a Special Protection Area (SPA) under the E.U. Birds Directive, as it is part of an internationally important wetland site that regularly supports in excess of 20,000 wintering waterbirds. Due to distance and presence of a hydrological pathway, this European site is deemed within the *zone of influence.* In line with the requirements of Article 6(3) of the Habitats Directive, a Screening Statement for Stage 1 Appropriate Assessment for a Safety Barrier along the R238 in the townland of The Three Trees near Quigleys Point, Co Donegal was undertaken by Environmental Consultants on behalf of Donegal County Council.	**No**

Does the proposed development have the potential to affect other significant environmental sensitivities in the area	The Stage 1 Appropriate Assessment concluded that: 1. The project **is not** directly connected to the management of any European sites. 2. The project, alone or in combination with other plans and projects **is not** likely to have significant effects on any habitats or species for which a European site was designated. 3. Negative impacts from the project are **not** foreseen on species or habitats for which European sites have been designated. 4. Therefore, a Stage 2 Appropriate Assessment **is not** required for this project. The Appropriate Assessment Screening Report prepared for this application confirms no significant effects to European Sites within proximity to the proposed development. Sites designated under the Wildlife Act are not adversely or significantly impacted by the proposed development.	

Preliminary Examination Conclusion:

Based on a preliminary examination of the **nature, size or location** of the development.
(Tick as appropriate)

☑	☐	☐
There is **no real likelihood** of significant effects on the environment. EIA is not required.	There is **real likelihood of** significant effects on the environment. An **EIAR is required**.	There is **significant and realistic doubt** regarding the likelihood of significant effects on the environment. Request the applicant to submit the **Information specified in Schedule 7A** for the purposes of a screening determination. Proceed to Screening Determination.

This document has been prepared and is hereby checked by the following Design Team Members:

Prepared By: ***PATRICK DOHERTY***

Signed: _____ Date: 17th November 2023

Recommended By: ***CHRIS HARLEY***

Signed: _____ Date: 17th November 2023

APPENDIX F – STAGE 1/2 ROAD SAFETY AUDIT REPORT

Comhairle Contae Dhún na nGall
Donegal County Council

MAKING COMPLEX EASY
A TETRA TECH COMPANY

R238 AT THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL

Stage 1 & 2 Road Safety Audit Exception Report

IE000842-RPS-XX-R-C-0007
S4.P01
20th November 2023

Stage 1&2 Road Safety Audit Exception Report

Document status

Status	Revision	Purpose of document	Authored by	Reviewed by	Approved by	Review date
S4	P01	Review and Authorization	PD	KMC	ROC	20/11/23

Approval for issue

ROC	20 November 2023

Prepared by:

RPS

Prepared for:

Donegal County Council

Dublin | Cork | Galway | Sligo | Kilkenny
rpsgroup.com

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RPS Consulting Engineers Limited, registered in Ireland No. 161581
RPS Engineering Services Limited, registered in Ireland No. 99795
The Registered office of each of the above companies is West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7

Contents

Appendices

1 INTRODUCTION

RPS has been commissioned by Donegal County Council (DCC) to provide vehicle restraint system (VRS) design solutions at five locations on the R238 Regional Road at the Three Trees, just south of Quigleys Point in Co. Donegal. A Stage 1 & 2 Road Safety Audit (RSA) was carried out on the proposed VRS scheme between the 3rd and 6th September 2023 by CST Group.

This Exception Report has been prepared in response to the RSA Feedback Form following the Stage 1 & 2 RSA.

An Exception Report Decision Form is attached in Appendix A of this report, which must be completed by the Director of the Overseeing Organisation. The detailed design drawings for the scheme are included in Appendix B of this report and the final Stage 1 & 2 RSA report is included in Appendix C.

2 EXCEPTION

This section identifies one particular issue where the designer has responded to the recommendation in the RSA with the reason it cannot be accepted. This reason then has subsequently not been accepted by the Audit Team.

The particular issue has been extracted from the final Stage 1 & 2 RSA report and is presented in Table 2-1 below, along with an explanation of the exception request.

Table 2-1: Exception Information

RSA Problem Ref.	RSA Report Heading	Description / Response
3.3.5	*Summary*	*Monument at Chainage 1+050*
	Problem	*There is a large monument at Chainage 1+050. The proposed barrier system stops to both sides of this monument. The monument is a solid structure and is located within the carriageway clear zone.* *Errant drivers may strike the monument resulting in vehicle occupant injuries. Additionally, the barrier will not achieve suitable restraint over the terminal length.*
	Recommendation	*The design team should redesign the barrier and remove the break at this location.*
	Problem accepted by Designers	Yes
	Recommended measure accepted by Designers	No
	Reason for not accepting recommended measure	The design team proposed various options at this location, including running a continuous VRS in front of the monument. However, through stakeholder consultation, the LA have confirmed that a break in the VRS is required to allow access to the monument.
	Alternative measures or reasons accepted by auditors	*No. Suggest this item is carried forward to an exception report.*
	Reason for exception	Donegal County Council have undertaken consultation with the stakeholders concerning the monument at chainage 1+050. It has been determined that access is required to the monument and the associated concrete apron to the front for maintenance and to provide a refuge for pedestrians to stand off the R238 carriageway when visiting the monument. Various options, including running a continuous VRS in front of the monument or providing an overlap of the barrier downstream of the monument were proposed. However, these alternatives

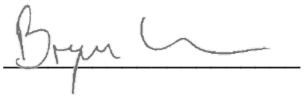
RSA Problem Ref.	RSA Report Heading	Description / Response
		were considered unsuitable through the consultations between the LA and stakeholders. Therefore, the proposed break in the barrier has been minimised (approx. 2.3m) and two T110 terminals and associated transitions have been proposed. It is considered there is no alternative at this location which will both fully protect the monument/height hazard and also allow pedestrian access directly to the front of the monument. Relocation of the monument is also not considered possible at this time. The proposed solution significantly reduces the hazard to errant vehicles at this location and accommodates the requirements of stakeholders. Therefore, due to the site constraints, the existing monument location and stakeholder requirements for access, an exception is sought to provide a break in the VRS (approx. 2.3m), directly in front of the monument in order to provide access.

Appendix A

Road Safety Audit Exception Report Decision Form

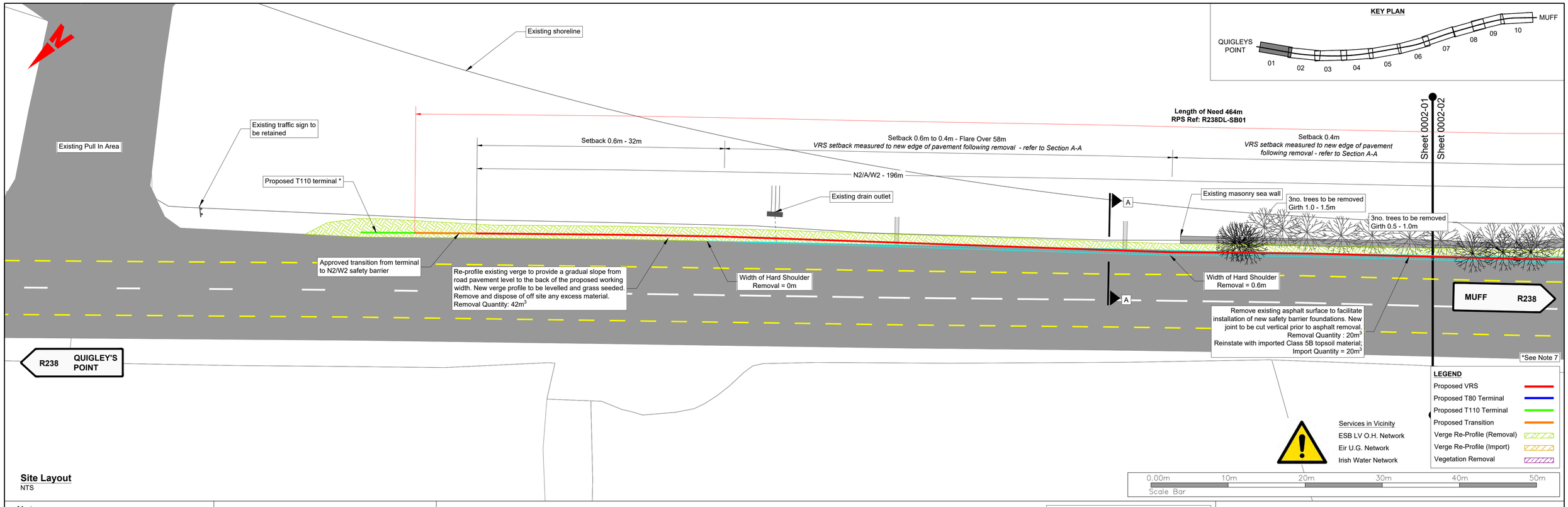
Road Safety Audit Exception Report Decision Form	
Scheme: R238 At The Three Trees, Quigley's Point, Co. Donegal	**Route Number:** R238
Audit Stage: Stage 1 & 2	**Date of RSA:** September 2023

Exception Report Item	RSA Problem Ref.	Decision by Director *Accept or Reject the Exception Report*
1.0	3.3.5	Accept the Exception Report.

Signed:  Director of Overseeing Organisation: Donegal County Council Date: 21st November 2023

Appendix B

Design Drawings



Site Layout
NTS

Notes:

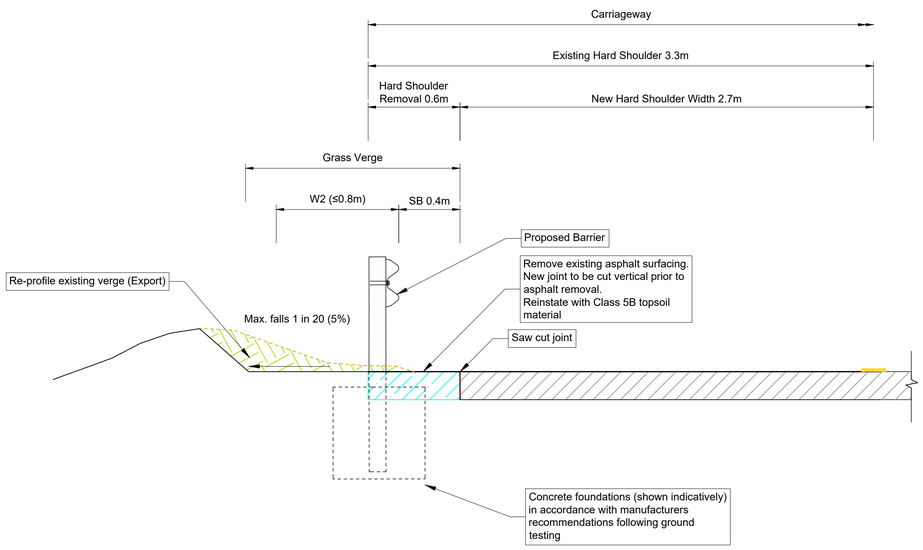
1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
2. Refer to Appendix 4/1 for details of proposed safety barriers.
3. Refer to Appendix 4/3 for details of proposed safety barrier terminals.
4. Setbacks are measured to the traffic face of the safety barrier.
5. All safety barrier positions, terminal positions and setbacks to be confirmed on site with the Employers Representative prior to installation.
6. All safety barrier lengths indicate safety barriers at full height. Terminals are to be in addition to these lengths and are to be in accordance with the manufacturers specification.
7. All safety barrier lengths assume that where P4/T110 terminals are specified, 7m long terminals will be used and where P2/T80 terminals are specified 3m long terminals will be used. If terminals used are of a different length, the safety barrier length shall be adjusted so that the end face of the terminal is located as shown.
8. Safety barrier transition lengths are indicative only and are included within the length of need. A minimum of 2 beam lengths must be provided for progressing systems through different working widths.
9. Working drawings, installation manuals/requirements and test certificates are to be provided to the Employers Representative prior to installation as per Appendix 4/1.
10. Where required, importation, handling and compaction of earthwork materials shall comply with the requirements TII Publication CC-SPW-00600 Specification for Roadworks Series 600.
11. The presence of utilities indicated by ⚠ is based on information received from Utility Providers. Refer to utilities drawings provided for general guidance on the location of existing services. It shall be the responsibility of the Contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes etc. (both underground and overhead) before work commences.

Existing Verge - Looking North

Existing Masonry Sea Wall

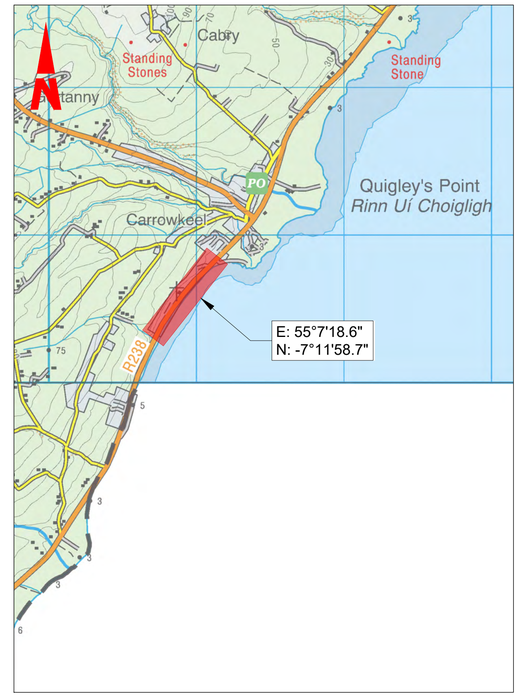
Existing Verge - Looking South

Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier



Section A-A
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

(i) Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients own risk. RPS will not accept any responsibility for any errors from the use of these files, either by human error by the recipient, listing of the un-dimensioned measurements, compatibility with the recipients software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site.

(ii) DO NOT SCALE, use figured dimensions only.

(iii) This drawing is the property of RPS, it is a project confidential classified document. It must not be copied used or its contents divulged without prior written consent. The needs and expectations of client and RPS must be considered when working with this drawing.

(iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others.

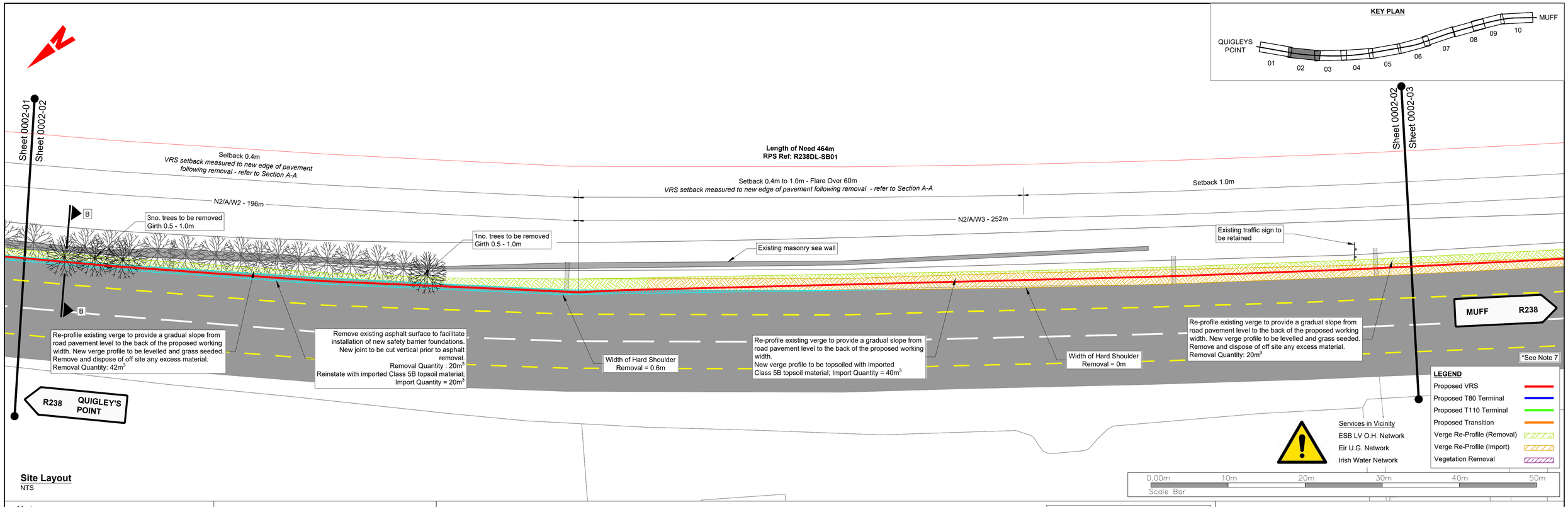
(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn	Chk	Amendment / Issue	App
S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	01 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB01
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-01
Status	S4
Rev	P01

T:\IE000842 - Donegal Regional Road VRS\8.0 Drawings\DG\IE000842-RPS-SB-XX-D-C-0002 - R238 Barrier Design.dwg



Site Layout
NTS

Notes:

1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
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3. Refer to Appendix 4/3 for details of proposed safety barrier terminals.
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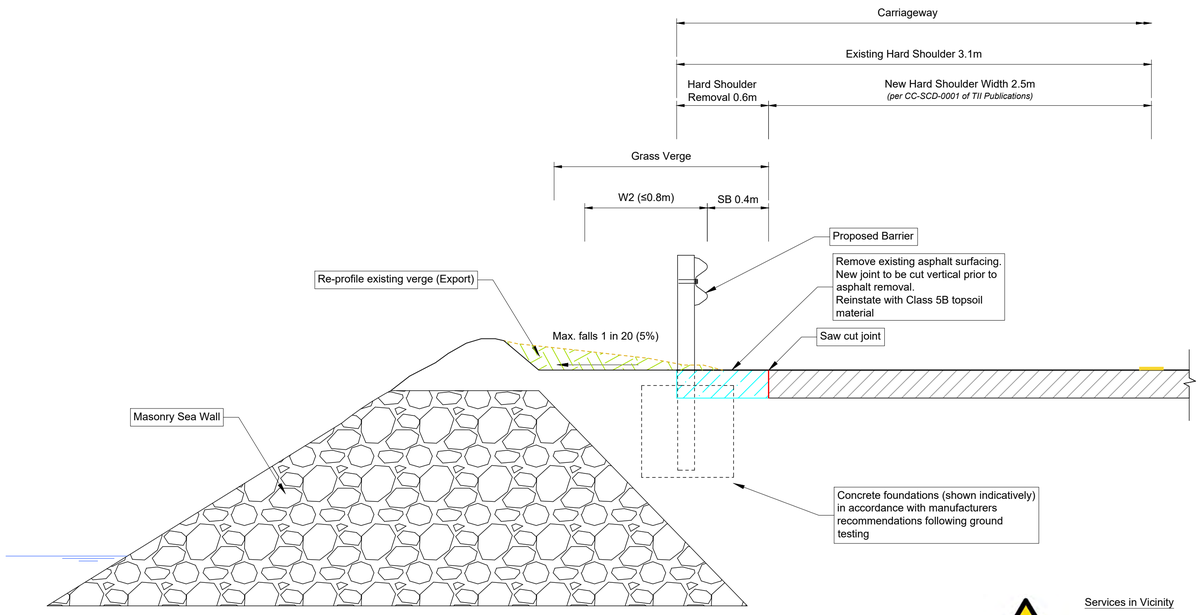
Existing verge

Existing verge looking south

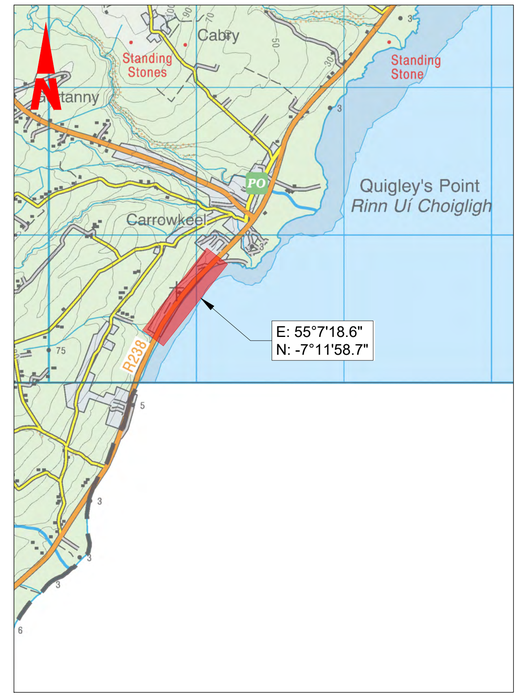
Existing verge looking north

Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier



Section B-B
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn	Chk	Amendment / Issue	App
S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	02 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB01
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-02
Status	S4
Rev	P01

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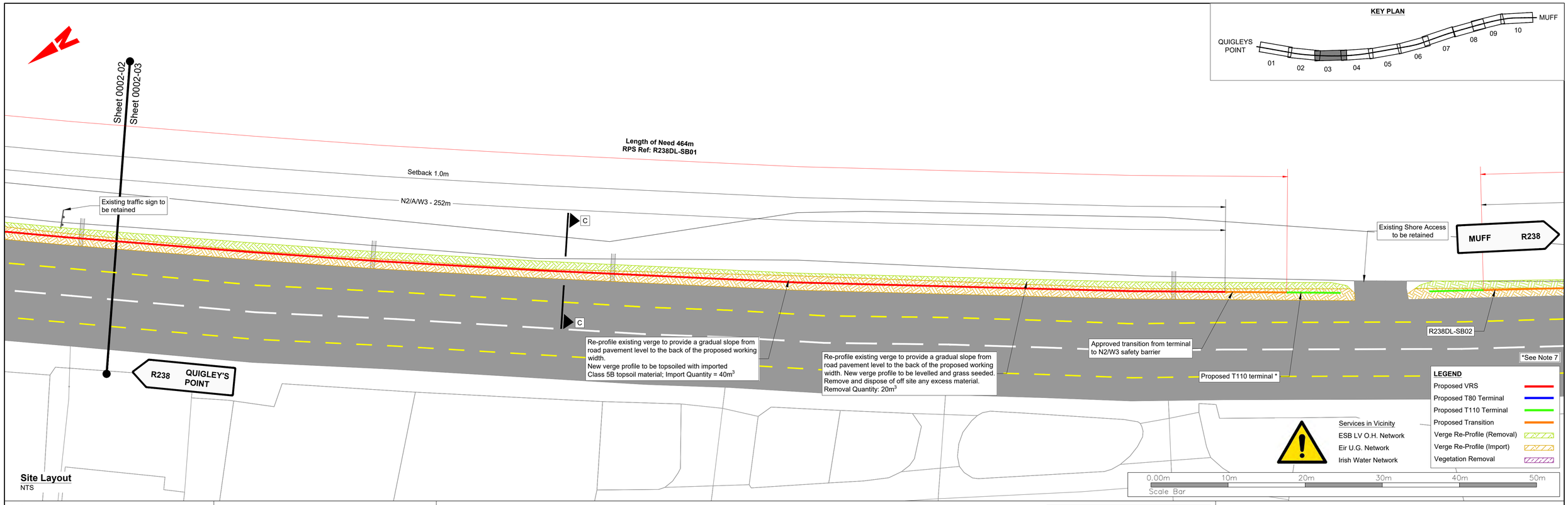

Site Layout
NTS

Notes:

1. Proposed safety barriers shall comply with the requirements of TII Publication CC-SPW-00400 and TII Publications DN-REQ-03034 The Design of Road Restraint Systems (Vehicle and Pedestrian) for Roads and Bridges, DN-REQ-03079 Design of Road Restraint Systems for Constrained Locations (Online Improvements, Retrofitting and Urban Settings) and DN-GEO-03036 Cross Sections and Headroom.
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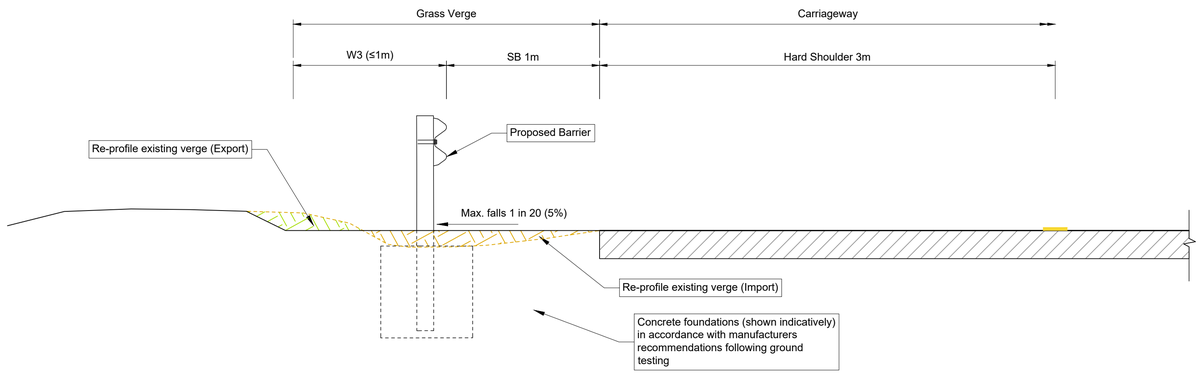
Existing verge looking north

Existing shore access to be retained

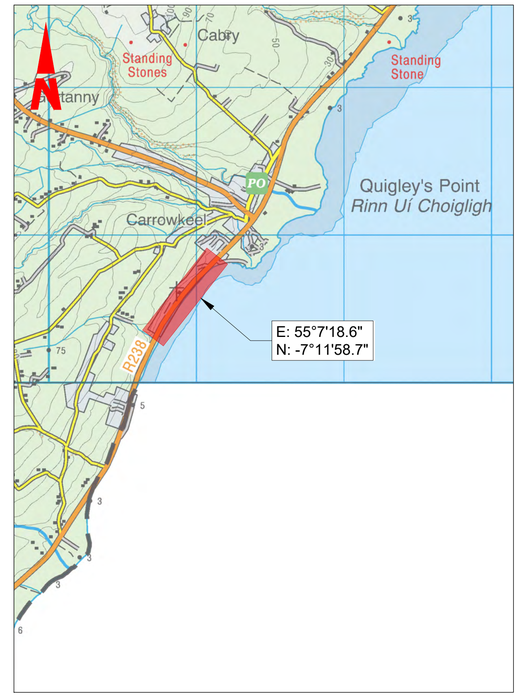
Existing verge looking north

Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier



Section C-C
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

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Rev	Date	Drn	Chk	Amendment / Issue	App
S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS
A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	03 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB01
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-03
Status	S4
Rev	P01

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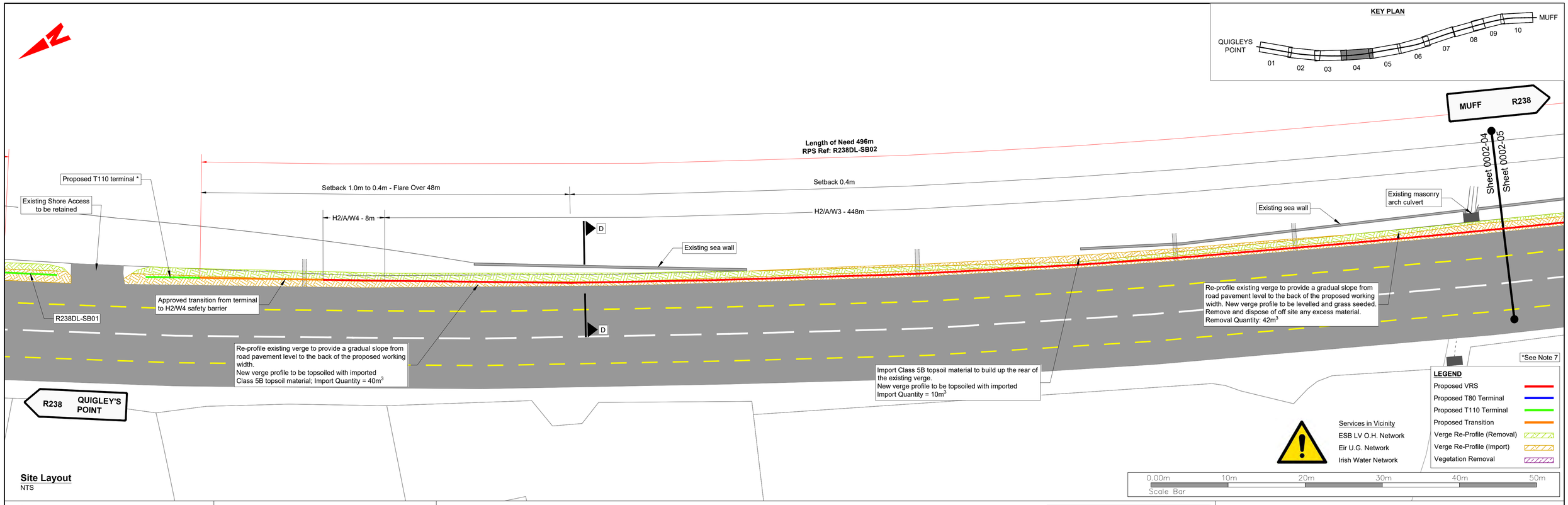

Site Layout
NTS

Notes:

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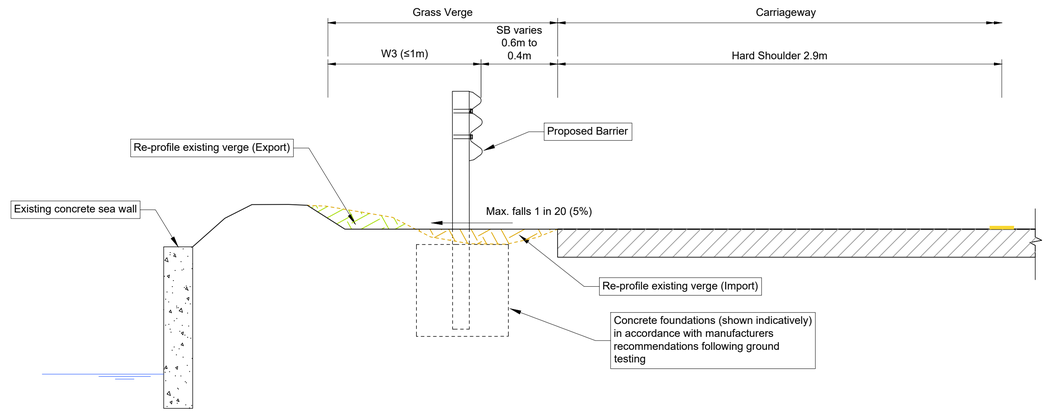
Existing shore access to be retained

Existing verge looking south

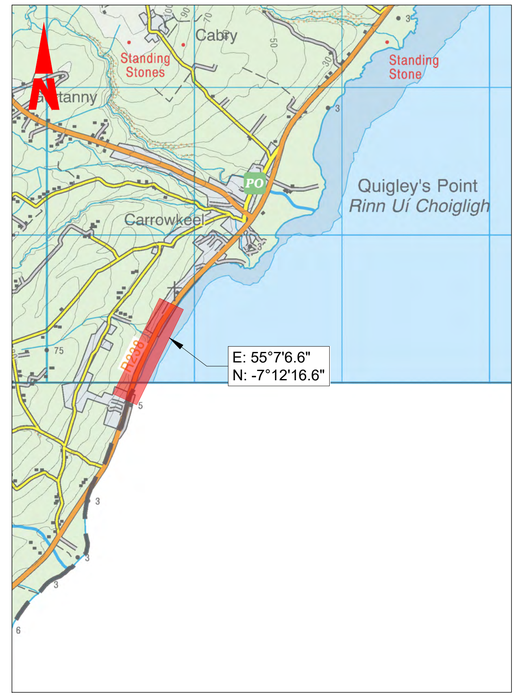
Existing concrete sea wall

Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier



Section D-D
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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Rev	Date	Drn	Chk	Amendment / Issue	App
S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	04 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB02
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-04
Status	S4
Rev	P01

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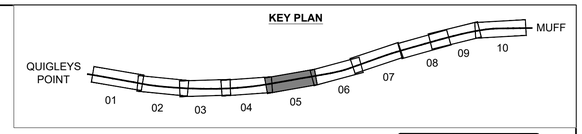

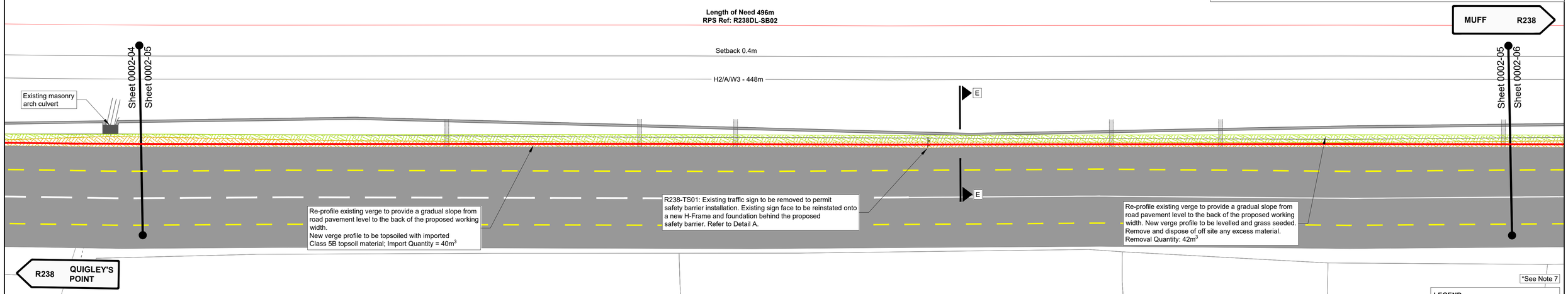

Site Layout
NTS

*See Note 7

LEGEND
- Proposed VRS
- Proposed T80 Terminal
- Proposed T110 Terminal
- Proposed Transition
- Verge Re-Profile (Removal)
- Verge Re-Profile (Import)
- Vegetation Removal

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network

0.00m 10m 20m 30m 40m 50m
Scale Bar

Notes:

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Existing masonry arch culvert

Existing TS01

Existing verge looking south

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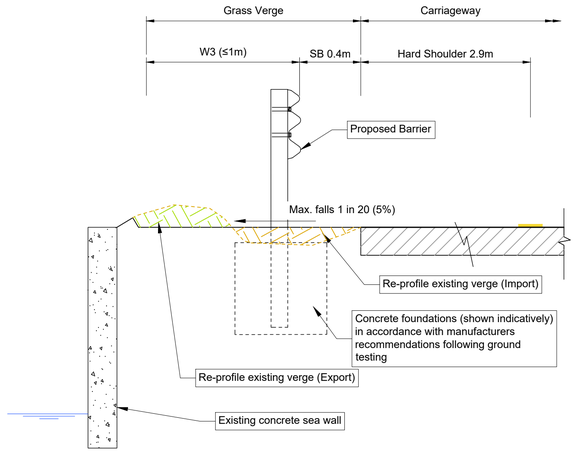


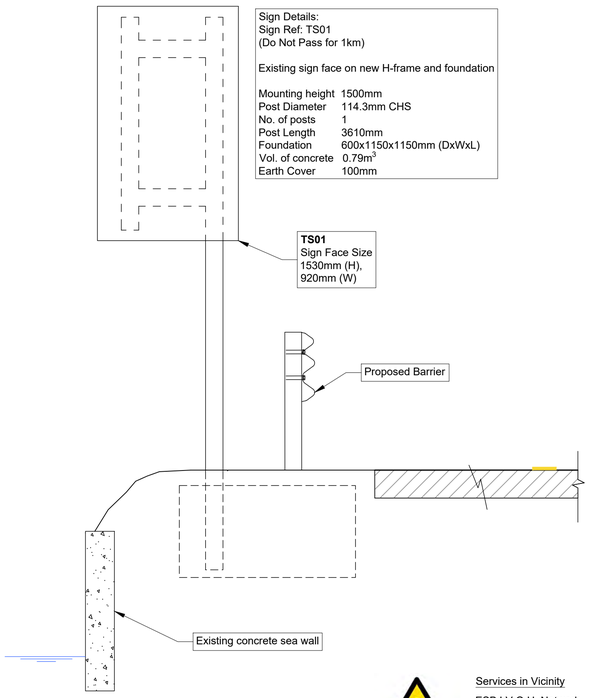
Section E-E
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network

Sign Details:
Sign Ref: TS01
(Do Not Pass for 1km)

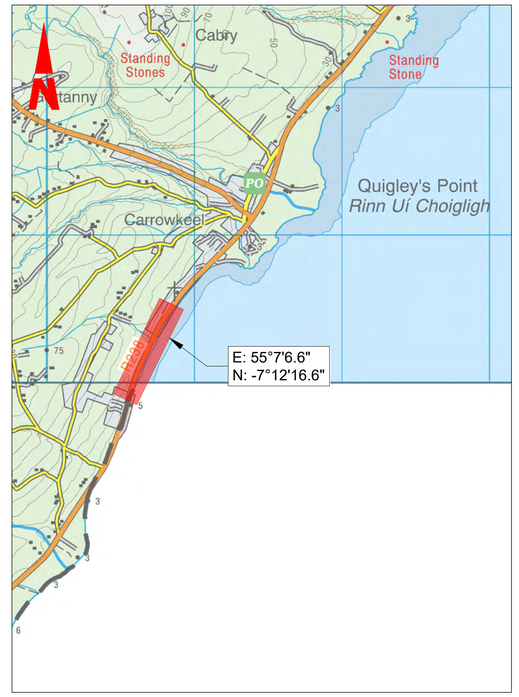
Existing sign face on new H-frame and foundation

Mounting height	1500mm
Post Diameter	114.3mm CHS
No. of posts	1
Post Length	3610mm
Foundation	600x1150x1150mm (DxWxL)
Vol. of concrete	0.79m3
Earth Cover	100mm



Detail A
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

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S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	05 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB02
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-05
Status	S4
Rev	P01

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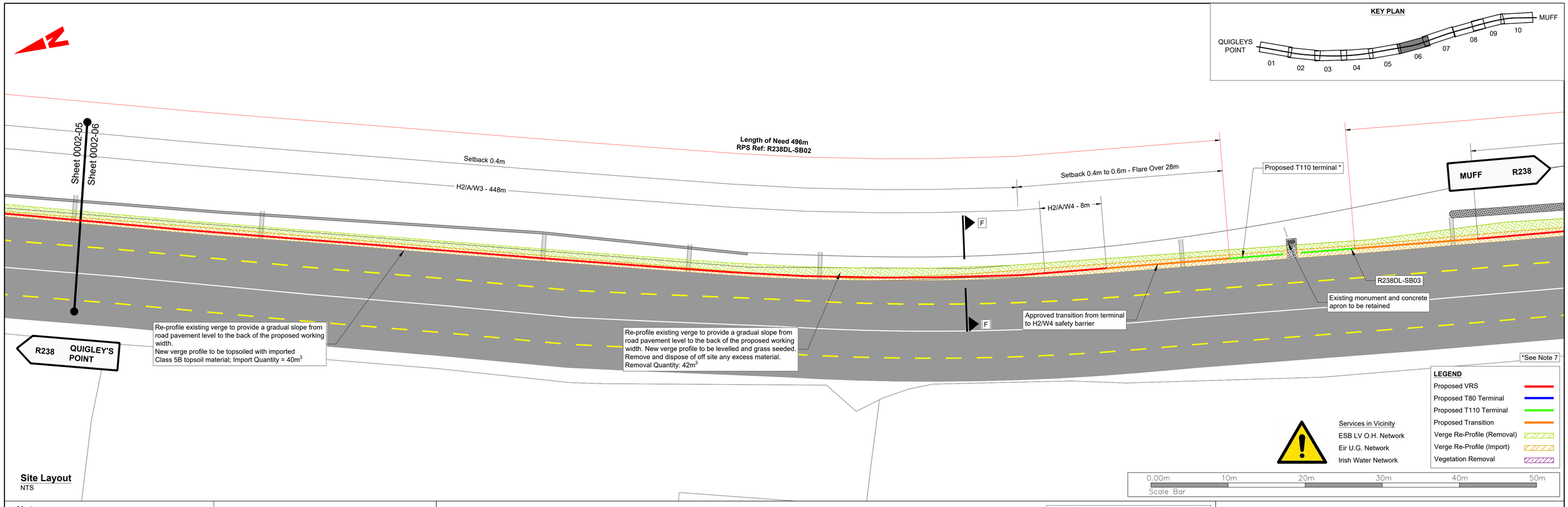

Site Layout
NTS

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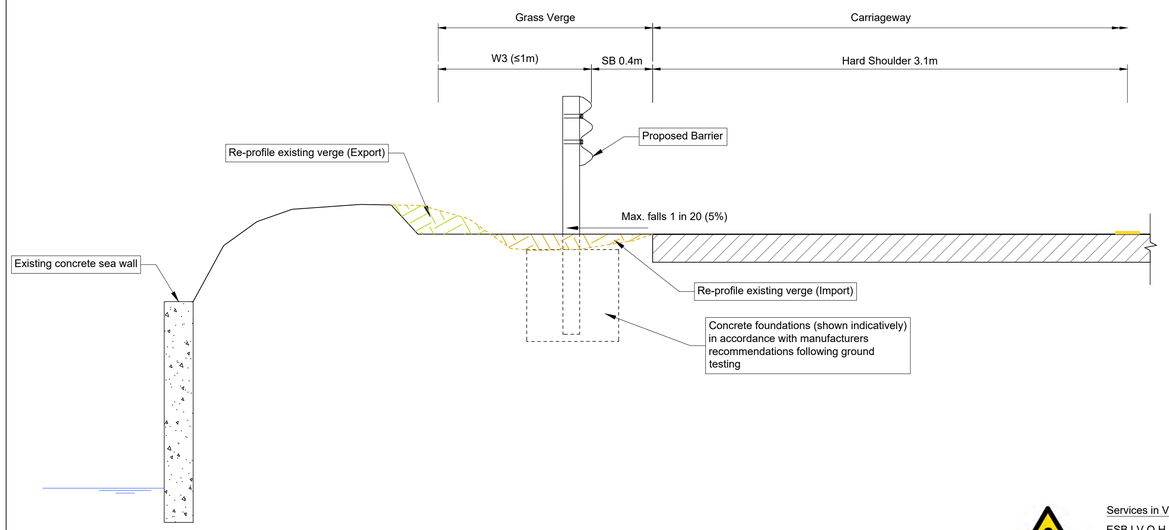
Existing verge looking south

Existing monument and concrete apron

Existing verge looking south



Section F-F
NTS

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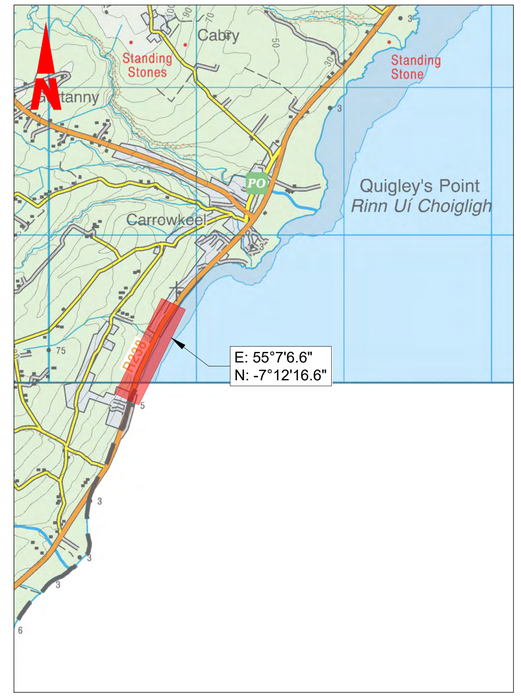
Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

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Status	S4
Rev	P01

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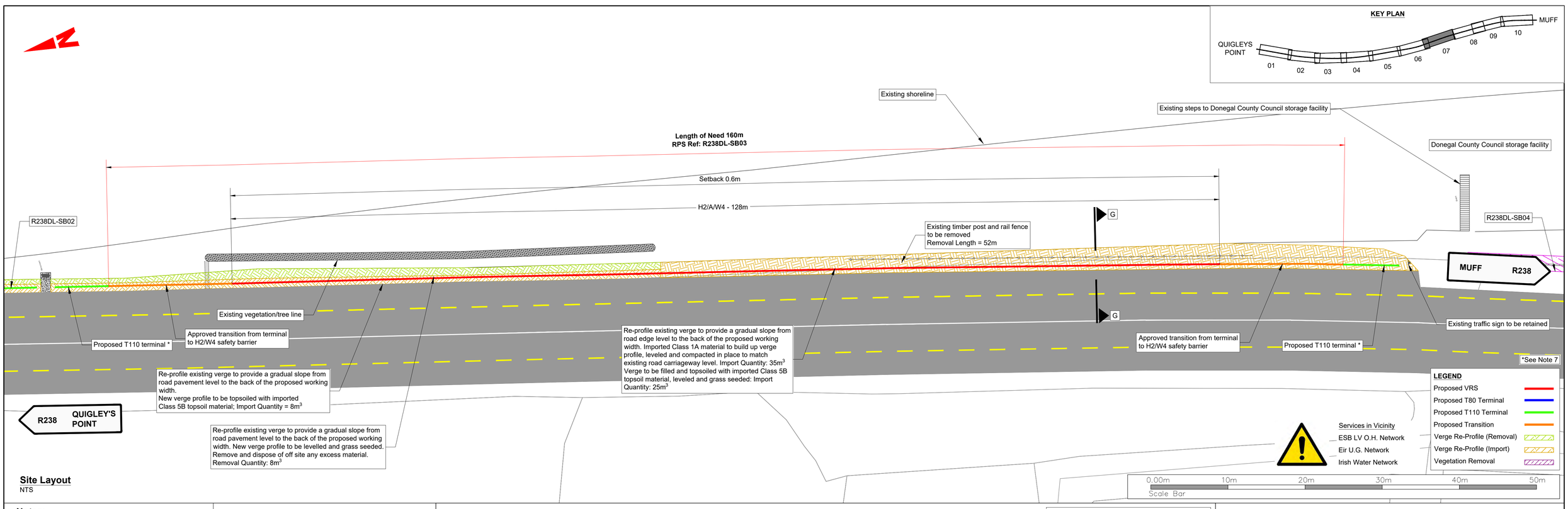

Site Layout
NTS

Notes:

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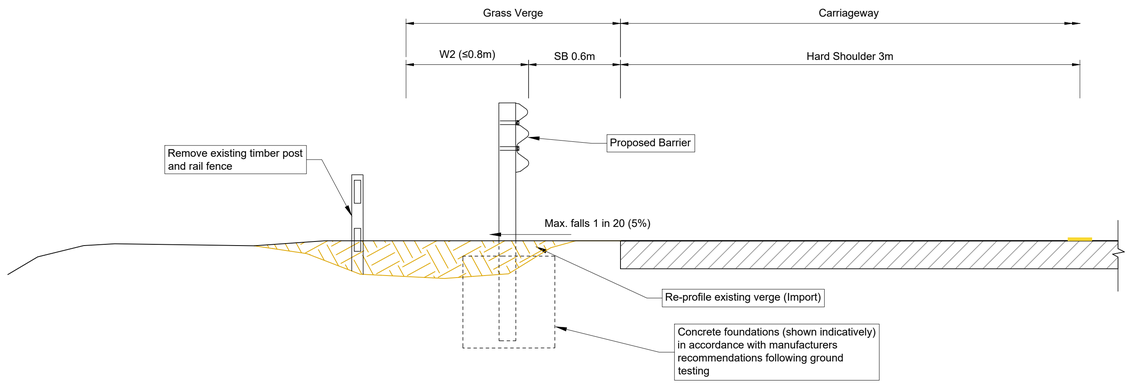
Existing vegetation/tree line

Existing verge and timber post and rail fence

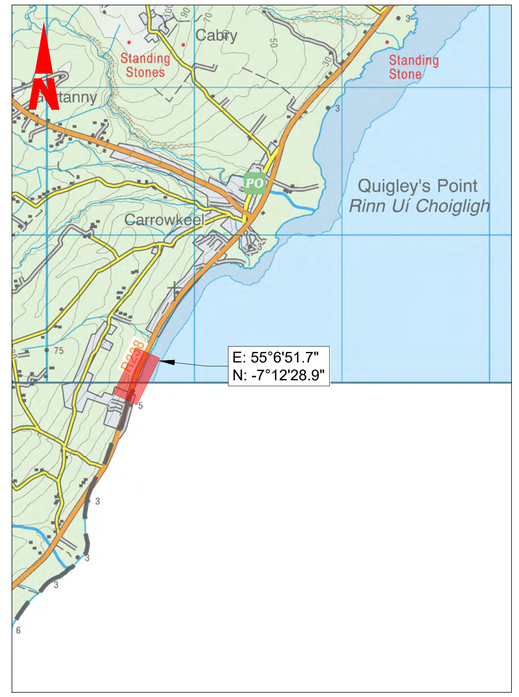
Existing verge looking north



Section G-G
NTS

Where the set-back is less than 1.5m, the mounting height of the barrier shall be related to the edge of the road pavement. Elsewhere, the height shall be measured from the general ground level in close proximity to the front of the barrier

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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Rev	Date	Drn	Chk	Amendment / Issue	App
S4.P01	07.11.23	KMC	PD	REVIEW AND AUTHORIZATION	PC

RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	07 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB03
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-07
Status	S4
Rev	P01

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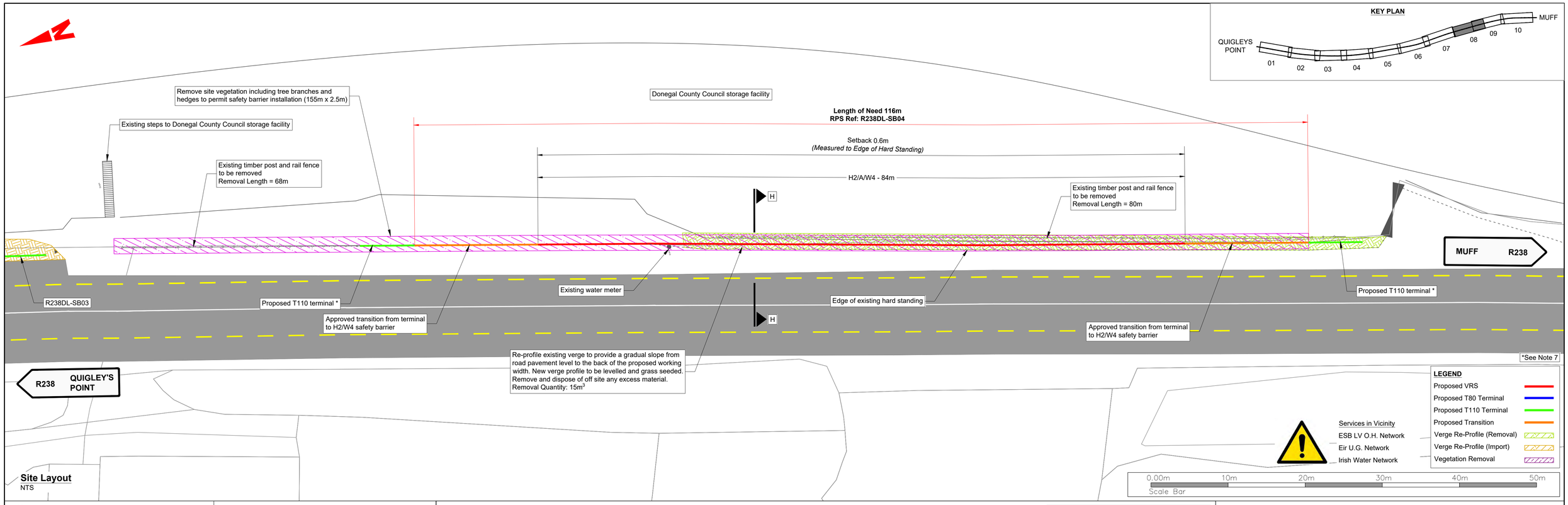

Site Layout
NTS

Notes:

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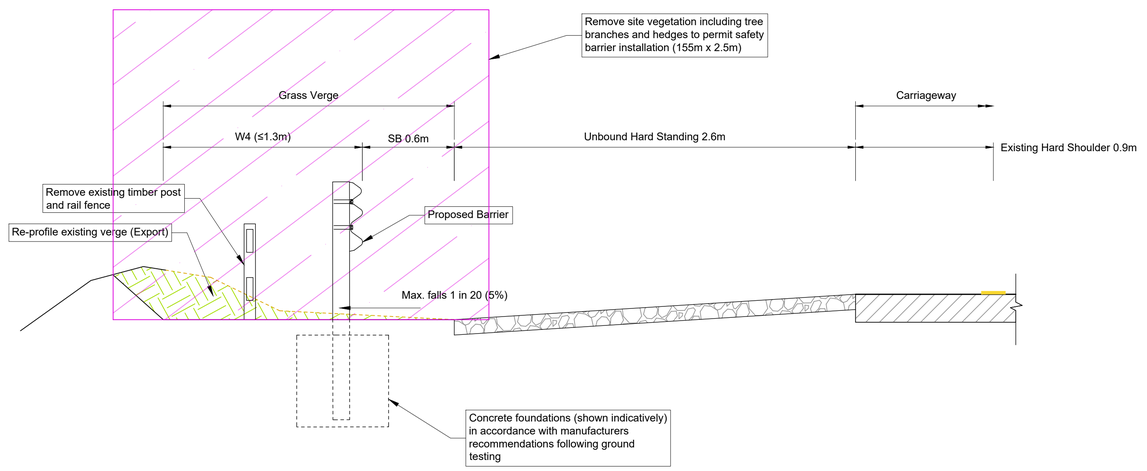
Existing verge looking south

Existing verge looking north

Existing storage facility access



Section H-H
NTS

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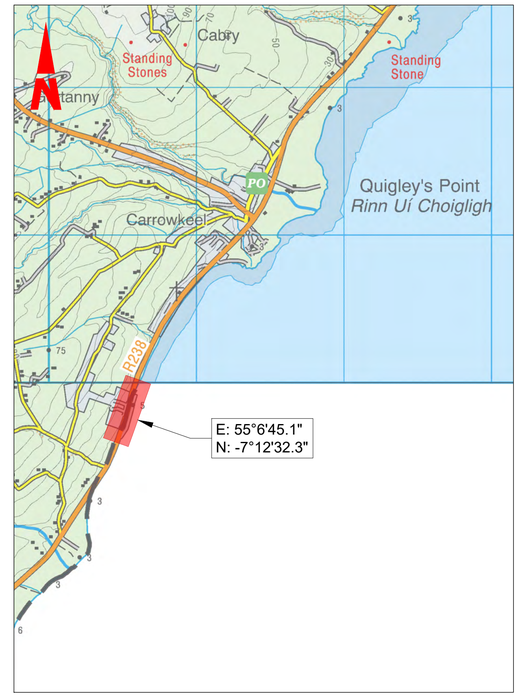
Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

General Notes

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RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	08 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB04
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-08
Status	S4
Rev	P01

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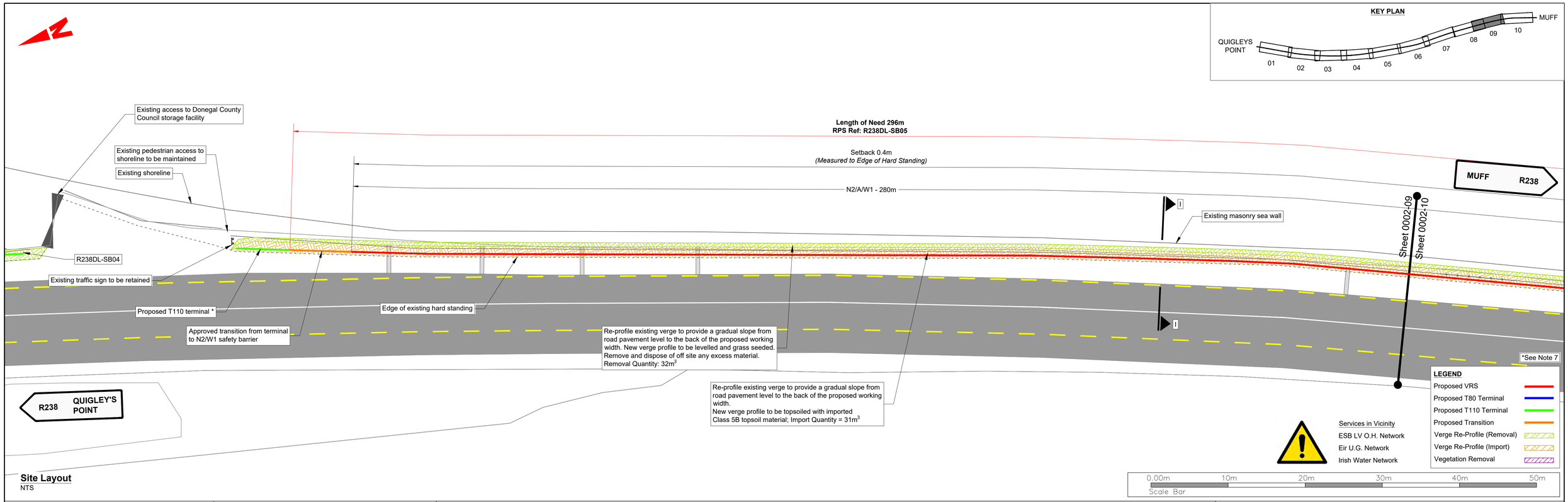

Site Layout
NTS

Notes:

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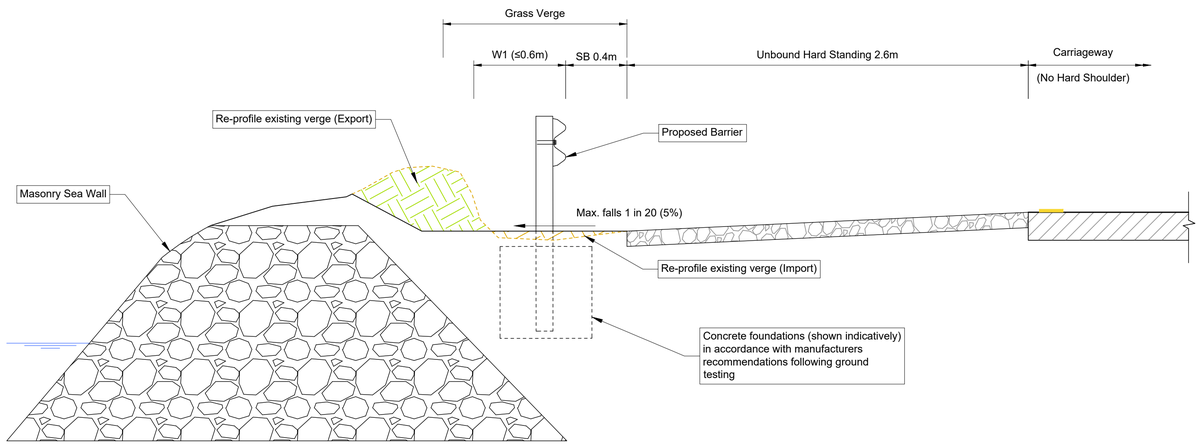
Existing verge looking south

Existing verge and sea wall

Existing verge looking north



Section I-I
NTS

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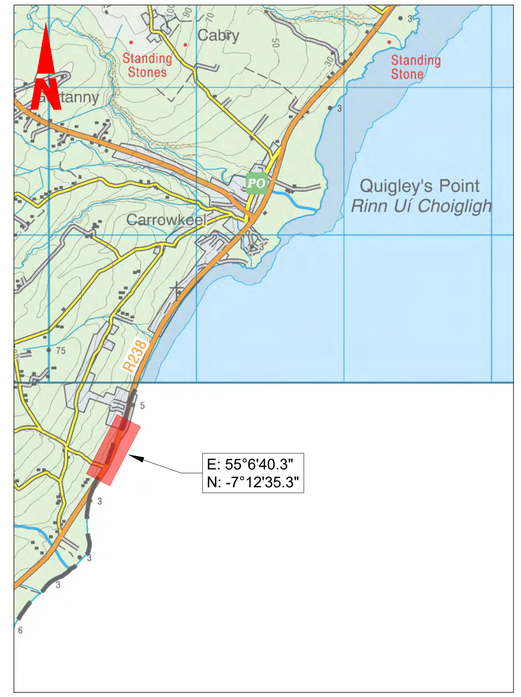
Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

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RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
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Sheets	09 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
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Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-09
Status	S4
Rev	P01

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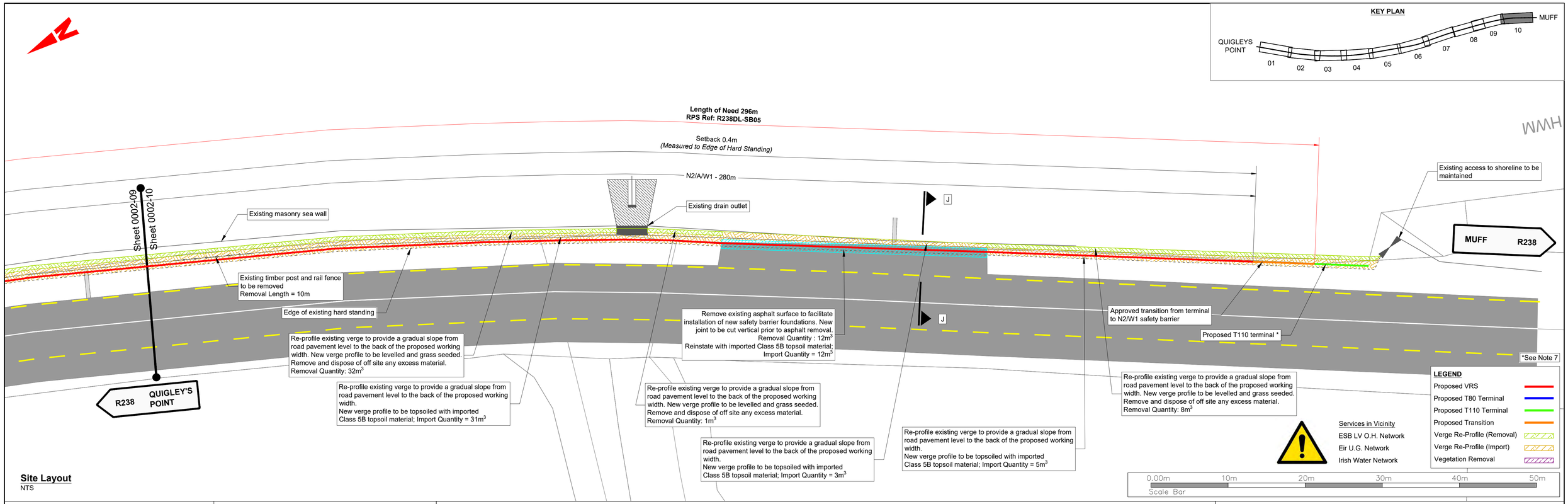

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NTS

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Existing drain outlet

Existing verge looking south

Existing access to shoreline

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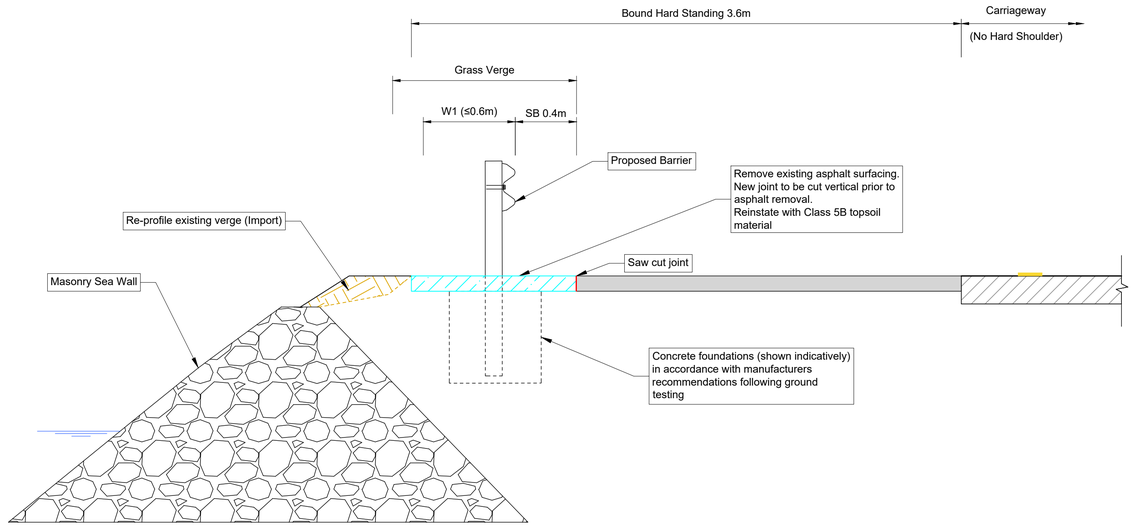
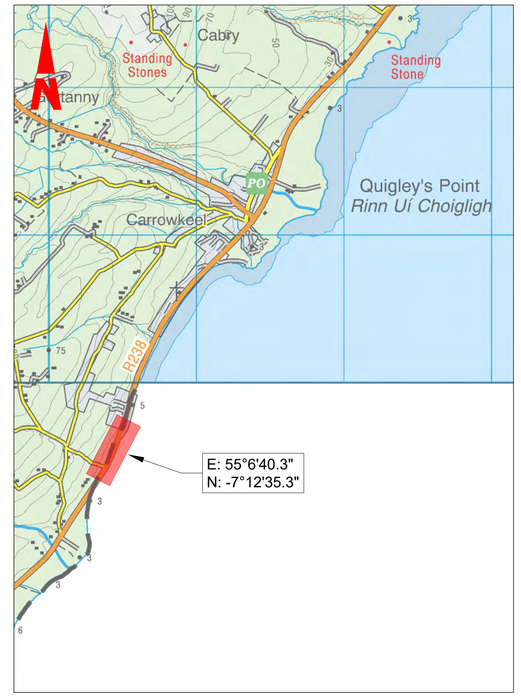


Section J-J
NTS

Services in Vicinity
ESB LV O.H. Network
Eir U.G. Network
Irish Water Network



Site Location
NTS

Client

Comhairle Contae Dhún na nGall
Donegal County Council

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RPS A TETRA TECH COMPANY

Scale	N.T.S. @ A1 N.T.S. @ A3
Created on	AUGUST 2023
Sheets	10 of 10
Project	R238 THE THREE TREES, QUIGLEYS POINT, CO. DONEGAL
Title	PROPOSED SAFETY BARRIER R238DL-SB05
Model File Identifier	IE000842-RPS-XR-XX-M-C-0003
File Identifier	IE000842-RPS-SB-XX-D-C-0002-10
Status	S4
Rev	P01

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Appendix C

Road Safety Audit

Stage 1/2 Road Safety Audit

Proposed Safety Barrier R238, The Three Trees, Quigleys Point, Co. Donegal.

On behalf of **Donegal County Council**

Prepared By:

CST GROUP
Chartered Consulting Engineers
1, O'Connell Street, Sligo, F91 W7YV
+353 (0)71 919 4500 info@cstgroup.ie www.cstgroup.ie

November 2023

Civil
Structural
Traffic

Table of Contents

DOCUMENT CONTROL

Revision	R0	R0									
Purpose of Issue: P=Preliminary C=Comment F=Final	C	F									
Date:	06 09 23	09 11 23									
Originator:	SS	SS									
Checked By:	PJG	PJG									
Approved By:	SS	SS									

1. INTRODUCTION

1.1. This report describes a Stage 1/2 Road Safety Audit carried out on behalf of Donegal County Council on the proposed safety barrier along the R238, The Three Trees, Quigleys Point, Co. Donegal.

1.2. The audit was carried out between 3rd – 6th September 2023.

1.3. The audit team were as follows:

Team Leader:

Stuart Summerfield, HNC (Civil) FCIHT FSoRSA
Certificate of Competency in Road Safety Audits (SoRSA, 2015)
TII Auditor Ref. SS73290

Team Member:

PJ Gallagher, BEng M.Inst.A.E.A. MITAI
TII Auditor Ref. PG3425716

1.4. The audit comprised an examination of the drawings relating to the scheme supplied by the design office. A site visit was carried out by both Audit Team members together on 3rd September between the hours of 12:30-13:30. Weather conditions during the inspection were fine and the road surface was dry. Traffic conditions were considered busy with cars and light goods vehicles. Photographs were taken during the inspection.

1.5. This Stage 1/2 audit has been carried out in accordance with the relevant sections of the Transport Infrastructure Ireland (TII) Publication (Standard) GE-STY-01024 (Dec 2017) 'Road Safety Audit'. The audit team has examined only those issues within the design relating to the road safety implications of the scheme and has therefore not examined or verified the compliance of the design to any other criteria.

1.6. **Appendix A** describes the documents examined by the Audit Team.

Appendix C contains the Audit Feed Back Form. The Designer shall consider the Audit Report and prepare a Designer Response to each of the recommendations, using the Feedback Form. The response shall state clearly whether each recommendation is accepted, rejected, or whether an alternative recommendation is proposed. Copies of the Designer Response shall be sent to the Employer and the Audit Team. The Audit Team shall then consider the Designer Response and indicate on the Feedback Form whether the Designer's response to each recommendation is accepted. The completed Report contains the completed Feedback Form with signatures of all three parties involved - Designer, Audit Team Leader and Employer.

1.7. All of the problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise collision occurrence.

2. ITEMS RESULTING FROM PREVIOUS STAGE 1/2 AUDIT

No previous audit has been offered for reference.

3. ITEMS RESULTING FROM THIS STAGE 1/2 AUDIT

3.1 Collision Data

Collision data provided with this scheme recorded 2 fatal, 2 minor injury and 6 material damage collisions during the period 09 July 2011 and 01 January 2020.

3.2 General Problems / Problems at Multiple Locations

3.2.1 Muff to Quigley Point Greenway

Problem: The audit team observed construction works are ongoing for the Muff to Quigleys Point greenway scheme. It appears this greenway scheme overlaps with the proposed VRS scheme however, the greenway scheme is not shown on the proposals drawings.

Hazard: There is concern that the surface of the greenway may fall within the barrier working width. Errant vehicles that impact with the VRS may deflect the barrier and impact with greenway users. Additionally, entrance and exit points to / from the greenway may be blocked by the VRS.

Recommendation: The design team should review the greenway design and ensure the proposed VRS does not have any negative safety implication for greenway users.

3.2.2 Set Back to Face of VRS

Problem: There are a number of locations where the set-back to the face of the VRS is shown as 0.4m. This set back is considered insufficient for an errant vehicle driver to acknowledge the audible and physical warning given by the unbound surface between the carriageway and barrier face in order to correct the vehicle.

Hazard: Impact with the barrier may result.

Recommendation: Increase the barrier set-back, where possible in compliance with the recommendations contained in TII publication DN-REQ-03034. Where this is not possible replace the carriageway edge line with a raised profile edge marking.

3.3 Problems at Specific Locations

3.3.1 Road Sign at Chainage 0+000

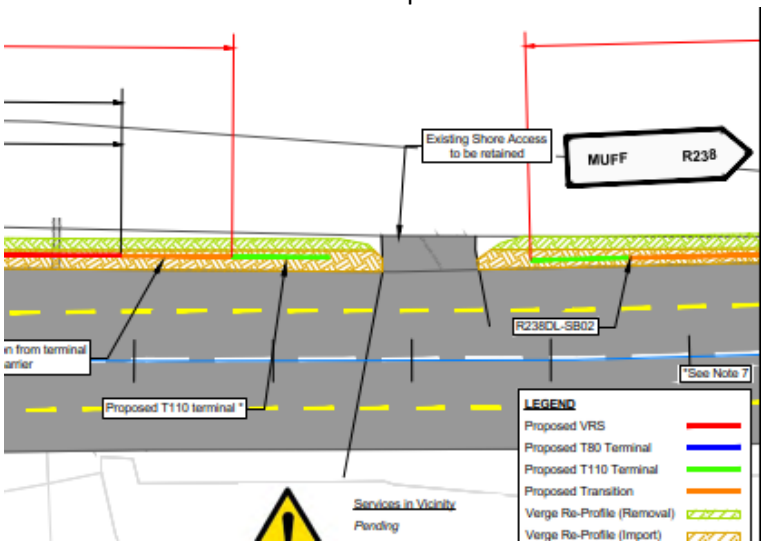
Problem: The existing road sign at chainage 0+000 incorporates two poles at close centres. This sign is not protected by the proposed barrier.

Hazard: Errant vehicle impact with the sign may result in vehicle occupant injury.

Recommendation: Relocate the sign to the rear of the barrier working width.

3.3.2 Shore Access at Chainage 0+500

Problem: There is a gap in the barrier at chainage 0+500 to retain an access to the shore. The gap in the barrier is much wider than required for vehicles to access the shore line.

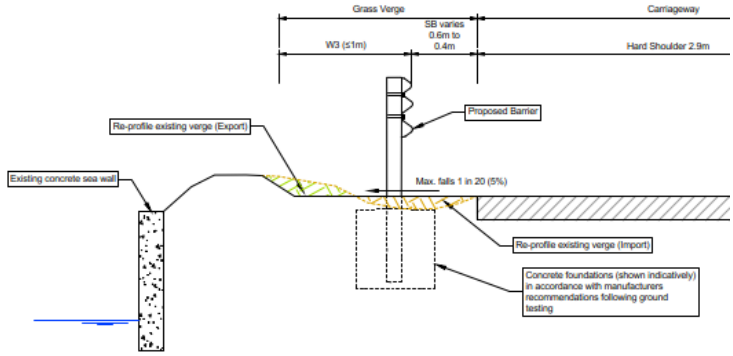


Hazard: Errant vehicles may depart the carriageway and travel between the two barriers resulting in entry to the water hazard.

Recommendation: Reduce the gap in the barrier.

3.3.3 Sea Wall at Chainage 0+575 (Section D-D)

Problem: The proposed detail shown in Section D-D indicates approximately 1m of level ground to the rear of the barrier and the top of the sea wall appearing roughly level with the carriageway. Inspection undertaken on site found the sea wall is considerably lower than the carriageway level.

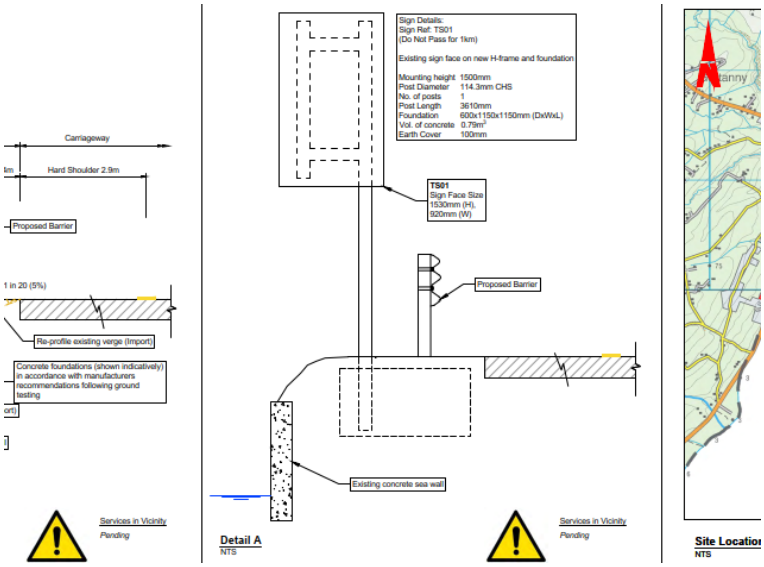


Hazard: There is concern that the ground to the rear of the barrier may fall away, particularly if the barrier is hit. The barrier may collapse and permit errant vehicles to enter the water hazard.

Recommendation: The design team should ensure the barrier achieves the required performance.

3.3.4 Existing Sign at Chainage 0+800

Problem: There is an existing sign at Chainage 0+800 shown to be relocated to the rear of the barrier on a new 114.3mm CHS post. The sea wall is close to the carriageway edge in this location. There is clearance between the barrier and the post shown on Detail A.



Hazard: The post may compromise the barrier performance. Errant vehicle occupants may sustain injury.

Recommendation: Ensure the post is installed outside of the barrier working width.

3.3.5 Monument at Chainage 1+050

Problem: There is a large monument at Chainage 1+050. The proposed barrier system stops to both sides of this monument. The monument is a solid structure and is located within the carriageway clear zone.

Hazard: Errant drivers may strike the monument resulting in vehicle occupant injuries. Additionally, the barrier will not achieve suitable restraint over the terminal length.

Recommendation: The design team should redesign the barrier and remove the break at this location.

3.3.6 Steps at Chainage 1+200

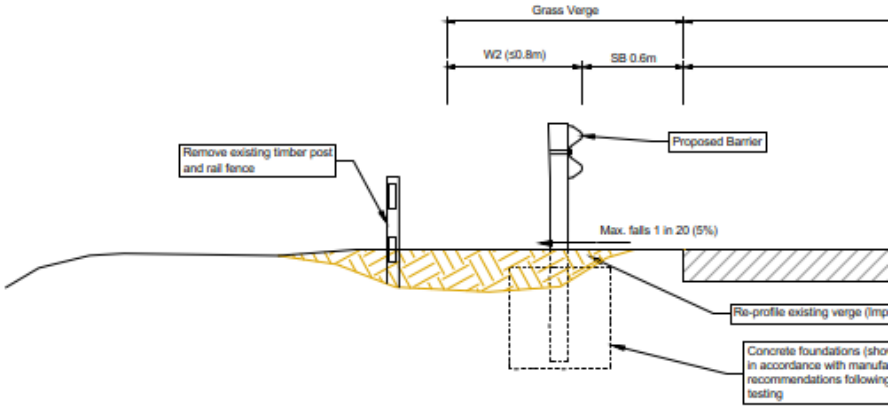
Problem: There is a break in the proposed barrier between chainage 1+200 – 1+250. There are steps at this location, and it is assumed access to these steps is the reason for the break in the barrier. Site observations suggest these steps have not been used for many years. The steps are now unstable and not suitable for safe use.

Hazard: Although it is unclear if the steps or falls are within the clear zone, users may impact with the barrier terminals.

Recommendation: The barrier should be continuous without any short gaps.

3.3.7 Barrier Working Width Chainage 1+100-1+175 (Section G-G)

Problem: A W2 barrier is indicated on the drawings for use between chainage 1+100 – 1+175. There appears to be reasonably level lands to the rear of this section of barrier. It is unclear why the designer has chosen to install a W2 barrier at this location.



Section G-G

Hazard: Occupants of errant vehicles may sustain injury in the process of impact with the stiff barrier.

Recommendation: The design team should review the available working width and propose a less stiff barrier if found to be viable.

3.3.8 Vehicle access at Chainage 1+375

Problem: There is a gated vehicle access to be retained at Chainage 1+375. There is a high earth mound and RHS gate post that may be located within the carriageway clear zone at this location, or not protected by the barrier system.

Hazard: Vehicles may strike the mound or solid gate post.

Recommendation: Remove the mound and gate post and replace with a passively safe installation.

3.3.9 VRS at Chainage 1+400

Problem: The proposed VRS terminal commences at Chainage 1+400. There are roadside hazards, including a steep pedestrian access to the beach and a sign with double poles that appear to fall within the clear zone between the gated access and the start of the barrier.

Hazard: Vehicles may depart the carriageway and impact with the roadside hazards.

Recommendation: The pedestrian beach access should be relocated to the side of the gated access track and the barrier extended to protect the existing hazards.

4. AUDIT TEAM STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement which we recommend should be studied for implementation. No one in the Audit Team has been involved with the scheme design as shown in Appendix A.

Signed .....

Stuart Summerfield
Audit Team Leader

Date 6th September 2023

Signed .....

PJ Gallagher
Audit Team Member

Date 6th September 2023

APPENDIX A LIST OF DOCUMENTS EXAMINED

DOCUMENT REF / NAME:	RECEIVED FROM:	DATE:
IE000842-RPS-SB-XX-D-C-0002-01 S3 P01 SB01	RPS	25/08/2023
IE000842-RPS-SB-XX-D-C-0002-02 S3 P01 SB02	RPS	25/08/2023
IE000842-RPS-SB-XX-D-C-0002-03 S3 P01 SB03	RPS	25/08/2023
IE000842-RPS-SB-XX-D-C-0002-04 S3 P01 SB04	RPS	25/08/2023
SRA R2238 Quigleys Point Junction – Muff Side	RPS	25/08/2023
R245, The Pans Cranford & R238 Quigley Point – Collision Stats	RPS	25/08/2023

APPENDIX B RSA FEEDBACK FORM

ROAD SAFETY AUDIT FEEDBACK FORM

CST Group Chartered Consulting Engineers
1, O'Connell Street, Sligo, F91 W7YV, Ireland

Scheme: Proposed Safety Barrier R238, The Three Trees, Quigleys Point, Co. Donegal

Audit Stage: 1/2 **Date Audit Completed:** 06/09/2023 **Route No.** R238 **Our Ref :** 123294|R0

TO BE COMPLETED BY DESIGNER				TO BE COMPLETED BY AUDIT TEAM LEADER
Paragraph No. in Safety Audit Report	**Problem accepted (Yes/No)**	**Recommended measure accepted (Yes/No)**	**Describe alternative measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted.**	**Alternative measures or reasons accepted by Auditors (Yes/No)**
3.2.1	Y	Y	The design team have been informed the proposed greenway does not extend with this scheme extents. However, the greenway design has been requested for review and is pending receipt.	
3.2.2	Y	N	The set-back of the VRS has been reduced to 0.4m in some locations due to the constrained verge width created by the existing Lough Foyle sea wall which supports the road. It is acknowledged this is below TII standards for national roads. Due to the narrow verge, it is not possible to increase the set-back in this location without undertaking major civil engineering works to the sea wall (and all associated assessments and approvals) which are beyond this scheme, and would potentially leave this hazard exposed for what could take a number of years. A full hard shoulder width has been retained in these locations to provide adequate space for a vehicle to travel within the hard shoulder without impacting the VRS.	Yes
3.3.1	N	N	TII Publication DN-REQ-03034 states that steel posts of 76mm diameter may be used as passively safe posts where post centres are ≥ 750mm spacing. In this location, the existing sign posts are 76mm diameter and circa 760mm spacing.	Yes
3.3.2	Y	Y		
3.3.3	Y	Y		
3.3.4	Y	N	The sign post is proposed within the VRS working width, however due to the constrained verge width in this location it is not possible to relocate it outside the working width. Due to the hazard type in this location, high containment VRS (H2) is proposed in accordance with TII Standards in front of the sign post. The H2 containment may result in lighter vehicles not utilising the full working	Yes

TO BE COMPLETED BY DESIGNER				TO BE COMPLETED BY AUDIT TEAM LEADER
Paragraph No. in Safety Audit Report	**Problem accepted (Yes/No)**	**Recommended measure accepted (Yes/No)**	**Describe alternative measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted.**	**Alternative measures or reasons accepted by Auditors (Yes/No)**
			width of the VRS upon impact and so are less likely to strike the sign post within the VRS working width.	
3.3.5	Y	N	The design team proposed various options at this location, including running a continuous VRS in front of the monument. However, through stakeholder consultation, the LA have confirmed that a break in the VRS is required to allow access to the monument.	No. Suggest this item is carried forward to an exception report.
3.3.6	N	N	The steps and embankment hazard in this location are outside of the clear zone, hence the break in the VRS for access. The LA have confirmed the land between the road and the steps/embankment is within 3rd party private ownership, hence the need for access at this time.	Yes
3.3.7	Y	Y		
3.3.8	Y	N	The VRS will be extended closer to the gate (circa 2m) to provide additional coverage of the earth mound. However, it is noted that TII Publication (gate standard detail CC-CSD-00310) comprises a gate hanging post which is also considered a roadside hazard (114.3mm diameter & 3.6mm thick). The design team are not aware of any suitable gate hanging post which is also passively safe. Therefore replacing the existing post hanging gate with the current TII standard detail is not considered of significant benefit for road safety.	Yes
3.3.9	Y	N	It is not considered feasible within the scope of this scheme to relocate and reconstruct the existing Lough Foyle shore access (used by fisheries personnel) to an acceptable standard. (Or to close off the existing access point with a VRS.) Relocation and reconstruction of the pedestrian access to an acceptable standard would require undertaking structural engineering works within the Lough Foyle shoreline SPA (and all associated assessments and approvals) which are beyond this scheme. This will be referred to the local authority for consideration as part of another scheme if funding becomes available.	Yes

ROAD SAFETY AUDIT FEEDBACK FORM

CST Group Chartered Consulting Engineers
1, O'Connell Street, Sligo, F91 W7YV, Ireland

TO BE COMPLETED BY DESIGNER				TO BE COMPLETED BY AUDIT TEAM LEADER
Paragraph No. in Safety Audit Report	**Problem accepted (Yes/No)**	**Recommended measure accepted (Yes/No)**	**Describe alternative measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted.**	**Alternative measures or reasons accepted by Auditors (Yes/No)**
			The sign can be installed on passively safe supports.	

Signed: ..... Design Team Leader Date: 08/11/2023

Peter Dickson
RPS |Consulting UK & Ireland

Signed: ..... Audit Team Leader Date: 08/11/2023

Stuart Summerfield
CST Group Chartered Consulting Engineers

Signed: ..... Employer Date: 09/11/2023

For Donegal County Council

APPENDIX G – PRELIMINARY DESIGN DRAWINGS

Drawing Number	Drawing Title	Revision
IE000842-RPS-IX-XX-D-C-0002-01	Location Plan	P01
IE000842-RPS-XP-XX-D-C-0003-01	Planning Boundary Overview	P01
IE000842-RPS-XP-XX-D-C-0003-02	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-03	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-04	Planning Boundary	P01
IE000842-RPS-XP-XX-D-C-0003-05	Planning Boundary	P01
IE000842-RPS-SB-XX-D-C-0002-01	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-02	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-03	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-04	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-05	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-06	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-07	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-08	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-09	Proposed Safety Barrier (R238DL-SB01)	P01
IE000842-RPS-SB-XX-D-C-0002-010	Proposed Safety Barrier (R238DL-SB01)	P01

DRAWINGS ARE CONTAINED IN SEPARATE BOOKLET