

Marine and Coastal Access Act 2009 (Part 4 Marine Licensing)

Application for Marine Construction Works/Land Reclamation/Beach Replenishment in the Territorial Sea and UK Controlled Waters Adjacent to Northern Ireland

(Construction schemes including coast defences, beneficial uses of dredged materials, jetties, land reclamation, outfall pipes etc.)

It is the responsibility of the applicant to obtain any other consents or authorisations that may be required

Under Part 4 (Chapter 5) of the Marine and Coastal Access Act 2009, information contained within or provided in support of this application will be placed on the public register unless DAERA Marine and Fisheries Division (as the licensing authority) approves the applicant's reasons for withholding all or part thereof.

Public Register

Is there any information contained within or provided in support of this application that you consider should not be included on the Public Register on the grounds that its disclosure:

- a) would be contrary to the interests of national security YES NO
- b) would prejudice to an unreasonable degree your or some other person's commercial interests or those of a third party? YES NO

If **YES**, to either (a) or (b), please provide full justification as to why all or part of the information you have provided should be withheld.

N/A

1. Project Title

Please give a brief identifiable description, including the location of the works.

NIR Minor Works 2016 – 2020
Inver River 06.457A (23m 0154yds)
Northern Ireland Railways (NIR) requires essential infrastructural maintenance on the Belfast to Larne line at the Inver River. The proposed works involve reinstatement of rock armour scour prevention measures which have recently deteriorated.
Site location plan attached at Appendix A.

2. Applicant Details

Title	<input type="text" value="MR"/>	Initials	<input type="text" value="████"/>	Surname	<input type="text" value="████████████████"/>
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Address:	<input type="text" value="Translink
Property & Structures Department
3 Milewater Road
Belfast
BT3 9BG"/>
----------	--

Name of contact: (if different from above)	<input type="text" value="N/A"/>
---	----------------------------------

Telephone number: (inc. code)	<input type="text" value="(028) 9035 4075"/>
----------------------------------	--

Email address:	<input type="text" value="██"/>
----------------	---

3. Agent Details (if appropriate)

Title	MR	Initials	[REDACTED]	Surname	[REDACTED]
Trading Title (if different from above)	AECOM Infrastructure & Environment UK Ltd				
Business Address:	9 th Floor, The Clarence West Building, Clarence Street West, Belfast, BT2 7GP				
Name of contact: (if different from above)	N/A				
Position within company (if appropriate)	Civil Engineer				
Telephone number: (inc. code)	[REDACTED]				
Email address:	[REDACTED]				
Company Registration No.	00880328				

4. Duration of Project

Expected Start Date	29th Jan 2019	Expected Completion Date	31st March 2019
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5. Description and Cost of the Proposed Project

- (a) Estimated gross cost of the works proposed seawards of the tidal limit of the High Water Mean Spring Tide Mark

The estimated gross cost of the works at the Inver River is £10,000.

Licence Band A – Fee £622

- (b) Give a detailed description of the proposed schedule of work

The works comprise the removal of debris and rubble adjacent to the north and south abutments. Rock armour is to be installed at the base of each abutment and at the west of the south abutment to prevent further scouring of the bed immediately adjacent to the abutments and undermining of the abutment foundations. Terram or other suitable geotextile membrane is to be placed on top of the existing river bed and rock armour. Rock armour is to be installed on 100mm bed of type 1 compacted fill or semi dry concrete mix.

Drawings detailing the existing culvert and proposed repair works are included in Appendix B.

MHWS – 3.5 m Above Chart Datum (ACD)

If necessary please continue on a separate sheet and tick this box

Types of Work Proposed

Coastal/Flood defences:	beach replenishment shoreline reinforcement flood defence sea defence
Slipways:	slipway causeway launching ramp
Miscellaneous:	habitat creation/replacement aquaculture (unless exempted) sea wall berms/wave screens artificial reef sea-lock
Harbour works:	dock wall/quay/wharf
Navigation works:	lock gates moorings (unless exempted) buoy/navigation mark (unless exempted) training wall/breakwater
Land reclamation:	bunded/piled area dock infill
Intakes/outfall pipes:	intake/outfall
Cables:	cable/subsea cable
Pipeline maintenance:	pipe/pipeline maintenance
Piers etc.:	bridge supports/bridge foundation pier jetty
Bank stabilisation:	
Scour protection:	Rock armour mattressing
Barrages & island etc.	tidal barrier

Sediment manipulation barrage
sculpture, statues, fountains etc.
ground investigation works
impoundment
groynes

6. Location of Works

This should include either 6 figure Irish Grid Reference (IGR) or Latitude and Longitude co-ordinates (WGS84 to 1 decimal minute) defining the extent of the project.

Irish Grid Reference (IGR) 342034,402095
MHWS – 3.5m Above Chart Datum (ACD)
Location Plan Drawing is provided in Appendix A.

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7. Method Statement

Works to be performed at low tide only

Night Shift as required by tidal flows

1. Rail Road Vehicle (RRV) operator under the direction of the banksman is to lift the trailer onto the tracks using the chains. Equipment to go to site is to be loaded onto the trailer, this includes a tower light, 8T excavator, 4" pump plus hoses and equipment listed in the equipment section as required.
2. 14T excavator to load rock armour into the RRV box trailer from the access point which will then be transported to site and offloaded by RRV and 8T Excavator.
3. Diesel boom will be installed across the mouth of the watercourse.
4. Removal of vegetation using hand tools, trimmers and hedgecutters with arisings being placed in the cess if it safe to do so or being removed from site.
5. RRV using the bucket to create an area on the bank for the placement of plant.
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7. 8T excavator to create an access ramp into the river bed from the bank using stone.
8. 8T excavator to create access ramp down to the works area using stone.
9. Rock Armour to be stacked safely near the area of works.
10. Excavator will clear the existing rock armour area of loose material and seaweed.
11. Works location to be dammed off by the excavator placing ton bags of sand around it and smaller sand bags placed by operatives to fill any gaps.
12. The ton bags of sand will be tied together using rope to assist in their tidal resistance.
13. 4" silenced pump will be used to dewater the works area.
14. Excavator to dig the bed for placement of rock armour to firm ground.
15. Where possible existing rock armour is to be reused.
16. Excavator to lift larger rock armour stones into position at the abutments and embed them as toe stones as per AECOM drawing Nr 60512590-1007-10015-A2.
17. The rock armour adjacent to the abutment will be placed to match the extents of the existing failed rock armour, stone on stone to a 1:1.5 gradient slope.
18. Rock armour being placed adjacent to the river bank will have 300mm toe dug below the bed with ledges approx. 300-450mm deep dug into the bank and a polypropylene geotextile laid in to the ledges including the base ledge.
19. Base ledge to have toe stones placed on a layer of compacted type 1 material. Compaction will be with the use of a vibrating plate.
20. Remaining rock armour stones to be set into the ledges at a 1:1.5 gradient slope.
21. When one side of the watercourse has been finished the excavator will be moved to the other side to complete it.
22. At the end of the shift all plant will be removed.

Dayshift Works as Required by tidal flow

23. Skilled operatives will install a diesel boom across the mouth of the watercourse.
24. Works to proceed in the same manner as nightshift works however the work party will follow dayshift safety instructions and no plant or equipment will be on or cross the track.
25. Upon completion of the works all plant and equipment will be removed from site.

If necessary, please continue on a separate sheet and tick this box

8. Permanent Deposits

(a) quantity of permanent materials to be deposited below HMWS tidemark:

Timber (m ² or tonnes)
Iron/Steel (tonnes)
Plastic/Synthetic (m ²)	31.0.....
Silt (m ³)
Sand (m ³)	3.1.....
Concrete (m ³)0.5
Concrete bags/mattresses (Confirm number, dimensions & total volume m ³)
Stone/Rock/Gravel (size range and volume m ³)	Diameter approx. 300-1000mm Volume 23.7m ³

If 'other' please describe below

N/A

If necessary, please continue on a separate sheet and tick this box

(b) for work involving salt marsh feeding, beach replenishment or land reclamation please provide the following information relating to the material to be deposited:

Quantity (tonnes)
Nature of Material (e.g. sand, silt, gravel etc.)
Source: (if sea dredged please state location of origin)
Particle Size

Has the material been chemically analysed? Yes No

If Yes, please include the analysis data with your application.

9. Temporary Deposits

Will there be a need to make any temporary deposits of material below HMWS tidemark during the works

Yes No

(a) quantity of temporary materials to be deposited below HMWS tidemark:

- Timber (m² or tonnes)
- Iron/Steel (tonnes)
- Plastic/Synthetic (m²)
- Silt (m³)
- Sand (m³)
- Concrete (m³)
- Concrete bags/mattresses
(Confirm number, dimensions
& total volume m³)
- Stone/Rock/Gravel
(size range and volume m³)

If 'other' please describe below

If necessary, please continue on a separate sheet and tick this box

10. Dredging

Do you intend to apply for a licence to dredge as part of the works?

Yes No

If Yes, please indicate the location
of the dredging and nature of material

11. Disposal of Material at Sea

Do you intend to apply for a licence to dispose at sea material dredged as part of the works?

Yes No

If Yes, please indicate:
Nature and quantity of material
(sand, gravel, silt, clay, rock etc.)

12. Planning

Is this project subject to a planning application?

Yes No

If Yes, attach a copy of environmental statement (if appropriate) and indicate what stage the application for planning permission is at (i.e. approved, awaiting notification, rejected)

.....

13. Statutory Consenting Powers

Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project?

Yes No

If Yes, please give details

14. Consultation

(a) Have the public been invited to submit comments? YES NO
If YES, how and where?

N/A

(b) Have any consultation meetings been held? **YES** **NO**
(with the public or other bodies)

N/A

If necessary please continue on a separate sheet and tick this box

15. Consultation with Conservation Bodies

Please provide details of any consultation that has taken place with NIEA Natural Environment Division and, if appropriate, include copies of any correspondence with your application.

A Habitats Regulations Assessment (HRA) Screening (Stage 1) has been prepared to support the application.
Agencies informed of works include: Fisheries (Section 48 Permit), River Agency & NEIA

If necessary please continue on a separate sheet and tick this box

16. Designated Conservation Areas

Are any parts of the proposed work located within the boundaries of a designated conservation area? **YES** **NO**

If **No**, please indicate approximate distance of the disposal operation from the nearest designated conservation area.

17. Environmental Assessment

Has an environmental assessment been undertaken to support any application in respect of the works, your own statutory powers (if applicable) or any other reason?

YES **NO**

If **YES**, is a copy of the assessment included with this application?

YES **NO**

If the assessment has been undertaken but has not been included with the application, please provide an explanation below.

N/A

Is the environmental assessment available for public inspection?

YES **NO**

If YES at what locations:

N/A

Declaration

I declare that the information given in this form and related papers is to the best of my knowledge and belief true.

WARNING
It is an offence under the Act under which this application is made to fail to disclose information or to provide false or misleading information.

Signature of applicant:
(or agent acting on behalf of applicant)

[Redacted Signature]

Date:

20/08/2018

Name (Block Letters):

[Redacted Name]

Position within company:
(if applicable)

Associate Civil Engineer

PLEASE CHECK CAREFULLY THE INFORMATION YOU HAVE GIVEN AND THAT ALL ENCLOSURES (INCLUDING COPIES) HAVE BEEN INCLUDED

Application Checklist

- **Completed application form**
- **Project drawings**
- **Method statement**
- **Maps/charts**
- **Additional environmental information e.g. photographs, environmental impact assessment etc.**
- **Payment**

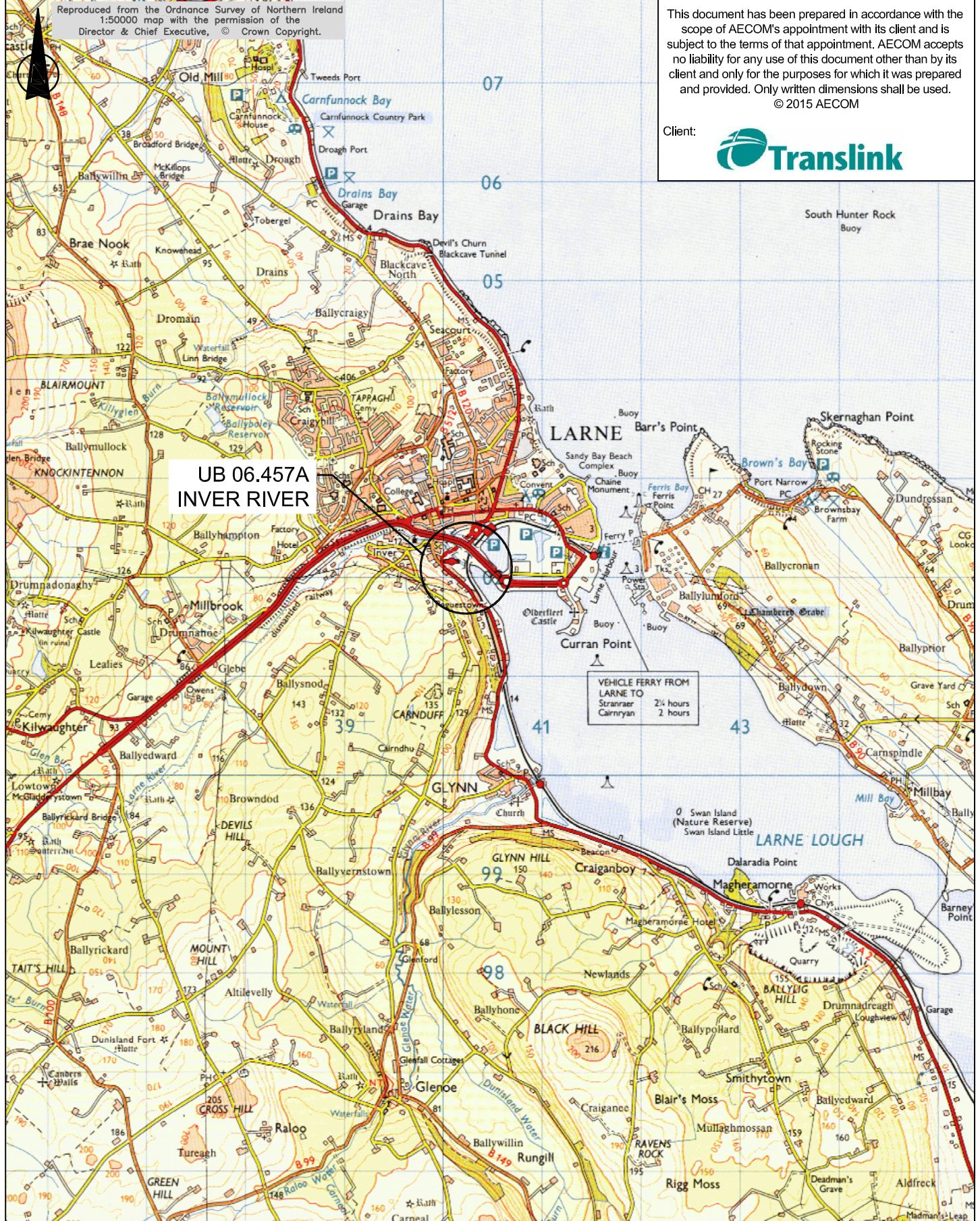
Appendix A

47075660 - 06.457A - 01 - Site Location

Reproduced from the Ordnance Survey of Northern Ireland 1:50000 map with the permission of the Director & Chief Executive, © Crown Copyright.

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Client:



VEHICLE FERRY FROM LARNE TO Stranraer Cairnryan 2 1/4 hours 2 hours

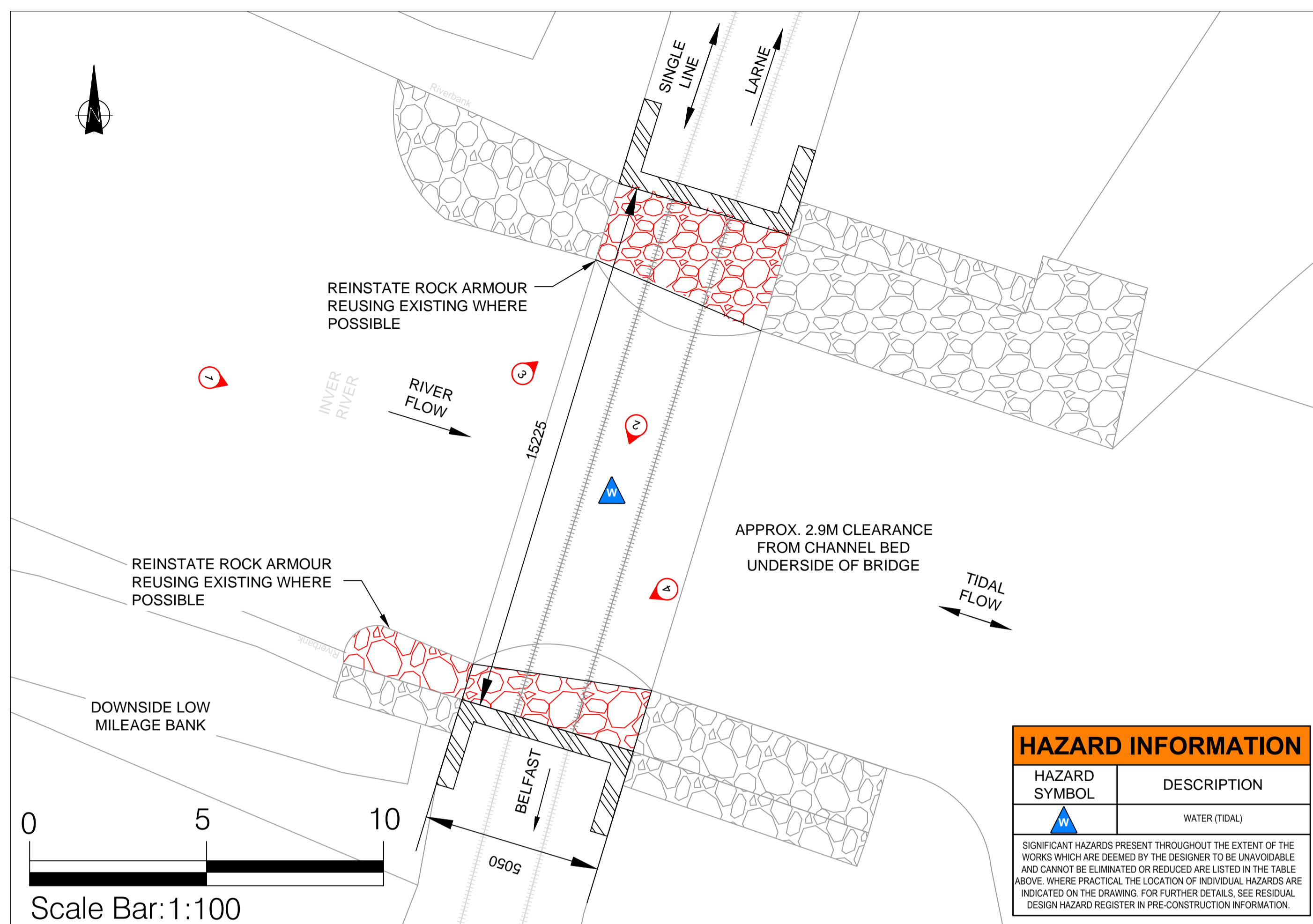
Drawing Title	
NIR STRUCTURES UNDERWATER EXAMINATIONS 2015 06.457A Location Plan	

Scale @ A4 1:50,000		
Drawn RMCA	Checked MJG	Approved RB
Date JAN 2016		Rev P1
Drawing Number 47075660 - 06.457A- 01		



Appendix B

60512590 - 1007 - 10015- Underwater Repairs



General Arrangement
Scale 1:100



Photo 1 - View of the structure from upstream



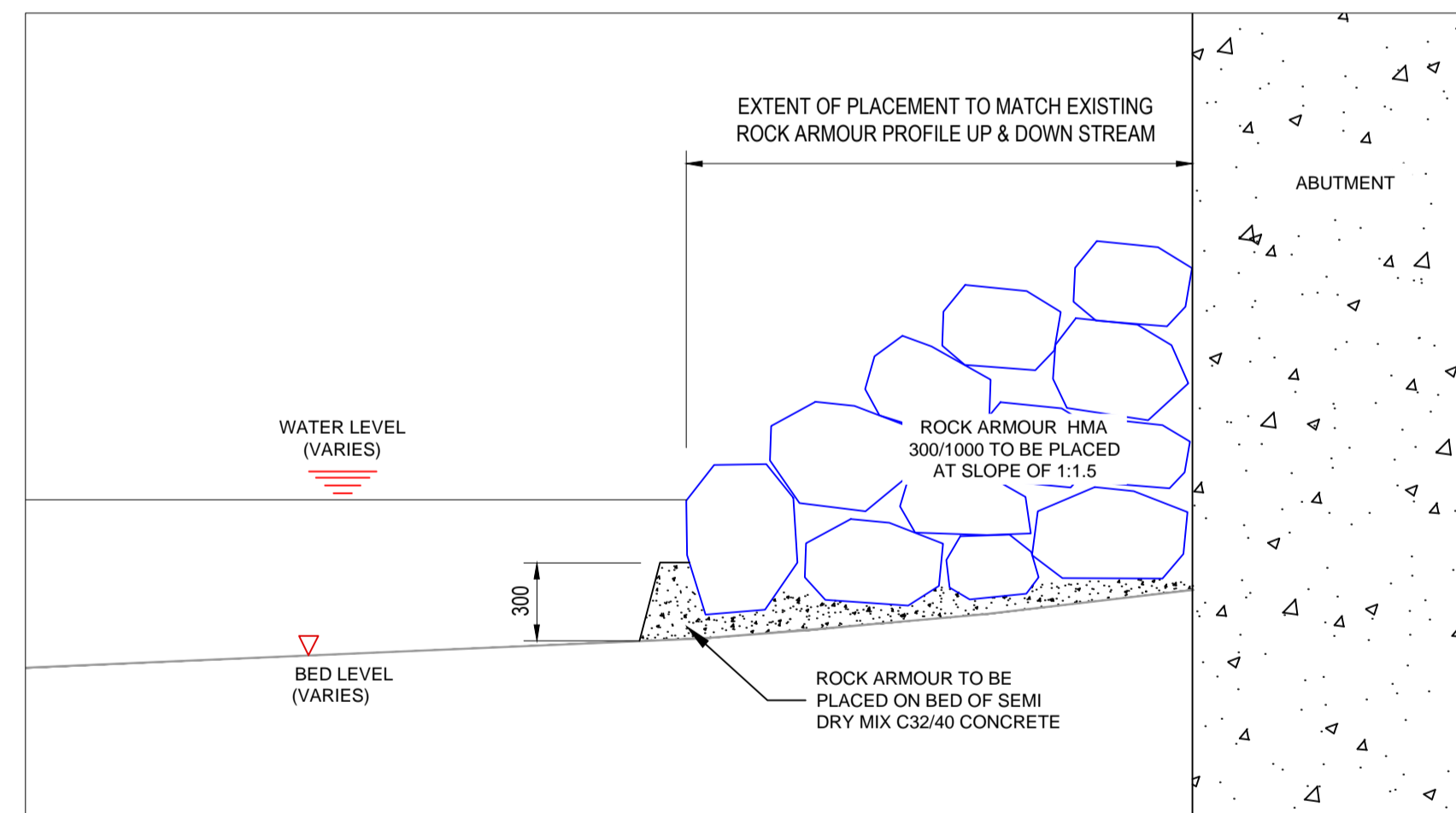
Photo 2 - Loss of rock armour at Low Mileage abutment



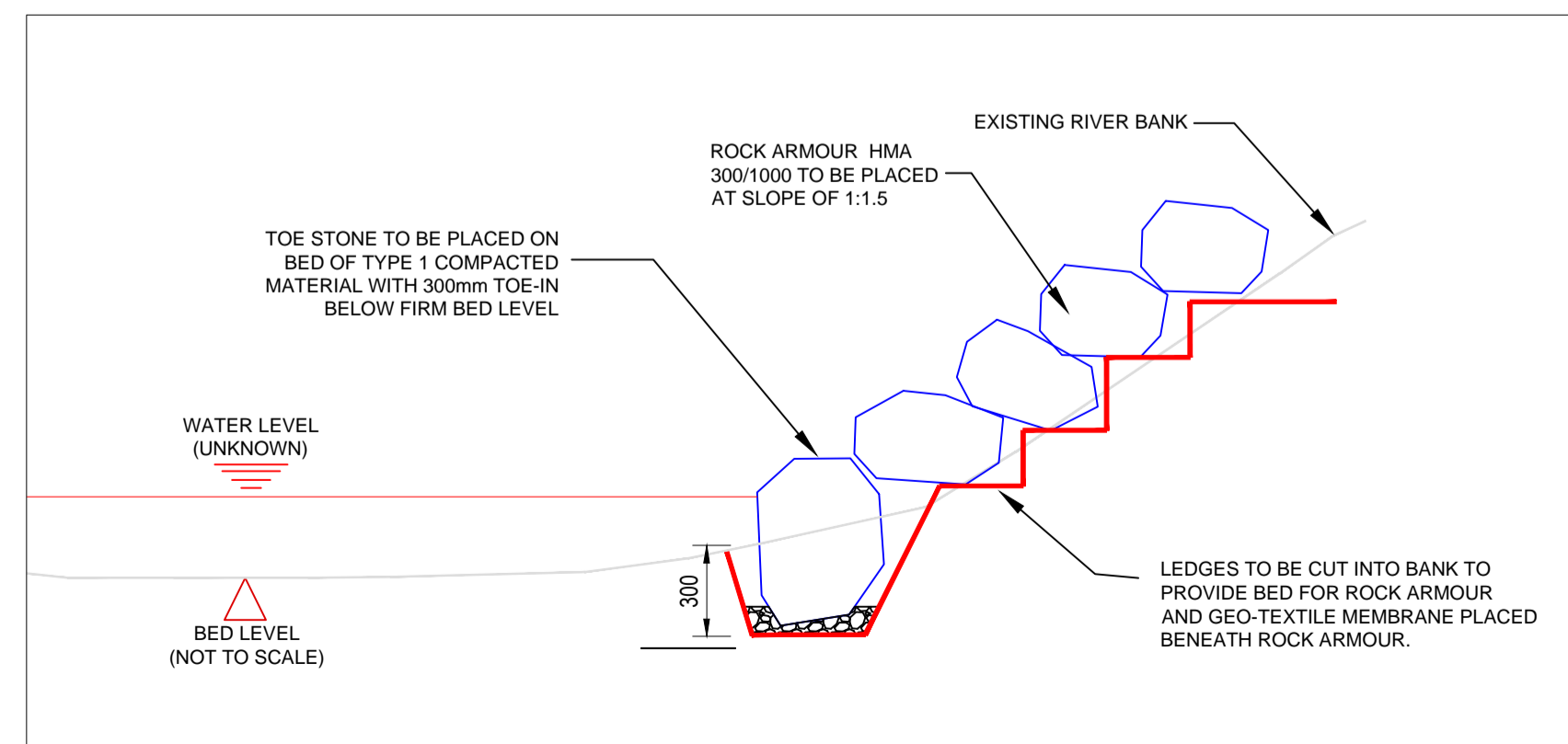
Photo 3 - Loss of rock armour at High Mileage abutment



Photo 4 - Loss of rock armour at downside Low Mileage bank



Detail 1 - Typical rock armour repair detail at abutment face
(Not to Scale)

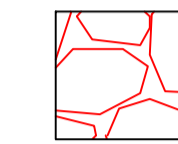


Detail 2 - Typical rock armour repair detail at channel bank
(Not to Scale)

NOTES

Schedule of Repairs

1. Reinstall rock armour at face of high and low mileage abutment and downside low mileage bank as per General Arrangement drawing and Rock Armour notes, reusing existing rock armour where possible (Details 1 and 2).



Rock Armour to be placed in this area

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROPRIATE METHOD STATEMENT.

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT.

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. DO NOT SCALE FROM THIS DRAWING. USE ONLY PRINTED DIMENSIONS.
3. ALL DIMENSIONS IN MILLIMETRES. ALL CHANGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.

ENVIRONMENTAL CONSIDERATIONS

1. PRIOR TO COMMENCING ANY WORKS COULD POTENTIALLY ALTER RIVER FLOW CHARACTERISTICS OR CAUSE DISTURBANCE TO THE RIVER BED. APPROPRIATE APPROVAL SHALL BE SOUGHT FROM THE RELEVANT STATUTORY BODIES, INCLUDING BUT NOT EXCLUSIVELY, NIR, DFI RIVERS LOUGHS AGENCY, DEARA, NIEA.
2. IF AN INVASIVE SPECIES, INCLUDING JAPANESE KNOT WEED / GIANT HORNWORM / HIMALAYAN BALSAM, IS IDENTIFIED OR SUSPECTED IN THE VICINITY OF THE WORK SITE, WORK SHALL BE STOPPED IMMEDIATELY AND THE APPROPRIATE BODIES, INCLUDING NIR & NIEA, SHALL BE INFORMED IMMEDIATELY.

ROCK ARMOUR

3. STONES SHALL BE BASALT AND SHALL COMPLY WITH EUROPEAN EN 13383 STANDARD GRADING REQUIREMENTS.
4. WHERE LMA 40-200 CLASS STONES ARE SPECIFIED, THESE STONES SHALL HAVE AN AVERAGE MASS OF 40-120KG AND APPROXIMATE DIAMETER 250-450mm.
5. WHERE HMA 300-1000 CLASS STONES ARE SPECIFIED, THESE STONES SHALL HAVE AN AVERAGE MASS OF 450-650KG AND APPROXIMATE DIAMETER 510-760mm.
6. STONES SHALL BE PLACED AT SLOPE OF 1:1.5
7. WHERE ROCK ARMOUR IS BEING PLACED AT EARTH CHANNEL BANKS, LEDGES SHALL BE CUT INTO BANK TO PROVIDE BED FOR STONES. LEDGE DEPTH SHALL BE 300-450mm AND 500-650mm FOR LMA 40-200 AND HMA 300-1000 RESPECTIVELY.
8. WHERE GEO-TEXTILE SEPARATION MEMBRANE IS SPECIFIED TO BE PLACED BENEATH ROCK ARMOUR, IT SHALL BE POLYPROPYLENE NON-WOVEN GEO-TEXTILE AS GEOFABRICS HPS4, OR SIMILAR APPROVED.
9. LARGER STONES SHALL BE USED AS TOE STONES AND SHALL BE PLACED IN A BED OF SEMI-DRY MIX C32/40 CONCRETE OR TYPE 1 COMPACTED STONE (AS SPECIFIED) WITH A 300mm TOE-IN BELOW FIRM BED LEVEL TO PREVENT SLIDING FAILURE / WASHOUT.
10. EXISTING ROCK ARMOUR SHALL BE REUSED / REINSTATED WHERE POSSIBLE.

Revision Details		By	Date	Suffix

Purpose of Issue

FOR APPROVAL



Project Title
TRANSLINK FRAMEWORK CONSULTANCY SERVICES 2016-2020

Drawing Title
**UNDERWATER REPAIRS
06.457A INVER RIVER**

Designed	Drawn	Checked	Approved	Date
GTM	EM			JAN '18

Project No: 60512590-1007
Scale @ A1
AS SHOWN

THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.



Drawing Number	Rev
60512590-1007-10015	A1

Appendix C

47075660 - MLA-DS- 06.457A - Designated Sites

Marine and Coastal Access Act 2009 (Part 4 Marine Licensing)

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<p>NIR Minor Works 2016 – 2020</p> <p>Inver River 06.457A (23m 0154yds)</p> <p>Northern Ireland Railways (NIR) requires essential infrastructural maintenance on the Belfast to Larne line at the Inver River. The proposed works involve reinstatement of rock armour scour prevention measures which have recently deteriorated.</p> <p>Site location plan attached at Appendix A.</p>
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Particle Size

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If Yes, please include the analysis data with your application.

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(size range and volume m³)

If 'other' please describe below

If necessary, please continue on a separate sheet and tick this box

10. Dredging

Do you intend to apply for a licence to dredge as part of the works?

Yes No

If Yes, please indicate the location
of the dredging and nature of material

11. Disposal of Material at Sea

Do you intend to apply for a licence to dispose at sea material dredged as part of the works?

Yes No

If Yes, please indicate:
Nature and quantity of material
(sand, gravel, silt, clay, rock etc.)

12. Planning

Is this project subject to a planning application?

Yes No

If Yes, attach a copy of environmental statement (if appropriate) and indicate what stage the application for planning permission is at (i.e. approved, awaiting notification, rejected)

.....

13. Statutory Consenting Powers

Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project?

Yes No

If Yes, please give details

14. Consultation

(a) Have the public been invited to submit comments? YES NO
If YES, how and where?

N/A

(b) Have any consultation meetings been held? **YES** **NO**
(with the public or other bodies)

N/A

If necessary please continue on a separate sheet and tick this box

15. Consultation with Conservation Bodies

Please provide details of any consultation that has taken place with NIEA Natural Environment Division and, if appropriate, include copies of any correspondence with your application.

A Habitat Regulations Assessment (HRA) Screening (Stage 1) has been prepared to support the application.
Agencies informed of works include: Fisheries (Section 48 Permit), Loughs Agency (Section 46/47 Permit), River Agency & NEIA

If necessary please continue on a separate sheet and tick this box

16. Designated Conservation Areas

Are any parts of the proposed work located within the boundaries of a designated conservation area? **YES** **NO**

If **No**, please indicate approximate distance of the disposal operation from the nearest designated conservation area.

0m (see Appendix C)

17. Environmental Assessment

Has an environmental assessment been undertaken to support any application in respect of the works, your own statutory powers (if applicable) or any other reason? **YES** **NO**

If **YES**, is a copy of the assessment included with this application? **YES** **NO**

If the assessment has been undertaken but has not been included with the application, please provide an explanation below.

N/A

Is the environmental assessment available for public inspection? **YES** **NO**

If YES at what locations:

N/A

Declaration

I declare that the information given in this form and related papers is to the best of my knowledge and belief true.

WARNING
It is an offence under the Act under which this application is made to fail to disclose information or to provide false or misleading information.

Signature of applicant:
(or agent acting on behalf of applicant)

Date:

20/08/2018

Name (Block Letters):

Position within company:
(if applicable)

Associate Civil Engineer

PLEASE CHECK CAREFULLY THE INFORMATION YOU HAVE GIVEN AND THAT ALL ENCLOSURES (INCLUDING COPIES) HAVE BEEN INCLUDED

Application Checklist

- **Completed application form**
- **Project drawings**
- **Method statement**
- **Maps/charts**
- **Additional environmental information e.g. photographs, environmental impact assessment etc.**
- **Payment**

Appendix A

47075660 - 06.457A - 01 - Site Location

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Client:



UB 06.457A
INVER RIVER

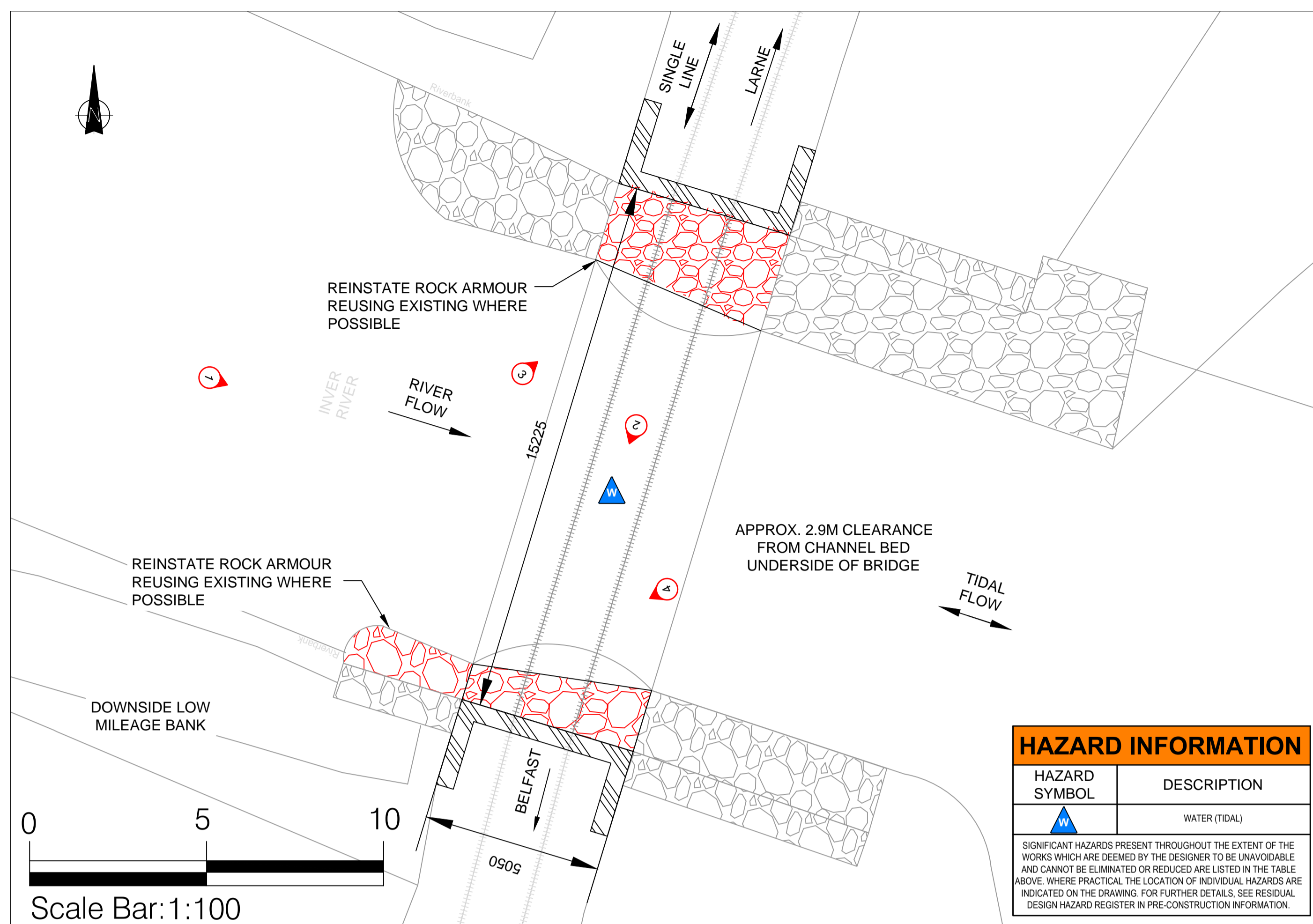
VEHICLE FERRY FROM LARNE TO Stranraer Cairnryan 2 1/4 hours 2 hours

Drawing Title NIR STRUCTURES UNDERWATER EXAMINATIONS 2015 06.457A Location Plan	Scale @ A4 1:50,000		
	Drawn RMCA	Checked MJG	Approved RB
	Date JAN 2016		Rev P1
Drawing Number 47075660 - 06.457A- 01			



Appendix B

60512590 - 1007 - 10015- Underwater Repairs



General Arrangement
Scale 1:100



Photo 1 - View of the structure from upstream



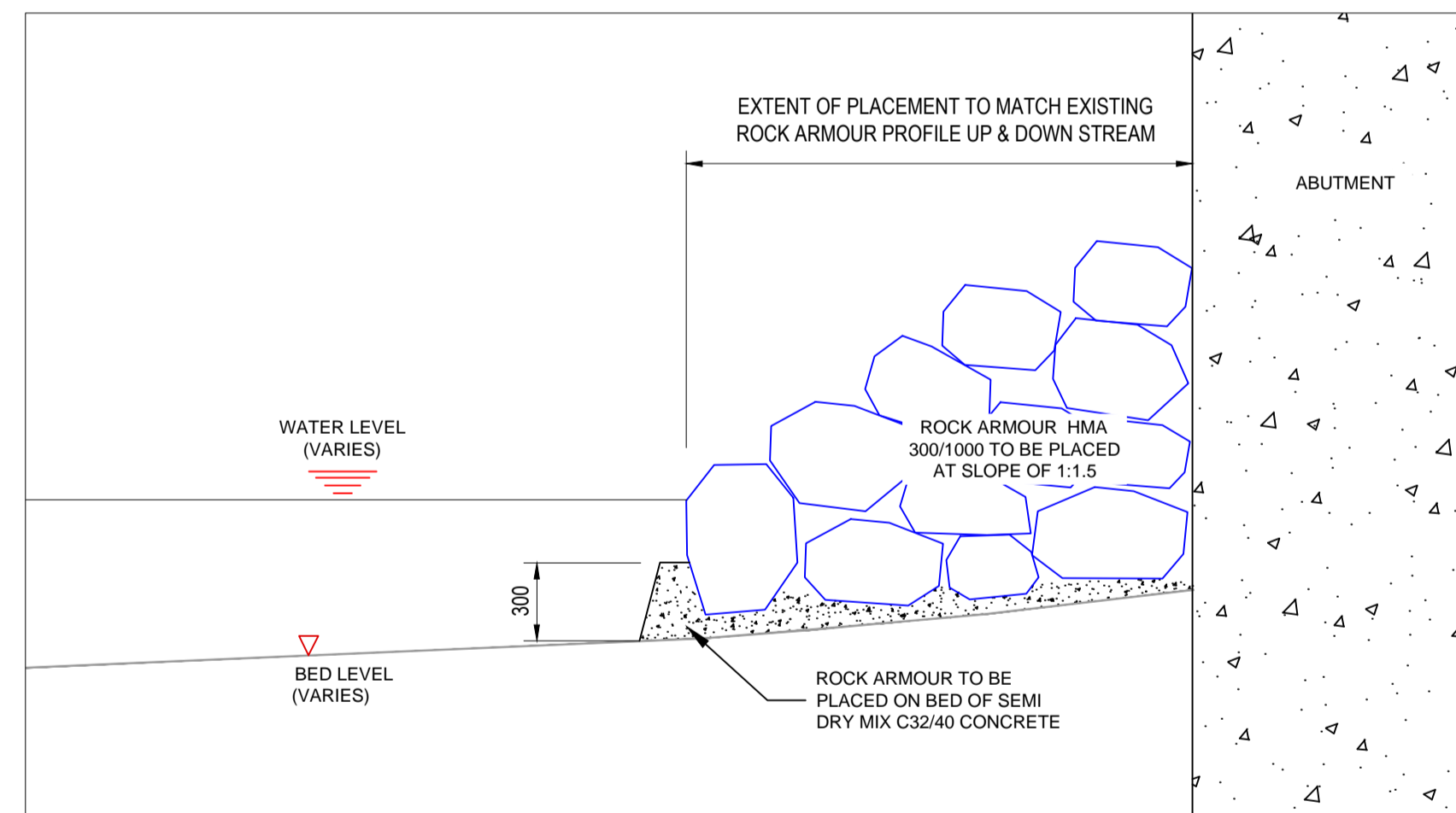
Photo 2 - Loss of rock armour at Low Mileage abutment



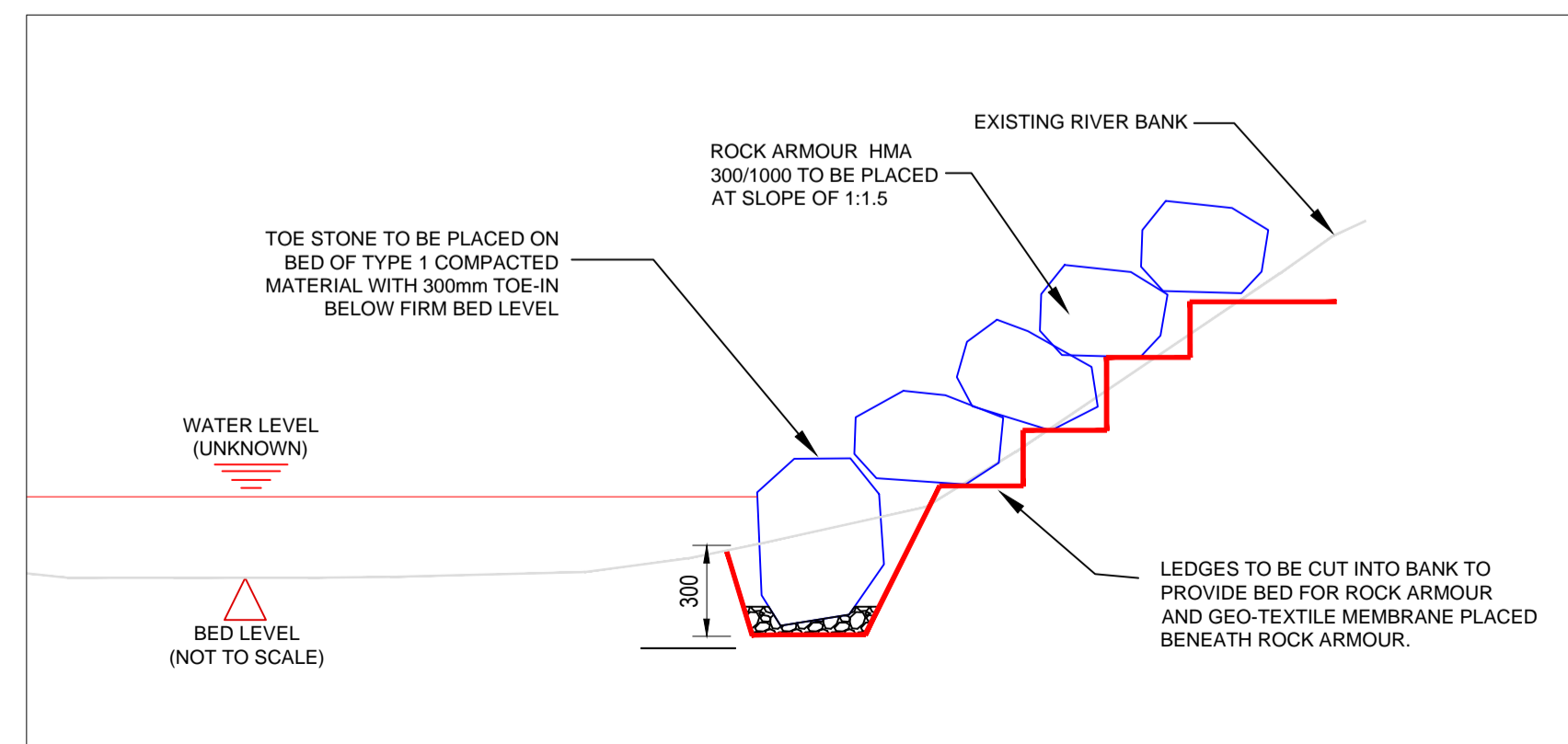
Photo 3 - Loss of rock armour at High Mileage abutment



Photo 4 - Loss of rock armour at downside Low Mileage bank



Detail 1 - Typical rock armour repair detail at abutment face
(Not to Scale)

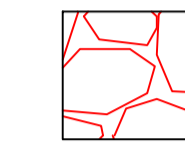


Detail 2 - Typical rock armour repair detail at channel bank
(Not to Scale)

NOTES

Schedule of Repairs

1. Reinstatement rock armour at face of high and low mileage abutment and downside low mileage bank as per General Arrangement drawing and Rock Armour notes, reusing existing rock armour where possible (Details 1 and 2).



Rock Armour to be placed in this area

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROPRIATE METHOD STATEMENT.

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT.

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. DO NOT SCALE FROM THIS DRAWING. USE ONLY PRINTED DIMENSIONS.
3. ALL DIMENSIONS IN MILLIMETRES. ALL CHANGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.

ENVIRONMENTAL CONSIDERATIONS

1. PRIOR TO COMMENCING ANY WORKS COULD POTENTIALLY ALTER RIVER FLOW CHARACTERISTICS OR CAUSE DISTURBANCE TO THE RIVER BED. APPROPRIATE APPROVAL SHALL BE SOUGHT FROM THE RELEVANT STATUTORY BODIES, INCLUDING BUT NOT EXCLUSIVELY, NIR, DFI RIVERS LOUGHS AGENCY, DEARA, NIEA.
2. IF AN INVASIVE SPECIES, INCLUDING JAPANESE KNOT WEED / GIANT HORNWORM / HIMALAYAN BALSAM, IS IDENTIFIED OR SUSPECTED IN THE VICINITY OF THE WORK SITE, WORK SHALL BE STOPPED IMMEDIATELY AND THE APPROPRIATE BODIES, INCLUDING NIR & NIEA, SHALL BE INFORMED IMMEDIATELY.

ROCK ARMOUR

3. STONES SHALL BE BASALT AND SHALL COMPLY WITH EUROPEAN EN 13383 STANDARD GRADING REQUIREMENTS.
4. WHERE LMA 40-200 CLASS STONES ARE SPECIFIED, THESE STONES SHALL HAVE AN AVERAGE MASS OF 40-120KG AND APPROXIMATE DIAMETER 250-450mm.
5. WHERE HMA 300-1000 CLASS STONES ARE SPECIFIED, THESE STONES SHALL HAVE AN AVERAGE MASS OF 450-650KG AND APPROXIMATE DIAMETER 510-760mm.
6. STONES SHALL BE PLACED AT SLOPE OF 1:1.5
7. WHERE ROCK ARMOUR IS BEING PLACED AT EARTH CHANNEL BANKS, LEDGES SHALL BE CUT INTO BANK TO PROVIDE BED FOR STONES. LEDGE DEPTH SHALL BE 300-450mm AND 500-650mm FOR LMA 40-200 AND HMA 300-1000 RESPECTIVELY.
8. WHERE GEO-TEXTILE SEPARATION MEMBRANE IS SPECIFIED TO BE PLACED BENEATH ROCK ARMOUR, IT SHALL BE POLYPROPYLENE NON-WOVEN GEO-TEXTILE AS GEOFABRICS HPS4, OR SIMILAR APPROVED.
9. LARGER STONES SHALL BE USED AS TOE STONES AND SHALL BE PLACED IN A BED OF SEMI-DRY MIX C32/40 CONCRETE OR TYPE 1 COMPACTED STONE (AS SPECIFIED) WITH A 300mm TOE-IN BELOW FIRM BED LEVEL TO PREVENT SLIDING FAILURE / WASHOUT.
10. EXISTING ROCK ARMOUR SHALL BE REUSED / REINSTATED WHERE POSSIBLE.

Revision Details		By	Date	Suffix

Purpose of Issue

FOR APPROVAL



Project Title

TRANSLINK FRAMEWORK CONSULTANCY SERVICES 2016-2020

Drawing Title

UNDERWATER REPAIRS
06.457A INVER RIVER

Designed	Drawn	Checked	Approved	Date
GTM	EM			JAN '18

Project No: 60512590-1007
Scale @ A1
AS SHOWN

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Drawing Number	Rev
60512590-1007-10015	A1

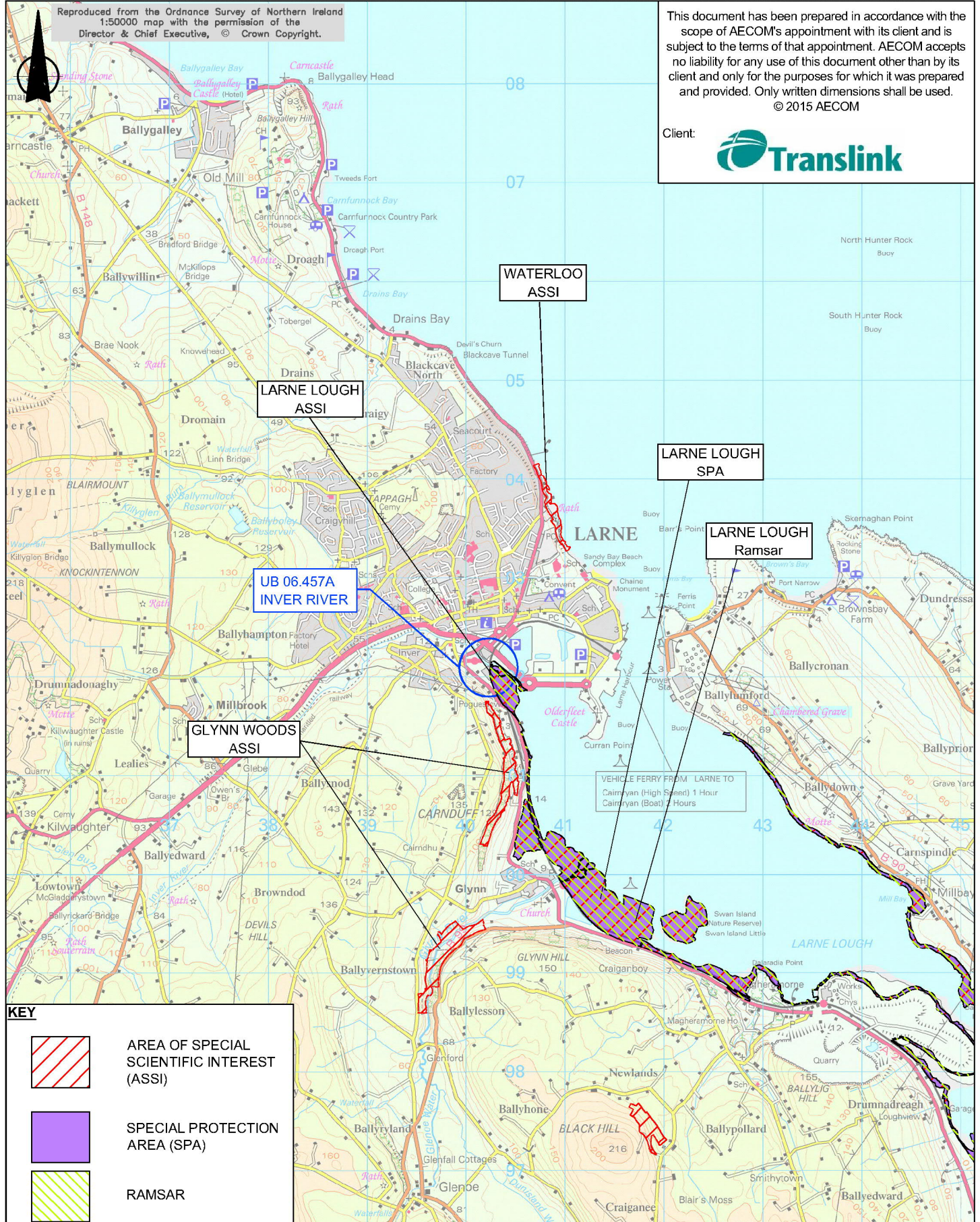
Appendix C

47075660 - MLA-DS- 06.457A - Designated Sites




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Client:



KEY

-  AREA OF SPECIAL SCIENTIFIC INTEREST (ASSI)
-  SPECIAL PROTECTION AREA (SPA)
-  RAMSAR

Drawing Title

**NIR STRUCTURES
UNDERWATER EXAMINATIONS 2015
INVER BRIDGE 06.457A
DESIGNATED SITES**

Scale @ A4 1:50,000		
Drawn RMCA	Checked MJG	Approved RB
Date JAN 2016		Rev P1
Drawing Number 47075660 - MLA-DS 06.457A		



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