Marine Construction Works/Land Reclamation/Beach Replenishment inthe Territorial Sea and Controlled Waters Adjacent to Northern Ireland

Marine Licensing

Important: before completing this form, please read these notes carefully.

The following numbered paragraphs correspond to the questions on the application form and are intended to assist applicants in completing the form. These explanatory notes are specific to this application and so applicants are advised to read these in conjunction with the General Marine Licensing Guidance document. However it may be that these notes do not fully cover all the questions that you may have. If further clarification is needed please telephone us on

028 90569247 or email

MarineLicensingTeam@daera-ni.gov.uk

For fees categories please see Marine Licensing Fees Addendum

For further Guidance please refer to Marine Licensing Guidance for Applicants

EXPLANATORY NOTES

2. Applicant

The person, company or organisation making the application. (The licensee(s) may be any of the following, the contractor actually carrying out the construction work, the applicant and possibly other bodies involved).

3. Agent

Any person, company or organisation acting on behalf of the applicant. They may be acting under contract (or other agreement) on behalf of any party listed in the answer to question 2, and have responsibility for the control; management or physical deposit of materials anywhere below the tidal limit of the mean high water springs (MHWS). (e.g. A consultancy company submitting the application or a contractor who will be carrying out the works.)

4. Duration of project

Details of the proposed commencement and completion dates of the works.

A licence is normally valid for 1 calendar year or the duration of the works (whichever is longer) but not normally exceeding 3 years. After this period, it will be necessary for licence holders to re-apply for a further licence to continue any ongoing works. It is the licensee's responsibility to apply for any further licences or an extension prior to the expiry of the initial licence.

5. Description and Cost of the Proposed Project

(a) This estimate should cover only works taking place below the tidal level of Mean High Water Springs (MHWS) and should take into consideration the cost of materials, labour, fees etc.
(b) Where the project is expected to take longer than 1 calendar year, this description must detail which elements of work are to be undertaken in the first 12 months, with an outline of the schedule for each further 12 month period of work. (The method of work etc. should be described in the answer to question 7.)
(c) Select the options which most appropriately describe the type of work proposed. Where the project involves a number of elements, please tick each relevant box.

6. Location of Works

Include a list of the latitude and longitude co-ordinates of the boundary points of the proposed project. In a few cases, (e.g. laying of long pipelines) it may only be practicable to supply co-ordinates for the start and end points.

Latitude and Longitude: For positions read from charts of 1:25,000 scale or smaller, the format should be e.g. **55^0 55'.5N 2^0 22'.2W**. The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If appropriate, map co-ordinates from the Irish Grid used by the Ordnance Survey Northern Ireland may be used, to a 6 figure grid reference.

It is important that the correct positions are included with this application, as any errors may result in the application being refused or delayed.

To supplement the information given in section 6, Department of Agriculture, Environment and Rural Affairs (DAERA) Marine and Fisheries Division requires the following to be provided with the completed application form:

- A suitably scaled extract from an Ordnance Survey Map (1:2,500 scale but not more than 1:10,000) or Admiralty Chart which should be marked to indicate
    - The full extent of the works in relation to the surrounding area;
    - Latitude and longitude (or 6 figure IGR) co-ordinates defining the area of operation;
    - The level of Mean High Water Springs (MHWS)
    - Any adjacent Special Area of Conservation (SAC), Area of Special Scientific Interest (ASSI), Special Protection Area (SPA)/RAMSAR or similar conservation area boundary.

DAERA Marine and Fisheries Division will require copies of all documents to be provided for dissemination to others as part of the consultation process. Normally **one** copy of the maps/drawings will be required, if there are ancillary copies required, DAERA Marine and Fisheries Division will advise the applicant accordingly. If they are subject to copyright, **it is the responsibility of the applicant to obtain necessary approvals to reproduce the documents and to submit suitably annotated copies with the application.** Alternatively maps/drawings can be sent electronically by email.

- **Sewer outfalls, discharge pipes for storm overflow and industrial waste etc.** The size and description of the pipe should be shown on the longitudinal sections and also details of any supports, foundations, methods of jointing and details of any tidal flaps.
- **Bridges over tidal waters:** an elevation with longitudinal and cross-sections of the bridge to a suitable scale should show the dimensions of the spans and width of piers, etc. above and below MHWS and the maximum and minimum heights of the undersides of the superstructures above MHWS. The headroom above MHWS and the width of span of the nearest bridges, if any, above and below the site should be stated.

- **Tunnels under tidal waters:** the longitudinal section of the tunnel should show the distances between the bed of the river or estuary and the top of the tunnel. Cross-sections should show the internal and external dimensions of the tunnel and particulars of construction. When a proposed future dredging level is known this must also be shown on all sections.

- **Overhead cables:** catenaries must be supplied in addition to the site plan showing the minimum clearance of the cable at MHWS and the electrical clearance allowed.

- **Marine Aquaculture:** proposals for fish farming and shellfish growing are subject to different procedures (refer to The Marine Licensing (Exempted Activities) Order (Northern Ireland) 2011).

The applicant should note that if the drawings/plans are subject to copyright, **it is the responsibility of the applicant to obtain the necessary approvals to reproduce the documents and to submit suitably annotated copies with the application.**

7. Method Statement

Please provide a full method statement, including details of any temporary structures that may be required below MHWS during the works, and the ultimate fate of the structure and material used in its construction. Details of these structures will be included in any licence that may be issued.

Proposed measures to ensure the marine environment is adequately safeguarded during the work should also be described (e.g. the method to be adopted to ensure that the loss of fine grained material is minimised during construction), as should those taken to minimise any interference with other uses of the sea or foreshore.

8. Permanent Deposits

(a) Tick the appropriate box (es) to indicate all materials to be deposited below MHWS. If you propose using types of materials for which a specific box is not provided, please describe the nature of such material in the box marked "other".

(b) If any of the materials to be placed below MHWS are to be brought to the site by sea, give details of the material, e.g. clean rock, and average particle size. Also indicate the vessels to be used, a chart showing the proposed vessel route to the site of the works and details of any trans-shipment areas i.e. where material may be off-loaded to smaller vessels or barges for transport inshore to the site of the works.

(c) Where the proposed works involve beach replenishment or land reclamation, additional information is required about the material to be deposited and method of delivery. The description of material must include details of its chemical quality. Where the material has not been chemically analysed, DAERA Marine

and Fisheries Division may request representative samples for analysis or require the applicant to arrange for analyses to be undertaken before the licence can be determined.

9. Temporary Deposits

If temporary deposits are required, please provide details as with the permanent deposits above. The temporary deposit location details (Latitude/Longitude) should be added to section 6 of the form, and the period of time the site will be used must be provided. If issuing a licence, DAERA Marine and Fisheries Division will include on the document details of any area that has been approved as a temporary deposit site.

10. Dredging

Indicate whether you are proposing to dredge as part of the works. A separate section of the Marine Licence may be required. The granting of the construction section of the Marine Licence does not imply that the dredging section of the Marine Licence will also be granted, as different assessment criteria are used to determine each type of application.

11. Disposal of material at sea

Indicate whether you are proposing to dispose of any excess material arising from the construction work at sea. A separate section of the Marine Licence may be required. The granting of the construction section of the Marine Licence does not imply that the sea disposal section of the Marine Licence will also be granted, as different assessment criteria are used to determine each type of application.

12. Planning

If the application is subject to planning permission, please give relevant details, including planning reference number, if planning has been approved/rejected and attached a copy of the environmental statement if appropriate.

13. Statutory Consenting Powers

Please describe what (if any) statutory responsibilities you (or your client) have to consent any aspect of the project.

14. Consultation

(a) Have the public been invited to comment on these proposals? if so to whom and what was the closing date

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

ELR 004 – Connswater River 04.325 (115m 0088yds)

Northern Ireland Railways (NIR) requires essential infrastructural maintenance on the Belfast to Bangor line at Connswater River. The proposed works involve the reinstatement of rock armour.

ELR 004 – Tidal Stream near IKEA 04.329 (116m 0506yds)

Northern Ireland Railways (NIR) requires essential infrastructural maintenance on the Belfast to Bangor line at bridge 04.329 adjacent to Holywood Exchange Retail Park. Works consist primarily of silt dredging.

Site location plan attached at Appendix A.

2. Applicant Details

Title	Initials	Surname
MR	A.	STOVE

Address:

Translink
Property & Structures Department
3 Milewater Road
Belfast
BT3 9BG

Name of contact:
(if different from above)

N/A

Telephone number:
(inc. code)

(028) 9035 4075

Email address:

anthony.stove@translink.co.uk

3. Agent Details (if appropriate)

Title	Initials	Surname
MR	G.	MCCORMACK

Trading Title (If different from above)	AECOM Infrastructure & Environment UK Ltd
Business Address:	9th 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)	(028) 9060 7200
Email address:	graham.mccormack@aecom.com
Company Registration No.	00880328

4. Duration of Project

Expected Start Date	Expected Completion Date
Jan 2019	March 2019

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

Estimated gross cost of Connswater Bridge works is £15,000.

Estimated gross cost of IKEA Bridge works is £3,000.

Licence Band A – Fee £622

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

Connswater Bridge
The works comprise the removal of debris and rubble from area adjacent to the west abutment and reinstatement of rock armour at the base of the central piers where the concrete footing is exposed. Terram or other suitable geotextile membrane is to be placed on the river bed below 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)

IKEA Bridge
The works comprise dredging excess silt deposits from the channel invert beneath the structure.

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

MHWS – 3.5 m Admirality 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

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

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.

Connswater Bridge - Irish Grid Reference (IGR) 36589,375030, MHWS – 3.5m Above Chart Datum (ACD)
IKEA Bridge - Irish Grid Reference (IGR) 338203,376846
Location Plan Drawing is provided in Appendix A.

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

7. Method Statement

Connswater Bridge - All works will be performed at low tide only and at night.

1. Rail Road Vehicle (RRV) operator under the direction of the banksman is to lift trailer of equipment onto the tracks using the chains. Equipment to go to site is to be loaded onto the trailer, this includes a tower light, 14T excavator and 3T mini digger and other equipment.
2. Rock armour to be loaded into the empty RRV box trailer for transport to site using the 14T excavator based at access point at Kinnegar.
3. All operatives working in the riverbed to wear waders and lifejackets.
4. Diesel boom to be placed across the downstream side of the watercourse.
5. Skilled operatives will remove the fencing panels at either ends of the bridge to allow access into the riverbed, fencing panels to be safely stored until the end of the works.
6. The 14T excavator will lift and place the bogmats to allow machine access from the track down the side of the bank to the river bed.
7. Mats will be linked together using chains and secured to the bank to stop them from floating away in high tides.
8. 3T mini digger to be unloaded and positioned close to pier 2 or 3 dependent upon which side is being worked on.
9. Any debris or unwanted material around the piers to be removed and disposed of offsite.
10. RRV, 14T excavator and 3T excavator will work in a relay to move rock armour from the box trailer to the pier and place the larger stones as toe stones 300mm below bed level, other stones will be placed at a 1:1.5 gradient.
11. This will continue until the rock armour has been placed around pier 2 and 3 in accordance with AECOM Drawing Nr 60512590-1007-10011-A2.
12. Excavators to be removed from the riverbed at the end of each shift and either left in a secure position or returned to the access point at Kinnegar.
13. As required the RRV will switch tracks to deploy the 3T excavator to the other side of the pier if access beneath the bridge is impossible.
14. Excavators will clear debris from Western abutment and level off bed beneath.
15. Gabion Mattress basket to be lifted by excavators from the trailer and placed alongside western abutment beneath track drainage outfalls.
16. Mattress to be filled with gabion stone using the excavators.
17. At the end of each shift all plant will be removed.
18. The Site Foreman will ensure that the site has been left clear and tidy.

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

Method Statement

IKEA Bridge - Works to be undertaken at Night

19. 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, 6" pump and 3T mini digger.
20. The Foreman / TSC will ensure that all working personnel understand the briefing and the method of works as per the Method Statement, before he allows works to commence.
21. The work party will make their way to site via Kinnegar UWC.
22. Personnel entering the watercourse to wear lifejackets.
23. Diesel boom placed across the downstream of the watercourse.
24. Plant will be offloaded from the trailer.
25. Chainsaw, hand tools, strimmers and hedgecutters will be used to remove vegetation from the wingwalls of the structure. Arisings to be disposed of offsite or placed in the cess if it safe to do so.
26. Dismantle the kee klamp hand rail from the side of the bridge and safely store it on site.
27. RRV to use the bucket to create an area in the cess for the placement of the 6" pump.
28. 6" Silenced Pump to be set up on the upstream side with the suction hose end placed into the stream beyond the wingwalls.
29. Ballast to be dug out using hand tools from between two sleepers and run layflat hose from the pump under the track and out toward the downstream.
30. Delivery hose will be connected to the layflat end and will be positioned to allow water to enter the stream beyond the downstream wingwalls.
31. RRV to drive sheet piles into the stream bed on the upstream and downstream side of the stream to eliminate flow.
32. Sandbags will be placed to cover any gaps at the edges of the sheetpile wall.
33. RRV to position ground mats into the stream bed.
34. RRV to lift 3T mini digger onto the ground mat.
35. 3T mini digger to reach under the bridge and within the wingwalls and dredge out silt using its bucket to a depth of approx 500mm.
36. The silt will be deposited at the side of the bank within reach of the RRV who will then lift the silt and dispose of it off site.
37. When sufficient silt has been removed from this side of the bridge the RRV will lift the 3T mini digger out from the stream, the RRV will then head to Kinnegar and change to be on the other track.
38. RRV on other track to place bogmats in stream on that side and lift 3T digger onto them.
39. 3T mini digger will remove silt on this side beneath the bridge and between the wingwalls as before and place it for the RRV to collect and dispose of it.
40. Upon completion of the desilting the RRV will lift the 3T mini digger back onto the trailer along with the ground mats.
41. Pump hosing to be removed and load it onto the trailer.
42. RRV to lift the 6" silenced pump onto the trailer and remove the sheet piles.
43. Reinstate the kee klamp hand rail on both sides of the bridge.
44. After each shift one or a number of the sheet piles will be raised up and clamped into position to allow the water to flow through, the dam will be reinstated at the start of the following work shift.
45. At the end of the shift all plant will be removed.

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)	20.0.....
Silt (m^3)	.....
Sand (m^3)	6.6.....
Concrete (m^3)	....1.0
Concrete bags/mattresses (Confirm number, dimensions & total volume m^3)	.....
Stone/Rock/Gravel (size range and volume m^3)	Diameter approx. 300-1000mm Volume 30m^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 (m^2 or tonnes) .....

Iron/Steel (tonnes) .....

Plastic/Synthetic (m^2) .....

Silt (m^3) .....

Sand (m^3) .....

Concrete (m^3) .....

Concrete bags/mattresses
(Confirm number, dimensions
& total volume m^3) .....

Stone/Rock/Gravel
(size range and volume m^3) .....

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 — IKEA Bridge – River Sediment/Deposits ……

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? (with the public or other bodies) **YES** ☐ **NO** ✓

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.

Agencies notified include Rivers Agency, Fisheries (Section 48 Permit) & NIEA
A Habitats Regulations Assessment (HRA) Screening (Stage 1) has been prepared to support the application.

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.

50 m (see AppendixC)

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]
Date:	20/08/2018
Name (Block Letters):	Graham McCormack
Position within company: (if applicable)	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 - 04.325 - 04.329 - 01 - Site Location

Plot Date : 5/11/2018 2:32 PM

File Name : \\BE-MAN-001\WIP5\CIVDATA\DOCUMENTS\60512590 - TRANSLINK FRAMEWORK 16-20\WORK PACKAGES\1007 - UNDERWATER REPAIRS\4. DRAWINGS\LOCATION PLAN

Client: Translink

VEHICLE FERRY FROM BELFAST TO

Stranraer	(High Speed)	1 3/4 hours
	(Boat)	3 1/4 hours
Troon	(Seacat)	2 1/2 hours
Heysham	(Seacat)	3 3/4 hours
I O M (summer only)		
	(Seacat)	2 3/4 hours
Liverpool		8 1/2 hours

UB 04.329

UB 04.325
CONNSWATER RIVER

APPROX. 2.4Km

Drawing Title

TRANSLINK STRUCTURE
UNDERWATER EXAMINATION
04.325 & 04.329
Location Plan

Scale @ A4 1:50,000		
Drawn GA	Checked GM	Approved RB
Date MAY 2018		Rev 0

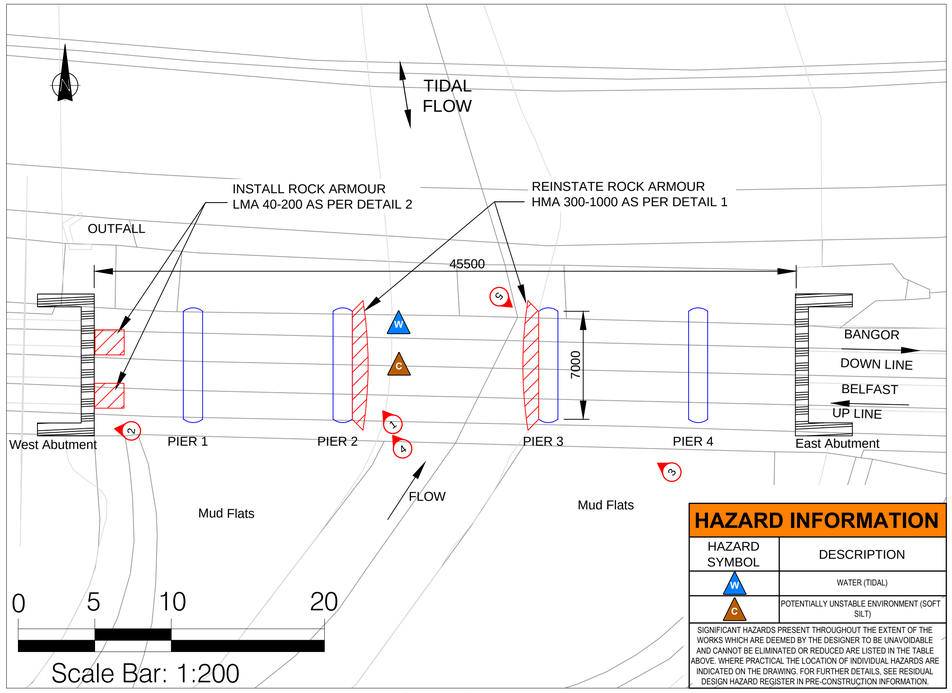
Drawing Number
47075660 - 04.325 - 04.329 - 01

AECOM

www.aecom.com

Appendix B

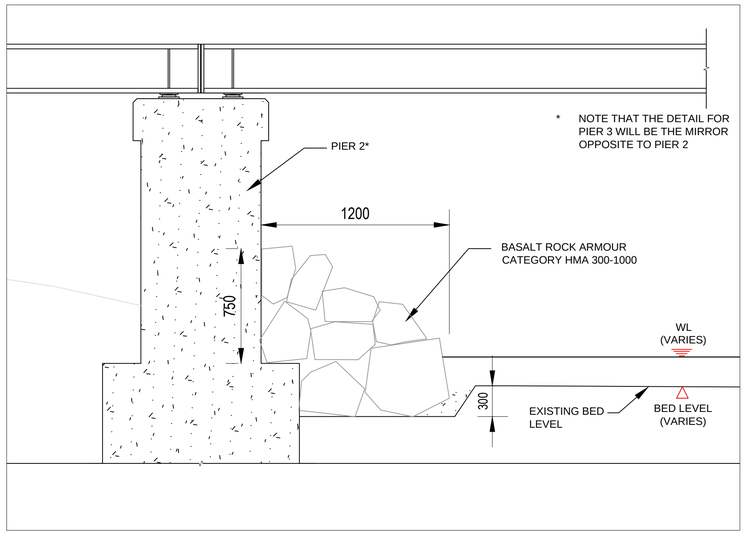
60512590 - 1007 - 10011- Underwater Repairs



HAZARD INFORMATION	
HAZARD SYMBOL	DESCRIPTION
W	WATER (TIDAL)
C	POTENTIALLY UNSTABLE ENVIRONMENT (SOFT SILT)

SIGNIFICANT HAZARDS PRESENT THROUGHOUT THE EXTENT OF THE WORKS WHICH ARE DEEMED BY THE DESIGNER TO BE UNAVOIDABLE AND CANNOT BE ELIMINATED OR REDUCED ARE LISTED IN THE TABLE ABOVE. WHERE PRACTICAL THE LOCATION OF INDIVIDUAL HAZARDS ARE INDICATED ON THE DRAWING. FOR FURTHER DETAILS, SEE RESIDUAL DESIGN HAZARD REGISTER IN PRE-CONSTRUCTION INFORMATION.

General Arrangement
Scale 1:200



Detail 1 - Repair detail at Pier 2 (from upstream side)
(Not to Scale)

Photo 1 - Pier 2 Horizontal crack

Photo 2 - West abutment

Photo 3 - General View of structure from upstream side

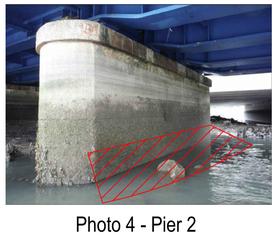
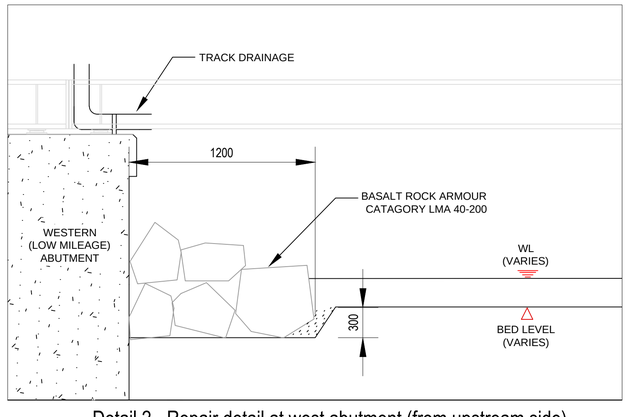


Photo 4 - Pier 2

Photo 5 - Pier 3



Detail 2 - Repair detail at west abutment (from upstream side)
(Not to Scale)

NOTES

Schedule of Repairs

1. Install rock armour at the face of central pier abutments as per General Arrangement, Detail 1, and in accordance with Rock Armour notes (Photos 4 & 5)

2. Remove debris from face of western abutment, level-off bed and install rock armour directly below track drainage outlets (UP and DN sides) as per General Arrangement, Detail 2, and in accordance with Rock Armour notes (Photo 2)

Install Rock Armour

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 CHAINAGES, 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 HOGWEED / 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 260-450mm.
5. WHERE HMA 300-1000 CLASS STONES ARE SPECIFIED, THESE STONES SHALL HAVE AN AVERAGE MASS OF 450-690KG 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 / Check	Date	Suffix

Purpose of issue

FOR APPROVAL

Client

Translink

Project Title

TRANSLINK FRAMEWORK CONSULTANCY SERVICES 2016-2020

Drawing Title

UNDERWATER REPAIRS

04.325 CONNSWATER

Designed	Drawn	Checked	Approved	Date
GTM	EM			JAN '18

Project No.	Suitability
60512590-1007	
Scale @ A1	Zone
AS SHOWN	

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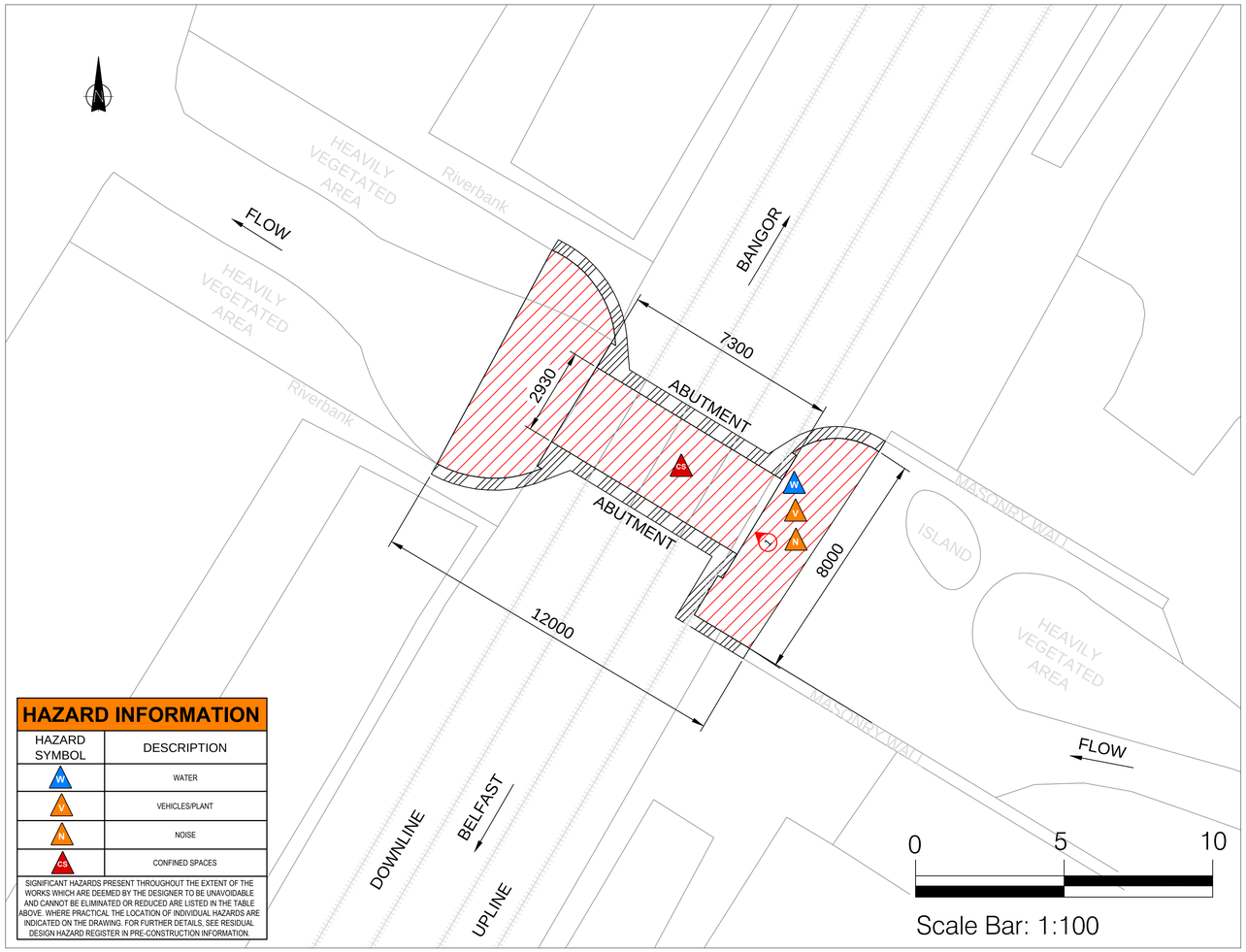
AECOM

Drawing Number	Rev
60512590-1007-10011	A1



HAZARD INFORMATION

HAZARD SYMBOL	DESCRIPTION
W	WATER
V	VEHICLES/PLANT
N	NOISE
CSL	CONFINED SPACES

SIGNIFICANT HAZARDS PRESENT THROUGHOUT THE EXTENT OF THE WORKS WHICH ARE DEEMED BY THE DESIGNER TO BE UNAVOIDABLE AND CANNOT BE ELIMINATED OR REDUCED ARE LISTED IN THE TABLE ABOVE. WHERE PRACTICAL THE LOCATION OF INDIVIDUAL HAZARDS ARE INDICATED ON THE DRAWING. FOR FURTHER DETAILS, SEE RESIDUAL DESIGN HAZARD REGISTER IN PRE-CONSTRUCTION INFORMATION.

General Arrangement
Scale 1:100

Photo 1 - View of upside of structure

NOTES

Schedule of Repairs

1. Dredge excess silt deposits as per area indicated in General Arrangement drawing, in accordance with Dredging notes and as directed by site engineer.
2. De-vegetate high and low mileage wing walls in accordance with De-vegetation notes.

Dredge excess silt deposits

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 CHAINAGES, 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.

DE-VEGETATION

CUT BACK VEGETATION GROWTH OBSCURING FACE OF ABUTMENTS / WING WALLS / RIVER WALLS, INCLUDING ANY OVERHANGING VEGETATION. CUTTINGS SHALL BE REMOVED AND DISPOSED OF OFF-SITE. MORTAR JOINTS SHALL BE FREE OF VEGETATION (SEE RE-POINTING NOTES BELOW). TREE GROWTH SHALL BE CUT BACK AND ROOTS KILLED-OFF BY DRILLING HOLES IN ROOTS AND INJECTING WITH A SUITABLE HERBICIDE.

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.
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DREDGING

3. SILT DEPTH VARIES FROM 150mm-500mm. DREDGE TO DEPTH OF APPROXIMATELY 500mm BELOW SURFACE LEVEL.
4. THIS AREA IS SUBJECT TO LOW FLOW THEREFORE DREDGED MATERIAL MAY BE STAGNANT/CONTAMINATED AND SHALL BE DISPOSED OF OFF-SITE

Revision Details	By / Check	Date	Suffix

Purpose of issue

FOR APPROVAL

Client

Translink

Project Title

TRANSLINK FRAMEWORK CONSULTANCY SERVICES 2016-2020

Drawing Title

UNDERWATER REPAIRS

04.329

Designed	Drawn	Checked	Approved	Date
GTM	EM			JAN '18

Project No.	Suitability
60512590-1007	
Scale @ A1	Zone
AS SHOWN	

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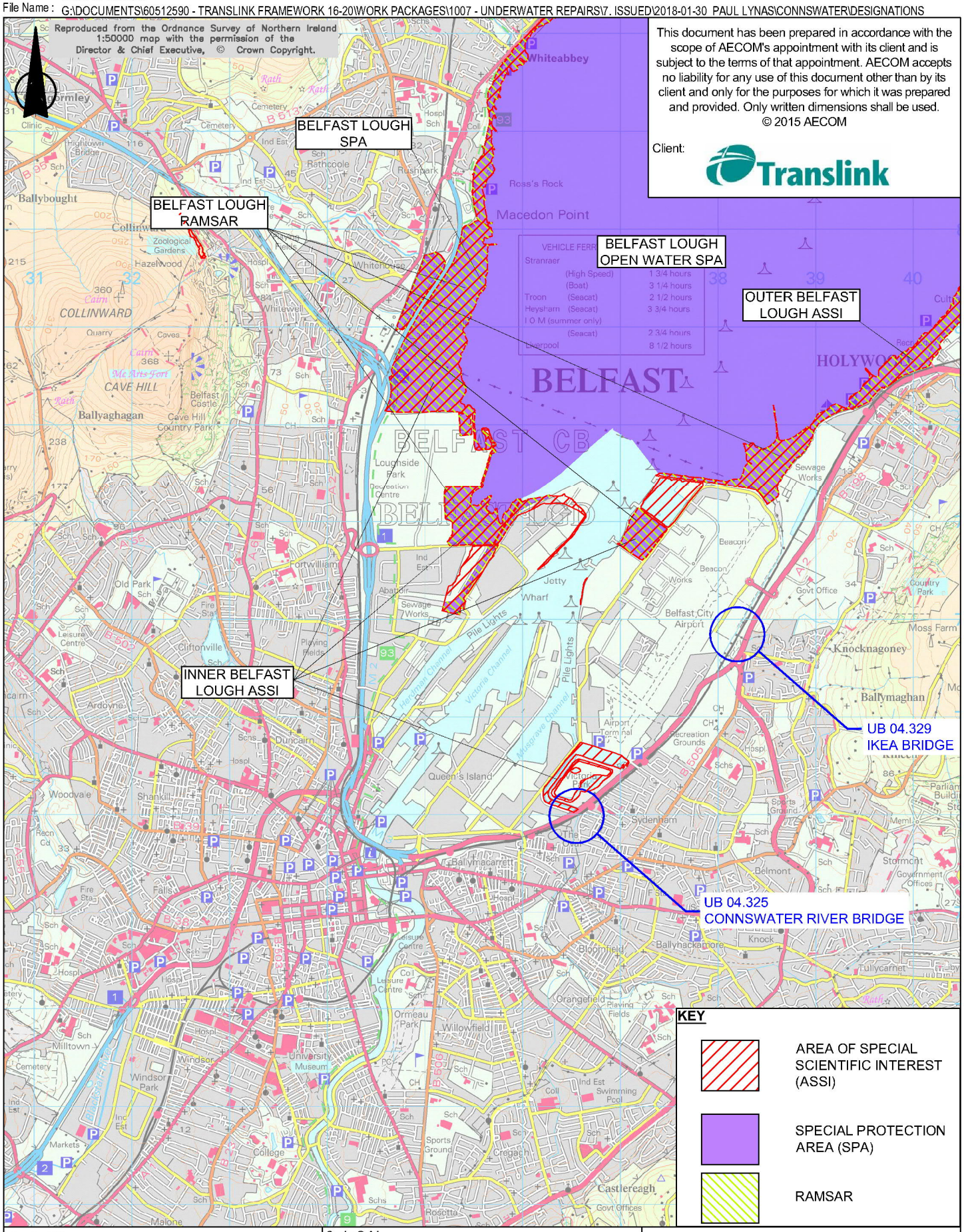
Drawing Number	Rev
60512590-1007-10012	A1

Appendix C

47075660 - MLA-DS- 04.325 - 04.329 - Designated Sites

Plot Date : 9/3/2018 12:42 PM
File Name : G:\DOCUMENTS\60512590 - TRANSLINK FRAMEWORK 16-20\WORK PACKAGES\1007 - UNDERWATER REPAIRS\7. ISSUED\2018-01-30 PAUL LYNAS\CONNSWATER\DESIGNATIONS



Client: Translink

Drawing Title

TRANSLINK STRUCTURE
UNDERWATER EXAMINATION
CONNSWATER BRIDGE 04.325 & IKEA BRIDGE 04.329
DESIGNATED SITES

Scale @ A4 1:50,000		
Drawn GA	Checked GM	Approved RB
Date MAY 2018		Rev 0

Drawing Number
47075660 - MLA-DS 04.325 - 04.329

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