



# SAFETY HEALTH & ENVIRONMENTAL **INFORMATION**

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following

Risks listed here are not exhaustive. Refer to Designer's Risk Assessment and pre-construction phase plan.

Managing flow & stage levels in River Fowey - Monitor flow levels & flood warnings. - Check adequacy of cut-off & stability of cofferdams.

Managing seepage flows through weir - Monitor seepage.

-Check stability of cut face in weir and assess permeability of formation material. - Check adequacy of cut-off & stability of cofferdams.

### Risk of falls from height

- Check depth of excavations. -Check adequate edge protection and access provision onto weir.

- Check cranage lifting facilities & constraints. - Check access weight & size restrictions for cranage along access route to site.

Interface with public & other site operations - Check adequate warning signs and fencing in place.

#### Services - Check for services.

Stability of Excavations & Structures - Check temporary works & construction sequencing to maintaining structural integrity of weir and stability of adjacent walls.

For information relating to Use, Cleaning and Maintenance see the Health and Safety File

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

> Proprietary Berry & Escott eel tiles fixed to - lateral 20° slope. - see detail 104 / 01 Existing masonry wall to be repointed to give flush hydraulic surface within extents of eel pass

Voids between tiles and surfaces filled with FOSROC Conbextra GP o.s.a.

Lateral 20° slope formed from non-shrink - cementitious grout **OR** as mass pour concrete (in continuous pour from channel base)

Concrete Eel pass with nominal A393 rebar reinforcement.

Nominal 75mm of existing RC weir profile to be excavated to achieve competent formation layer. - Any voids encountered to be mass filled with concrete to achieve competent formation layer. Formed mass concrete ramp to found eel pass.

Weir glacis to be saw cut to remove exposed / corroded reinforcing mesh. Concrete face to be scabbled. A393 stainless steel mesh to be fixed to new roughened face and concrete mix poured to cover with minimum 60mm

Varying formation surfaces. Soft spots in bed strata and voids in weir formation to be back-filled with typical mass concrete mix to from suitable foundation

- NOTES: 1. DIMENSIONS:
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- Marked thus (\*) are approximate • All levels are in metres to Site Datum

• Critical levels set out to crest level. Temporary site datum to be agreed on site.

### 2. SPECIFICATION:

All works to be carried out in accordance with the Environment Agency Minimum Technical Requirements which shall be the Civil Engineering Specification for the Water Industry (CESWI).

## 3. REINFORCED & MASS CONCRETE

- All concrete to comply with BS 8500-2. • Mass concrete and reinforced concrete of the same mix. • Concrete to have a minimum strength class of C35 / 45.
- Designated Mix REQUIREMENTS: RC 35 / 45

## - 20mm max. aggregate size

- S3 consistency class • Reinforcement: All steel reinforcement shall be deformed Type 2 and shall be cut and bent to BS4466 or BS4449.
- Minimum cover to reinforcement  $C_{min} = 60mm$ . • All exposed edges to have 25mm chamfer, with exception to abutting
- ioints. • Exposed formed concrete to have fair worked finish.
- Exposed unformed concrete to have wood float finish. • Operation and maintenance platform given tamped finish.
- Nominal 100mm layer of mass concrete blinding for pours.
- 4. RIP-RAP SCOUR PROTECTION:
- Rip-rap scour protection to comprise of natural hard stone with nominal density 2700kg/m<sup>3</sup>. Approximate grading to be: 50% 300mm<Ø<450mm, 50% 150mm<Ø<300mm.

Information Purposes

P01 For Information Issue Description Status

## **Detailed Design**

20/06/19

Date

Scales		Current Issu	e Signatures	
	As shown	Author M.Giblin	MG	
Original Size	A1	Checker M.Lakin	M. L'	
Datum	N/A	Арргоvег I.StR.	Loin S. Stevent-Russon	
Grid	N/A	🔘 Соруг	right reserved	
Filename:				

Client





PROJECT



TITLE

# General Arrangement and Sections

Project No.	ls	sue
02458 -	<b>-</b>	P01
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Managing seepage flows through weir - Monitor seepage.

-Check stability of cut face in weir and assess permeability of formation material. - Check adequacy of cut-off & stability of cofferdams.

#### Risk of falls from height - Check depth of excavations.

-Check adequate edge protection and access provision onto weir.

#### Lifting

 Check cranage lifting facilities & constraints.
 Check access weight & size restrictions for cranage along access route to site.

Interface with public & other site operations - Check adequate warning signs and fencing in place.

#### Services - Check for services.

Stability of Excavations & Structures - Check temporary works & construction sequencing to maintaining structural integrity of weir and stability of adjacent walls.

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- Designated Mix REQUIREMENTS: RC 35 / 45

### - 20mm max. aggregate size

- S3 consistency class
  Reinforcement: All steel reinforcement shall be deformed Type 2 and shall be cut and bent to BS4466 or BS4449.
- Minimum cover to reinforcement  $C_{min} = 60$ mm. • All exposed edges to have 25mm chamfer, with exception to abutting
- joints. • Exposed formed concrete to have fair worked finish.
- Exposed unformed concrete to have wood float finish.
- Nominal 100mm layer of mass concrete blinding for pours.

4. RIP-RAP SCOUR PROTECTION: • Rip-rap scour protection to comprise of natural hard stone with nominal density 2700kg/m<sup>3</sup>. Approximate grading to be: 50% 300mm<Ø<450mm, 50% 150mm<Ø<300mm.

Information Purposes NIC P01 For Information 20/06/19 Issue Description Date Status

## **Detailed Design**

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Grid	N/A	🔘 Соруг	right reserved	
Filename:		•		

Client





PROJECT

WFG Framework Glynn Weir

TITLE

# Larinier Fish Pass Plan and Sections

Drawing No.	Project No.	lssue
0102	_ 02458 -	- P01







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to the hazards/risks normally associated with work detailed on this drawing, note the following nformation.	All Mir Spo	works to nimum T ecificatio	ICATION: b be carried out in accordan echnical Requirements wh on for the Water Industry (C	ich shall be the Civil CESWI).	
d here are not exhaustive. Refer to Designer's ssment and pre-construction phase plan.	• A • N • C	All concre Mass co Concrete	RCED & MASS CONCRE ete to comply with BS 8500 ncrete and reinforced con to have a minimum streng ed Mix REOLIDEMENTS:	n-2. Increte of the same m	nix.
JCTION		- RC - 20r	ed Mix REQUIREMENTS: 35 / 45 mm max. aggregate size		
Managing flow & stage levels in River Fowey - Monitor flow levels & flood warnings.		Reinforce	consistency class ement: All steel reinforcement bent to BS4466 or BS4449		d Type 2 and shall
<ul> <li>Check adequacy of cut-off &amp; stability of cofferdams.</li> <li>Managing seepage flows through weir</li> </ul>		All expos	cover to reinforcement C <sub>rr</sub> ed edges to have 25mm cl		n to abutting
- Monitor seepage. -Check stability of cut face in weir and assess permeability of formation material.	• E	Exposed Exposed	formed concrete to have fa unformed concrete to have 100mm layer of mass conc	e wood float finish.	-e
- Check adequacy of cut-off & stability of cofferdams.	4. 1	RIP-RAF	SCOUR PROTECTION:		
Risk of falls from height - Check depth of excavations. -Check adequate edge protection and access provision onto weir.	der	nsity 270	00kg/m <sup>3</sup> . Approximate grad m<Ø<300mm.		
Lifting - Check cranage lifting facilities & constraints. - Check access weight & size restrictions for cranage along access route to site.					
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Drawing No.

0103

Project No.

- 02458

Issue

- P01



# 104 / 01 - Eel Tile Substrate

Scale 1:10





### SAFETY HEALTH • Are in millimetres unless otherwise stated • Marked thus (\*) are approximate • All levels are in metres to Site Datum & ENVIRONMENTAL 2. SPECIFICATION: INFORMATION All works to be carried out in accordance with the Environment Agency Minimum Technical Requirements which shall be the Civil Engineering Specification for the Water Industry (CESWI). In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following 3. REINFORCED & MASS CONCRETE • All concrete to comply with BS 8500-2. • Mass concrete and reinforced concrete of the same mix. • Concrete to have a minimum strength class of C35 / 45. Risks listed here are not exhaustive. Refer to Designer's Designated Mix REQUIREMENTS: Risk Assessment and pre-construction phase plan. - RC 35 / 45 - 20mm max. aggregate size - S3 consistency class • Reinforcement: All steel reinforcement shall be deformed Type 2 and shall be cut and bent to BS4466 or BS4449. Managing flow & stage levels in River Fowey • Minimum cover to reinforcement $C_{min} = 60mm$ . - Monitor flow levels & flood warnings. All exposed edges to have 25mm chamfer, with exception to abutting - Check adequacy of cut-off & stability of cofferdams. joints. • Exposed formed concrete to have fair worked finish. Managing seepage flows through weir • Exposed unformed concrete to have wood float finish. - Monitor seepage. • Nominal 100mm layer of mass concrete blinding for pours. -Check stability of cut face in weir and assess 4. ALUMINIUM: permeability of formation material. All structural aluminium alloys to BS8118. - Check adequacy of cut-off & stability of cofferdams. • Sheet plate grade to be Alloy 5251 H22 Temper, o.s.a. • All aluminium welds to be 10mm continuous fillet welds unless otherwise Risk of falls from height indicated. - Check depth of excavations. -Check adequate edge protection and access 5. FABRICATION: provision onto weir. • Fabricator to prepare fabrication drawings. • All structural material components & all fabricated aluminium structures Lifting executed to conform to BS EN 1090-2. - Check cranage lifting facilities & constraints. • Size of connection plates & bolt hole positions to suit fabrication - Check access weight & size restrictions for cranage tolerances and checked prior to delivery to site. along access route to site. Interface with public & other site operations - Check adequate warning signs and fencing in place. Services - Check for services. Stability of Excavations & Structures - Check temporary works & construction sequencing to maintaining structural integrity of weir and stability of adjacent walls. For information relating to Use, Cleaning and Maintenance see the Health and Safety File It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement Information Purposes 18no aluminium M16 Alloy 5754 bolts as shear connectors. Inserted into clearance holes in aluminium walls, welded, and head ground off to create flush internal surface. Nut spot welded to within 10mm of end of bolt thread. NIC P01 For Information 20/06/19 Issue Description Date Status **Detailed Design** Current Issue Signatures Scales As shown Author MA M.Giblin Original hecker Α1 M.L. M.Lakin Size Datum Approver N/A Tain S. Sterot - Russon I.St.-R. Grid N/A C Copyright reserved Filename Client 137 Westcountry **Rivers** Trust **FISHTEK** CONSULTING PROJECT WFG Framework Glynn Weir TITLE Aluminium Larinier Fabricated Elements and Eel Tiles

NOTES: 1. DIMENSIONS:



### NOTES: 1. DIMENSIONS: SAFETY HEALTH • All levels are in metres to Site Datum & ENVIRONMENTAL site. INFORMATION 2. SPECIFICATION: In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following

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3. ALUMINIUM:

• All structural aluminium alloys to BS8118. • Sheet plate grade to be Alloy 5251 H22 Temper, **o.s.a**.

• All aluminium welds to be 10mm continuous fillet welds unless otherwise indicated.

4. FABRICATION:

• Fabricator to prepare fabrication drawings. • All structural material components & all fabricated aluminium or

stainless steel structures executed to conform to BS EN 1090-2. • Size of connection plates & bolt hole positions to suit fabrication

tolerances and checked prior to delivery to site.

## 5. STAINLESS STEEL:

 All structural stainless steel 316L, o.s.a. • Wedge wire screen by Screen Systems (Wireworkers) Ltd.



- P01

- 02458

0105



106 / 02 - Larinier - RC Schedule

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7H16-10-150 TF	7H16-11-150 BF <b>03 - Plan</b>	Dist. Straights (cut from stock steel) H16-01-150 EF	Wall-end U-bars 7H16-03-150
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		Dist. Straights (cut from stock steel) H16-01-150 NF	
<sup>10</sup> J <sup>11</sup> J		1	Wall end L-bars 13H16-12-150 NF
			Channel U-ba 88H16-02-150
09			
	04 - Sectional Elevation		Slab-end U-bar 7H16-03-150

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ITEM	<u> </u>								NAME	MTG			
	Lar	arinier							REV.	P01			
MEMBER	BAR MARK	TYPE AND SIZE	No. OF MBRS.	No. OF BARS IN EACH	TOTAL No.	LENGTH OF EACH BAR MM. <b>+</b>	SHAPE CODE	A*	В*	C*	D*	E/r*	
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	15	A39	3 SS	S grad	de 304	mesh	(app	orox. 1	5.0m <sup>2</sup>	weir re	epair)		
Covei	:									expos		es)	

\* Legs cut to suit on site \*\* Length cut to suit from stock

steel

C 250 D 330 A 1170

BM09 - SC99 - Bespoke bar

Laps: Tension faces 40Ø (480mm)

