Specifications and Tender, Snake Lane Fish Passage Improvement Project

Appendix 1 – Design Drawings and Amendments

WILD TROUT TRUST

wildtrout.org

Location: River Ecclesbourne, Snake Lane, Duffield, Derbyshire

Introduction

The following design documents are provided:

1. Detailed arrangement for notching of Snake Lane weir, reinforcement and installation of rock rapid as per drawings **8761-01A Layout**; **8761-02B Section 1** and **8761-03A Section 2**.

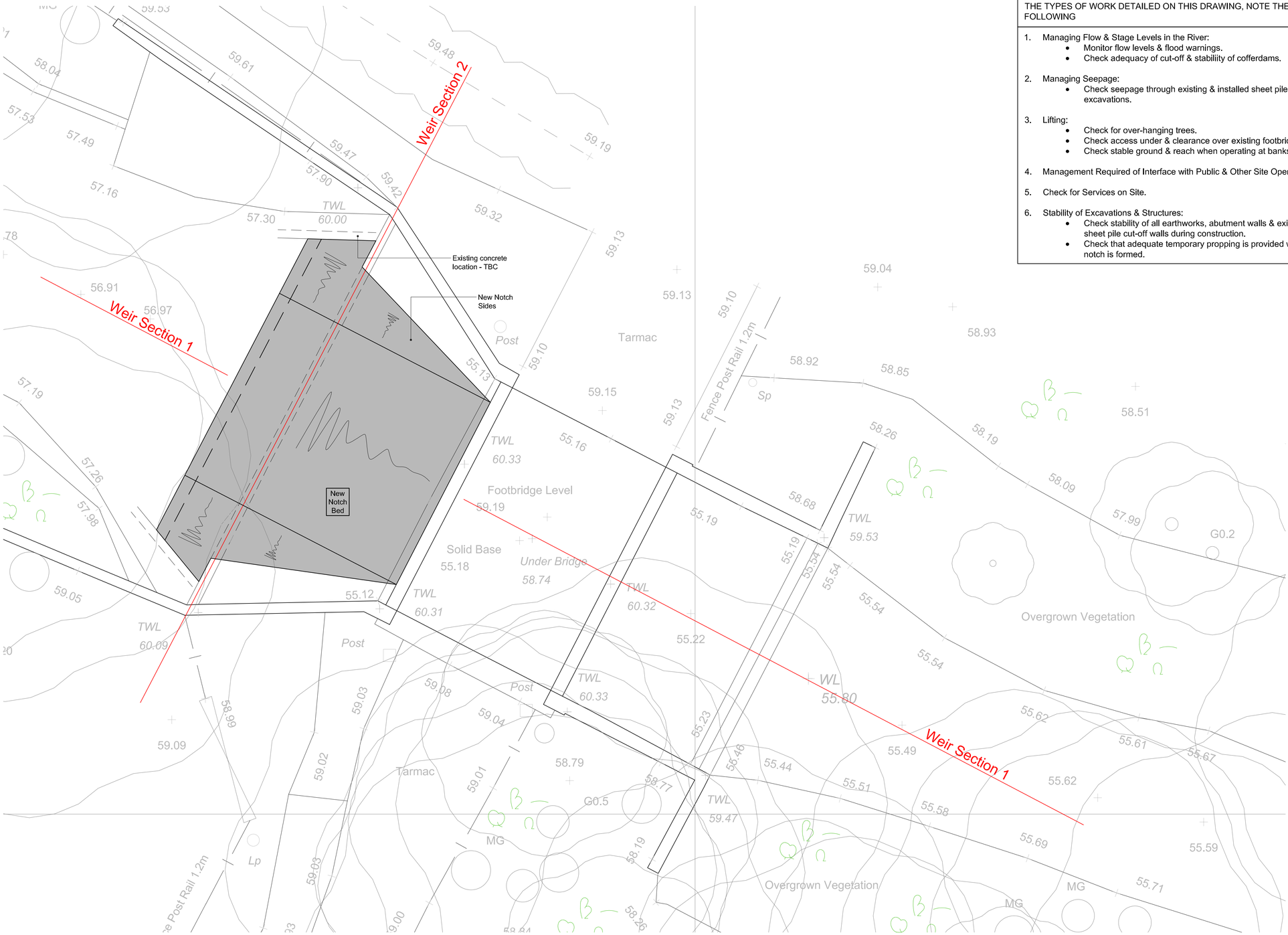
2. Note on positioning of furthest downstream rock rapid in relation to outfall at coordinates E433951.353 N343473.906.

3. Indicative design of piling and embedded boulders to be installed at the toe of each rock rapid (except for the weir rapid – see point 1 above). Details of piling specification to be agreed between contractor and designer.

4. Detailed design drawings for the remainder of the project (**NB subject to the above amendments**).

1. GCA drawings

- **8761-01A Layout**;
- **8761-02B Section 1**
- **8761-03A Section 2**



HEALTH & SAFETY INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

1. Managing Flow & Stage Levels in the River:
   - Monitor flow levels & flood warnings.
   - Check adequacy of cut-off & stability of cofferdams.
2. Managing Seepage:
   - Check seepage through existing & installed sheet piles & excavations.
3. Lifting:
   - Check for over-hanging trees.
   - Check access under & clearance over existing footbridge.
   - Check stable ground & reach when operating at bankside.
4. Management Required of Interface with Public & Other Site Operations.
5. Check for Services on Site.
6. Stability of Excavations & Structures:
   - Check stability of all earthworks, abutment walls & existing sheet pile cut-off walls during construction.
   - Check that adequate temporary propping is provided when the notch is formed.

NOT FOR CONSTRUCTION UNLESS STATED BELOW

GENEARL NOTES

1. Layout plan is based on Mapmatic drawing 4431-0001.
2. To be read in conjunction with GCA drawing 8761-02 & 03.
3. All works to be undertaken in accordance with the Building Regulations and good building practice.
4. All temporary works including shoring to contractor's design.
5. All levels to be confirmed by Hydraulic Engineer prior to construction.
6. Refer to concrete specification for full details.
7. These drawings indicate alterations to the existing weir only. All alterations to the river bed are by others.
8. All drawings are indicative until existing weir construction has been confirmed on site & reported to GCA.
9. All existing concrete infrastructure around weir to be checked for spalling or defects & repaired as required.

CONSTRUCTION NOTES

1. Dimensions:
   - All dimensions are in millimetres unless noted otherwise.
   - All levels are in metres to site datum.
2. Specification:
   - All work to be carried out in accordance with the Environment Agency Minimum Technical Requirements which shall be Civil Engineering Specification for the Water Industry (CESWI). All technical requirements clauses apply unless stated as deleted, amended or augmented in accordance with the Contract Works Information documentation.
3. Concrete:
   - All concrete to comply with BS8500-2.
   - Concrete to have a minimum strength class of C35/45.
4. Concrete Designated Mix Proposal to be Advised by Supplier:
   - RC 35/45.
   - 20mm maximum aggregate size.
   - S2 consistency class.
5. Reinforcement:
   - All reinforcement to be deformed Type 2 & cut & bent to BS4466 or BS4449.
   - It is to be obtained from firms holding a valid certificate of Approval for the manufacture & or fabrication of steel reinforcement issued by the UK Certification Authority for Reinforcing Steels.
   - Tying wire for steel reinforcement is to be 1.6mm diameter, annealed mild steel wire complying with BS1052.
6. Formwork:
   - Exposed formed concrete surfaces to have a fair worked finish unless otherwise indicated.
   - Exposed unformed concrete surfaces to have a wood float finish unless otherwise indicated.
   - Outside edges to have 25mm chamfer.
7. Grout for Dowels is Either:
   - Rawl 60-170 R-Kex 400 2-part epoxy grout or
   - Proprietary rapid high non or compensated shrinkage cementitious grout, eg SIKA L2 high flow or
   - Similar approved.

Rev	Date	Details	Rev by	Approved
A	02.11.21	Updated	ADT	JT

GCA (UK) Ltd, BABINGTON LODGE
128 GREEN LANE, DERBY DE1 1RY
TEL 01332 362411 FAX 01332 290855
E-MAIL derby@gca-consulting.com

CONSULTING CIVIL, STRUCTURAL, HIGHWAY & TRANSPORTATION ENGINEERS
OFFICES AT DERBY, LEICESTER, MILTON KEYNES & WARWICK

	Name	Date
Drawn	ADT	10.08.21
Checked	JT	10.08.21
Approved	JT	10.08.21

client: The Wild Trout Trust

project: Snake Lane Weir, Dutfield

title: Layout Plan

TENDER

Dwg No 01

Project No 8761 | Scale 1:50 @ A1 | Rev A

Preliminary ☐ | Detailed ☐ | Tender ☒ | Construction ☐ | As Built ☐

All Dimensions in Millimetres unless stated otherwise. Do not scale Dimensions from this drawing

HEALTH & SAFETY INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

1. Managing Flow & Stage Levels in the River:
   - Monitor flow levels & flood warnings.
   - Check adequacy of cut-off & stabiliity of cofferdams.
2. Managing Seepage:
   - Check seepage through existing & installed sheet piles & excavations.
3. Lifting:
   - Check for over-hanging trees.
   - Check access under & clearance over existing footbridge.
   - Check stable ground & reach when operating at bankside.
4. Management Required of Interface with Public & Other Site Operations.
5. Check for Services on Site.
6. Stability of Excavations & Structures:
   - Check stability of all earthworks, abutment walls & existing sheet pile cut-off walls during construction.
   - Check that adequate temporary propping is provided when the notch is formed.

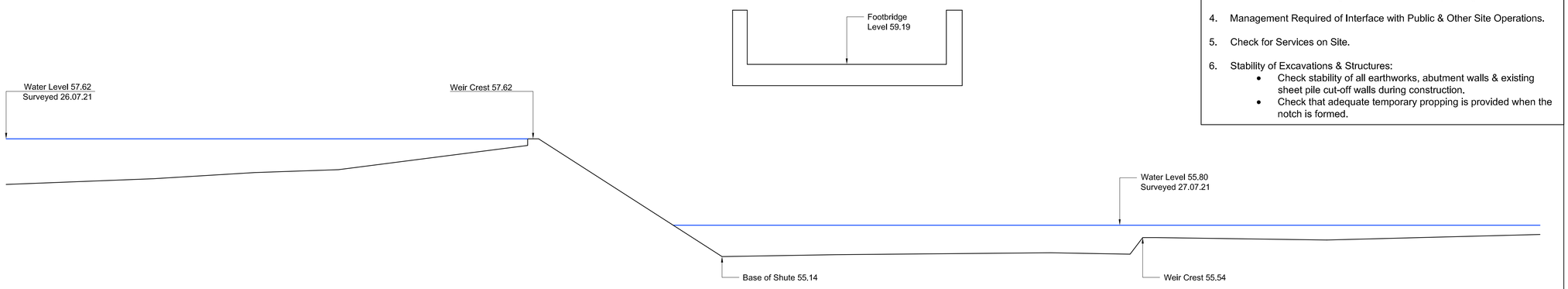
NOT FOR CONSTRUCTION UNLESS STATED BELOW

GENEARL NOTES

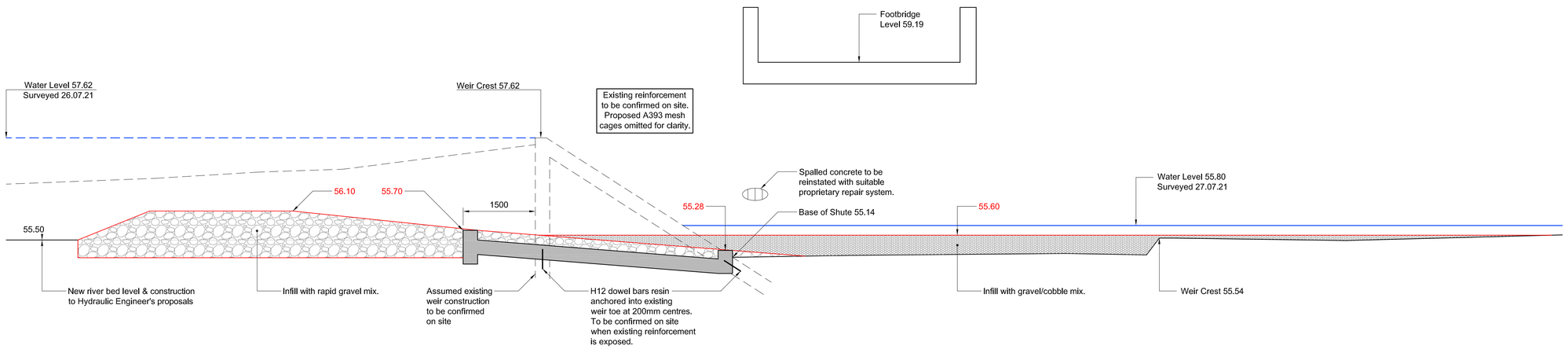
1. Sections are based on Mapmatic drawing 4431-0001.
2. To be read in conjunction with GCA drawing 8761-01.
3. All works to be undertaken in accordance with the Building Regulations and good building practice.
4. All temporary works including shoring to contractor's design.
5. All levels to be confirmed by Hydraulic Engineer prior to construction.
6. Refer to concrete specification for full details.
7. These drawings indicate alterations to the existing weir only. All alterations to the river bed are by others.
8. All drawings are indicative until existing weir construction has been confirmed on site & reported to GCA.
9. All existing concrete infrastructure around weir to be checked for spalling or defects & repaired as required.

CONSTRUCTION NOTES

1. Dimensions:
   - All dimensions are in millimetres unless noted otherwise.
   - All levels are in metres to site datum.
2. Specification:
   - All work to be carried out in accordance with the Environment Agency Minimum Technical Requirements which shall be Civil Engineering Specification for the Water Industry (CESWI). All technical requirements clauses apply unless stated as deleted, amended or augmented in accordance with the Contract Works Information documentation.
3. Concrete:
   - All concrete to comply with BS8500-2.
   - Concrete to have a minimum strength class of C35/45.
4. Concrete Designated Mix Proposal to be Advised by Supplier:
   - RC 35/45.
   - 20mm maximum aggregate size.
   - S2 consistency class.
5. Reinforcement:
   - All reinforcement to be deformed Type 2 & cut & bent to BS4466 or BS4449.
   - It is to be obtained from firms holding a valid certificate of Approval for the manufacture & or fabrication of steel reinforcement issued by the UK Certification Authority for Reinforcing Steels.
   - Tying wire for steel reinforcement is to be 1.6mm diameter, annealed mild steel wire complying with BS1052.
6. Formwork:
   - Exposed formed concrete surfaces to have a fair worked finish unless otherwise indicated.
   - Exposed unformed concrete surfaces to have a wood float finish unless otherwise indicated.
   - Outside edges to have 25mm chamfer.
7. Grout for Dowels is Either:
   - Rawl 60-170 R-Kex 400 2-part epoxy grout or
   - Proprietary rapid high non or compensated shrinkage cementitious grout, eg SIKA L2 high flow or
   - Similar approved.



Existing Weir Section 1
Scale 1:50



Proposed Weir Section 1
Scale 1:50

All Dimensions in Millimetres unless stated otherwise. Do not scale Dimensions from this drawing

Rev	Date	Details	Rev by	Approved
B	24.11.21	Updated Following Comments	ADT	JT
A	02.11.21	Updated	ADT	JT

GCA (UK) Ltd, BABINGTON LODGE
128 GREEN LANE, DERBY DE1 1RY
TEL 01332 362411 FAX 01332 290855
E-MAIL derby@gca-consulting.com

CONSULTING CIVIL, STRUCTURAL, HIGHWAY & TRANSPORTATION ENGINEERS
OFFICES AT DERBY, LEICESTER, MILTON KEYNES & WARWICK

	Name	Date
Drawn	ADT	10.08.21
Checked	JT	10.08.21
Approved	JT	10.08.21

client: The Wild Trout Trust

project: Snake Lane Weir, Duffield

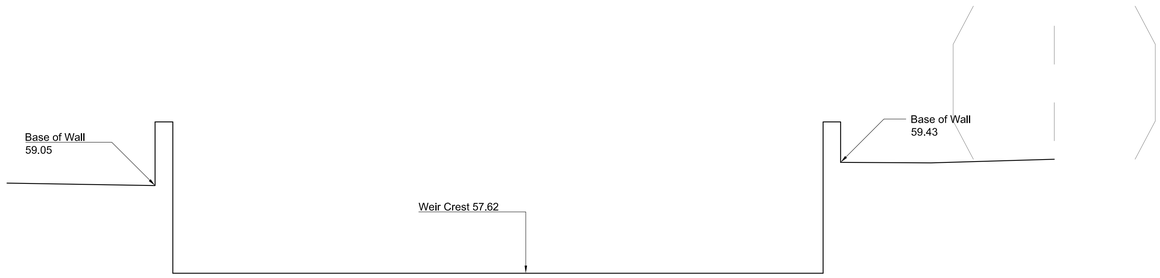
title: Existing & Proposed Section 1

TENDER

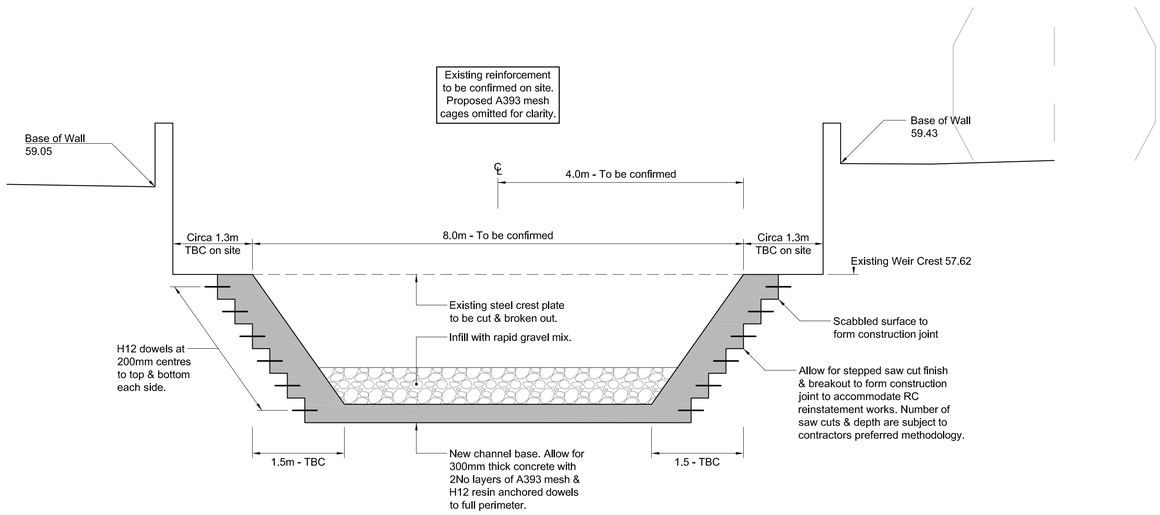
Dwg No 02

Project No 8761 | Scale 1:50 @ A1 | Rev B

Preliminary ☐ | Detailed ☐ | Tender ☒ | Construction ☐ | As Built ☐



Existing Weir Section 2
Scale 1:50



Proposed Weir Section 2
Scale 1:50

All Dimensions in Millimetres unless stated otherwise. Do not scale Dimensions from this drawing

HEALTH & SAFETY INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

1. Managing Flow & Stage Levels in the River:
   - Monitor flow levels & flood warnings.
   - Check adequacy of cut-off & stabiliity of cofferdams.
2. Managing Seepage:
   - Check seepage through existing & installed sheet piles & excavations.
3. Lifting:
   - Check for over-hanging trees.
   - Check access under & clearance over existing footbridge.
   - Check stable ground & reach when operating at bankside.
4. Management Required of Interface with Public & Other Site Operations.
5. Check for Services on Site.
6. Stability of Excavations & Structures:
   - Check stability of all earthworks, abutment walls & existing sheet pile cut-off walls during construction.
   - Check that adequate temporary propping is provided when the notch is formed.

NOT FOR CONSTRUCTION UNLESS STATED BELOW

GENEARL NOTES

1. Sections are based on Mapmatic drawing 4431-0001.
2. To be read in conjunction with GCA drawing 8761-01.
3. All works to be undertaken in accordance with the Building Regulations and good building practice.
4. All temporary works including shoring to contractor's design.
5. All levels to be confirmed by Hydraulic Engineer prior to construction.
6. Refer to concrete specification for full details.
7. These drawings indicate alterations to the existing weir only. All alterations to the river bed are by others.
8. All drawings are indicative until existing weir construction has been confirmed on site & reported to GCA.
9. All existing concrete infrastructure around weir to be checked for spalling or defects & repaired as required.

CONSTRUCTION NOTES

1. Dimensions:
   - All dimensions are in millimetres unless noted otherwise.
   - All levels are in metres to site datum.
2. Specification:
   - All work to be carried out in accordance with the Environment Agency Minimum Technical Requirements which shall be Civil Engineering Specification for the Water Industry (CESWI). All technical requirements clauses apply unless stated as deleted, amended or augmented in accordance with the Contract Works Information documentation.
3. Concrete:
   - All concrete to comply with BS8500-2.
   - Concrete to have a minimum strength class of C35/45.
4. Concrete Designated Mix Proposal to be Advised by Supplier:
   - RC 35/45.
   - 20mm maximum aggregate size.
   - S2 consistency class.
5. Reinforcement:
   - All reinforcement to be deformed Type 2 & cut & bent to BS4466 or BS4449.
   - It is to be obtained from firms holding a valid certificate of Approval for the manufacture & or fabrication of steel reinforcement issued by the UK Certification Authority for Reinforcing Steels.
   - Tying wire for steel reinforcement is to be 1.6mm diameter, annealed mild steel wire complying with BS1052.
6. Formwork:
   - Exposed formed concrete surfaces to have a fair worked finish unless otherwise indicated.
   - Exposed unformed concrete surfaces to have a wood float finish unless otherwise indicated.
   - Outside edges to have 25mm chamfer.
7. Grout for Dowels is Either:
   - Rawl 60-170 R-Kex 400 2-part epoxy grout or
   - Proprietary rapid high non or compensated shrinkage cementitious grout, eg SIKA L2 high flow or
   - Similar approved.

Rev	Date	Details	Rev by	Approved
A	02.11.21	Updated	ADT	JT

GCA (UK) Ltd, BABINGTON LODGE
128 GREEN LANE, DERBY DE1 1RY
TEL 01332 362411 FAX 01332 290855
E-MAIL derby@gca-consulting.com

CONSULTING CIVIL, STRUCTURAL, HIGHWAY & TRANSPORTATION ENGINEERS
OFFICES AT DERBY, LEICESTER, MILTON KEYNES & WARWICK

	Name	Date
Drawn	ADT	10.08.21
Checked	JT	10.08.21
Approved	JT	10.08.21

client: The Wild Trout Trust

project: Snake Lane Weir, Duffield

title: Existing & Proposed Section 2

TENDER

Dwg No	Project No	Scale	Rev
03	8761	1:50 @ A1	A

Preliminary	Detailed	Tender	Construction	As Built
		X		

2. Downstream Rapid Position

An 150-mm diameter outfall to the river from the domestic waste treatment unit at Mill Green House is located on the north bank of the river at co-ordinates E433951.353 N343473.906 and an invert level of 56.25m AoD (Figure 1 and Figure 2).

The toe of the furthest downstream rock rapid **must be positioned upstream of the outfall pipe** to ensure no increase in river water surface levels at the outfall.

Figure 1 Outfall from Mill Green House.

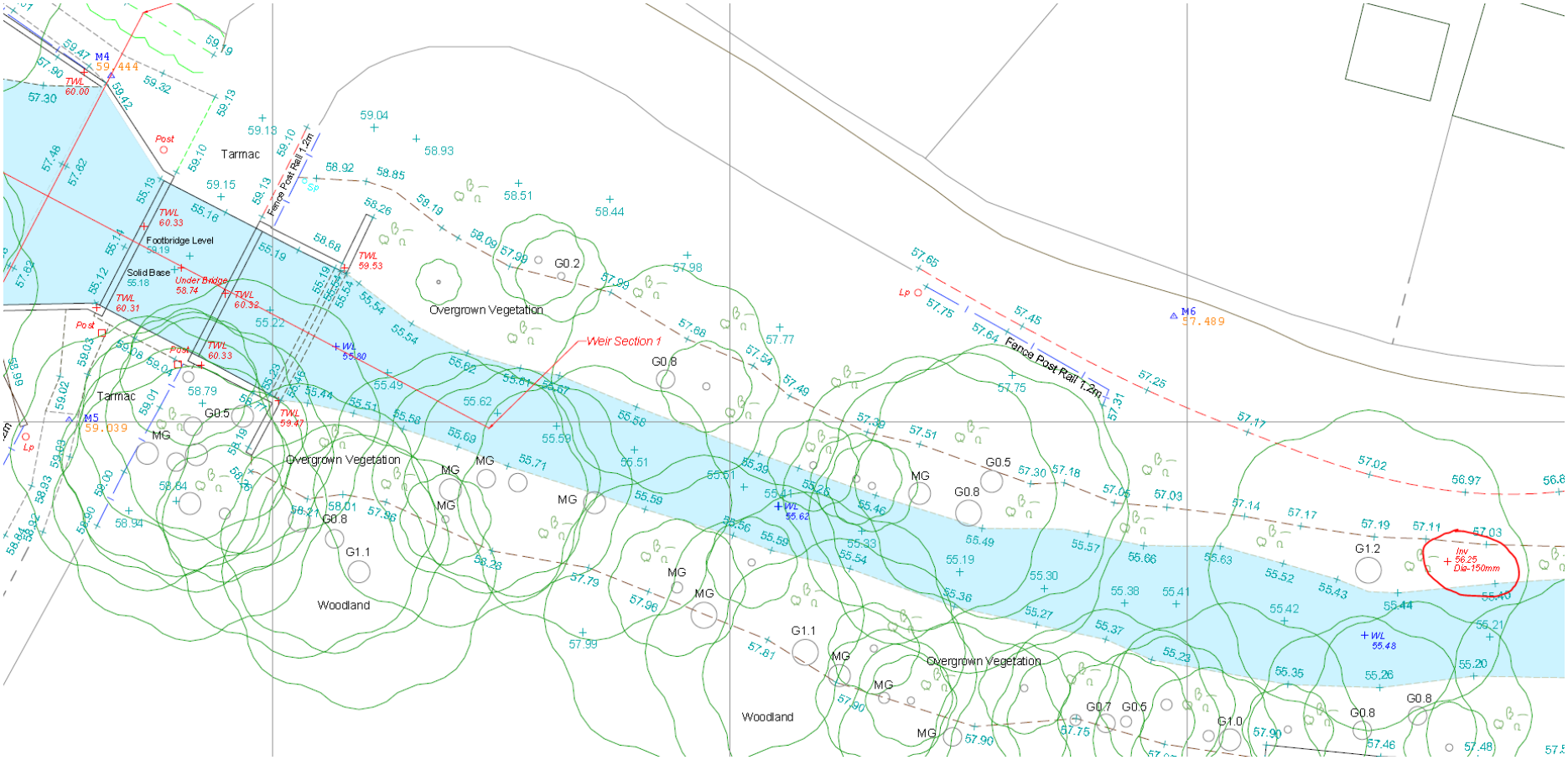


Figure 2 Extract from topographic survey (Mapmatic drawing 4431) showing position of outfall (red circle)

3. Stabilising the Rock Rapids

[NB this does not apply at the rock rapid at the weir which is the subject of the detailed design in point 1 above].

The original design of the rock rapid structures is based upon the modelled shear stresses at the site following notching of the weir. The calibre of the material to be used for the rock rapids is scaled to be stable at the maximum modelled shear stresses, with an additional safety factor. The stability and shear stresses are based upon unconsolidated material, whereas the design stipulates bedding-in of the boulders and angular, interlocking material, providing additional stability.

However it is recognised that "wash out" is a known risk factor for rock rapids and providing additional stability measures during construction reduces the risk of the need for future maintenance and repair for marginal cost.

The design will therefore incorporate piling and embedded boulders at the toe of each rock rapid structure to provide additional stability. An indicative diagram is shown in Figure 3. This has been referred to the original designers (AquaUoS) of Snake Lane, who provided the following comment:

With regards to further stabilisation of these measures and the use of sheet piling, this is ok from an implementation and feature functionality perspective. One risk to be aware of is if there is very minor movement of material as the feature beds in around the toe that leaves a small weir as a result of the sheet piling. Suitable keying in of the keystone boulders for the rapid features would help minimise this risk and was part of the original MS anyway.

With regards to the specification of the sheet piling, we have referred this back to the University of Salford as we would've deferred to an engineer there for input to use of this in the design. I'll let you know when we hear back, otherwise, it might be worth checking with your engineer. This would mainly be around type of sheet pile (there are surprisingly quite a few) and founding depth…obviously the positioning is as you indicate, at the toe of the feature.

The amended design has also been referred to James Thomson of GCA Consulting, the structural engineer advising the project. His advice is to determine the details of the type of piles and the depth to which they will be driven in conjunction with a suitably experienced contractor.

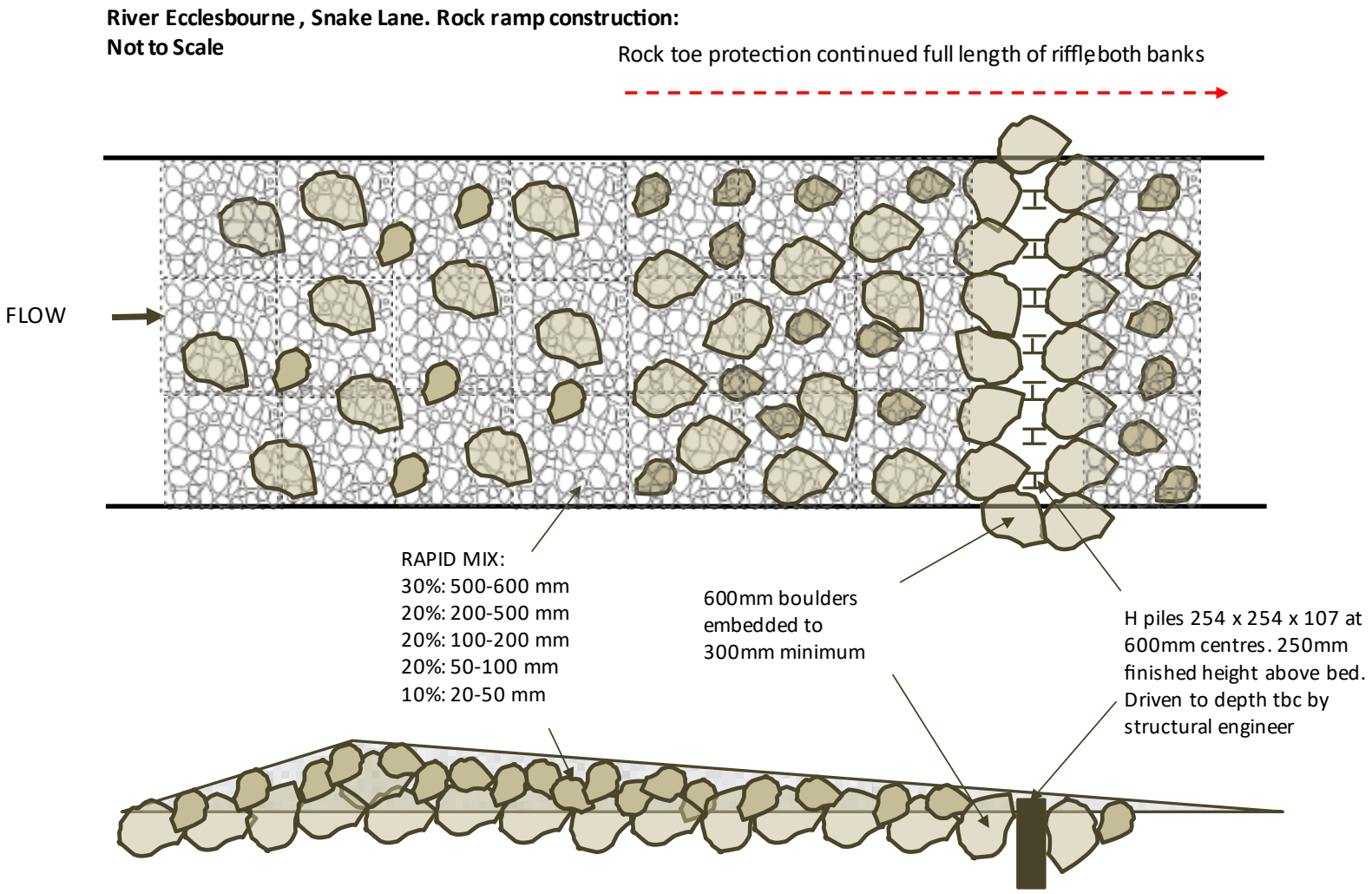
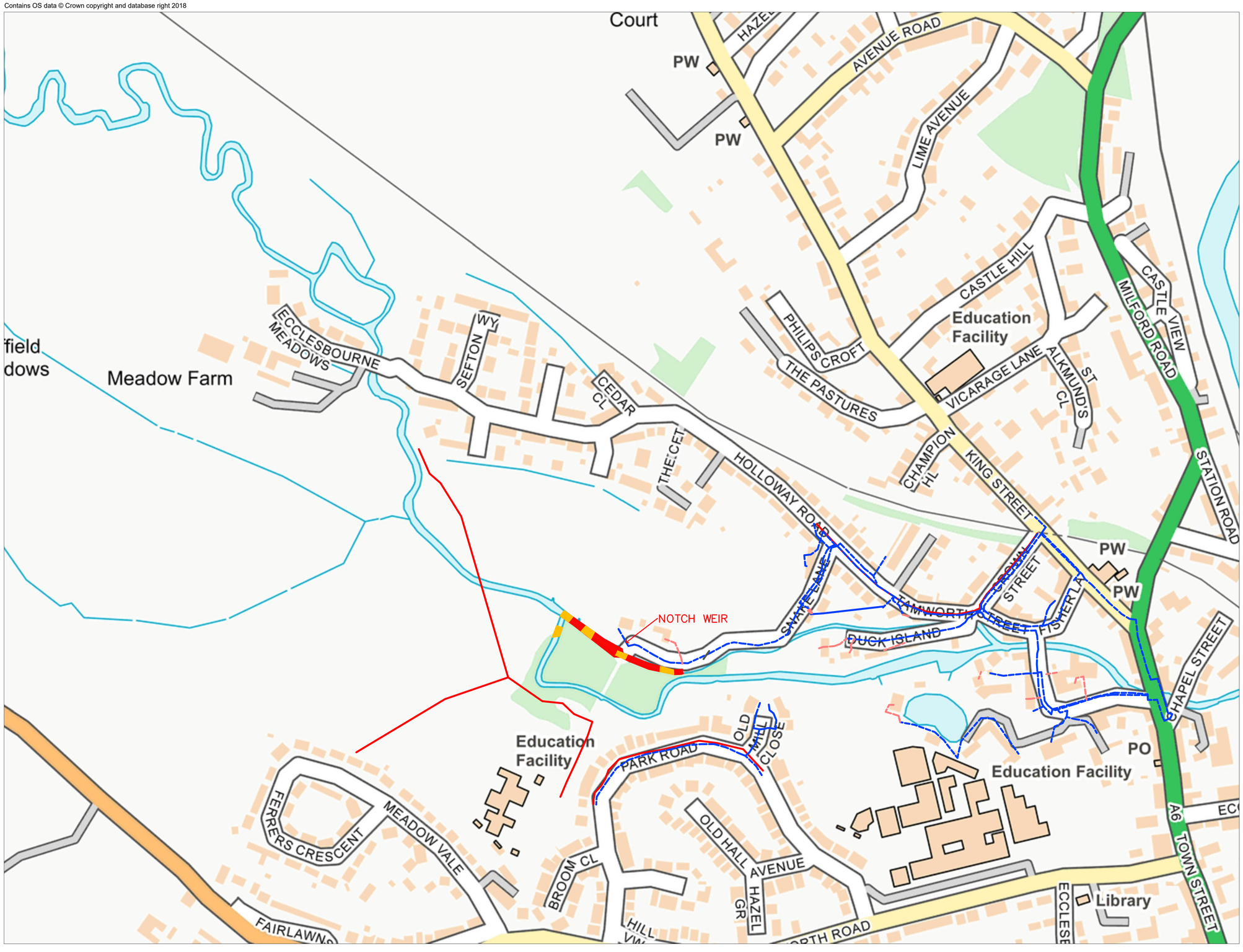


Figure 3 Indicative design of rock ramp stabilisation using piles and embedded boulders at the toe of each structure

4. Detailed Design Drawings from AquaUoS

NB Subject to the above amendements



AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SERVICES SEARCH (WESTERN POWER DISTRIBUTION)

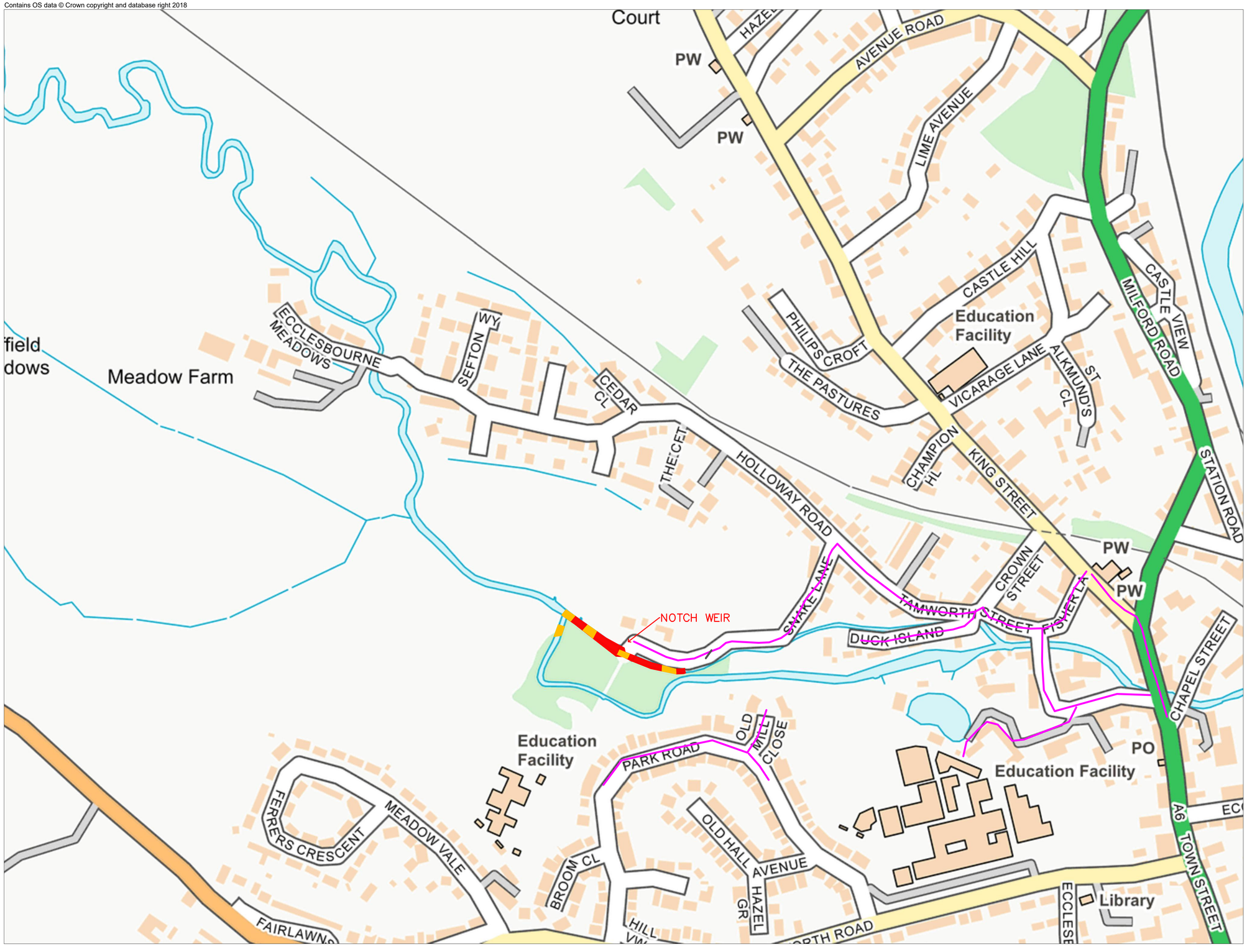
LEGEND
- HIGH VOLT (11kV) OVERGROUND
- LOW VOLTAGE OVERGROUND
- LOW VOLTAGE UNDERGROUND
- PL UNDERGROUND
- SERVICE LINE UNDERGROUND

SCALE
0 75 150 Meters

DATE
16/03/2019

SHEET
1

Author: RW Checked: SB Approved: GH



AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SERVICES SEARCH (GAS)

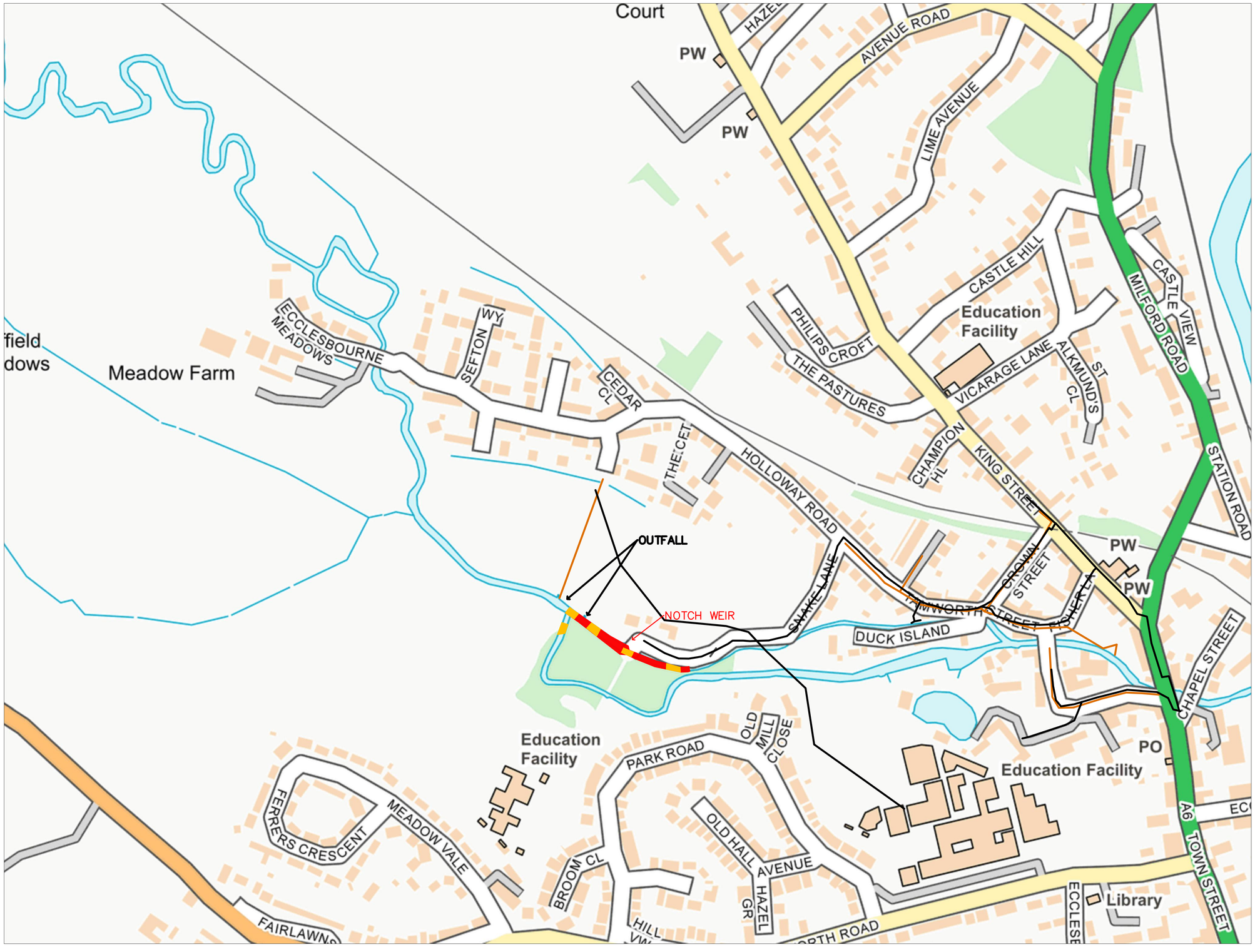
LEGEND
LP GAS MAIN

SCALE
0 75 150 Meters

DATE
16/03/2019

SHEET
2

Author: RW Checked: SB Approved: GH



AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SERVICES SEARCH (SEVERN TRENT WATER)

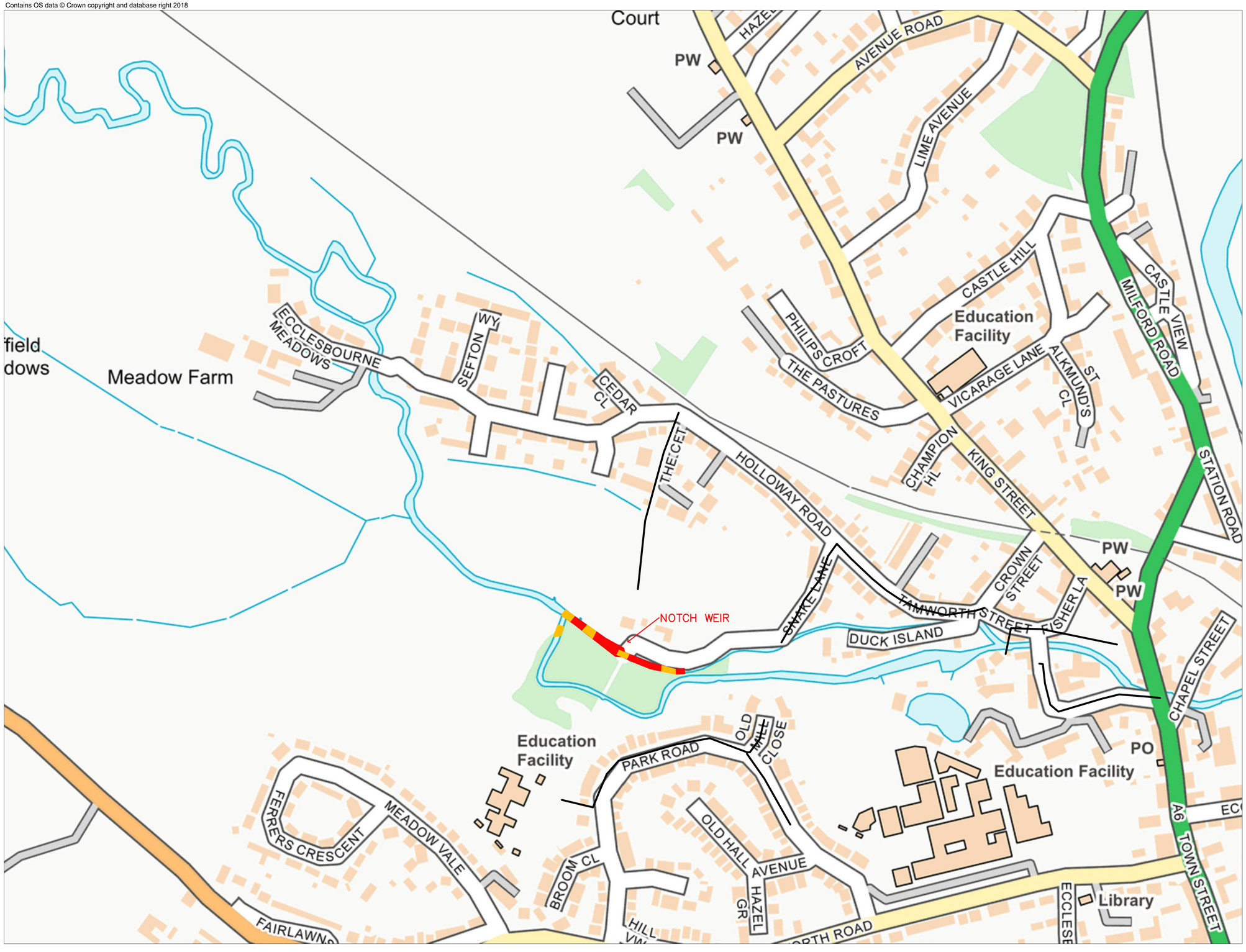
LEGEND
WATER MAIN
GRAVITY SEWER

SCALE
0 75 150 Meters

DATE
16/03/2019

SHEET
3

Author: RW Checked: SB Approved: GH



THIS DRAWING IS FOR THE SOLE USE OF THE CLIENT NAMED AND CANNOT BE USED OR REPRODUCED IN ANY WAY WITHOUT THE CONSENT OF AQUAUOS. AQUAUOS EXCEPTS NO RESPONSIBILITY OR LIABILITIES FOR THIRD-PARTY USE WITHOUT CONSENT FROM AQUAUOS.

Author: RW Checked: SB Approved: GH

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

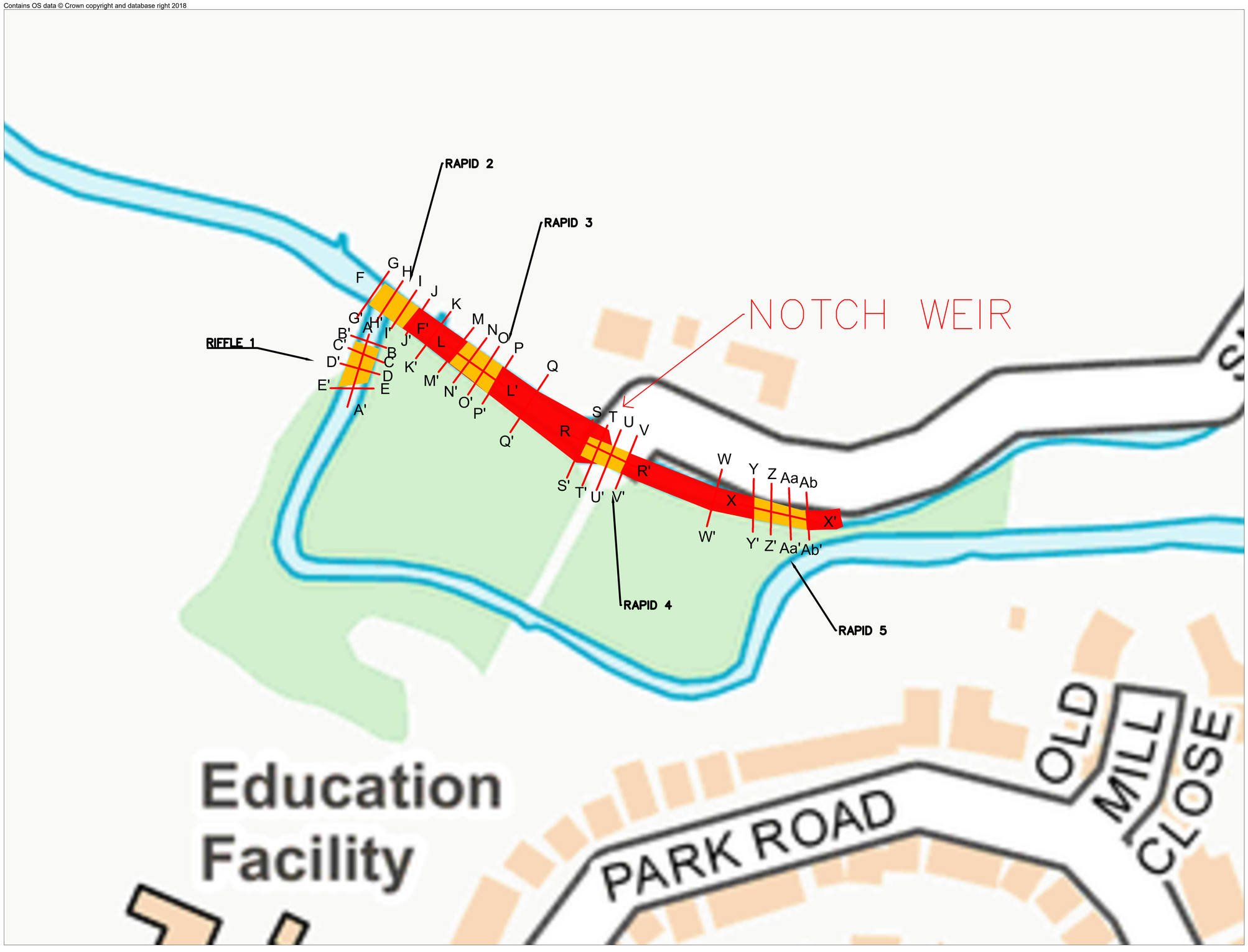
TITLE
SERVICES SEARCH (TELECOMS)

LEGEND
OPENREACH

SCALE
0 75 150 Meters

DATE
16/03/2019

SHEET
4



AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
PROJECT OVERVIEW: OPTION 2

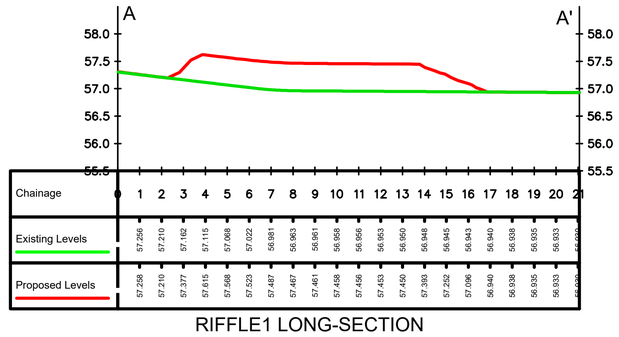
LEGEND
POOLS
RIFFLE/RAPID

SCALE
0 15 30 Meters

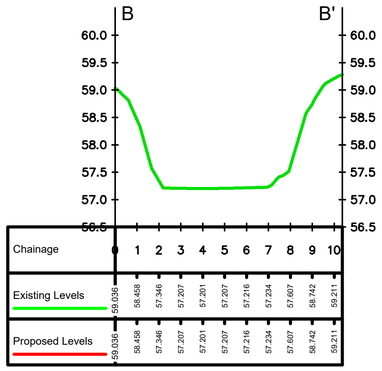
DATE
16/03/2019

SHEET
5

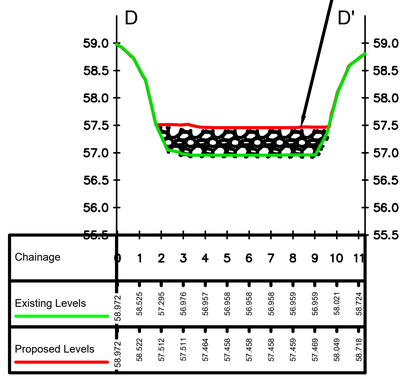
Author: RW Checked: SB Approved: GH



RIFFLE1 LONG-SECTION

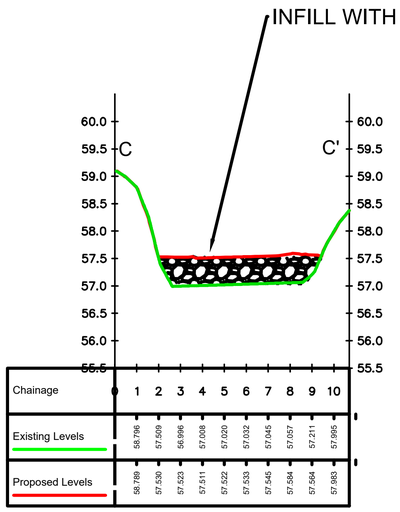


RIFFLE 1 SECTION 1

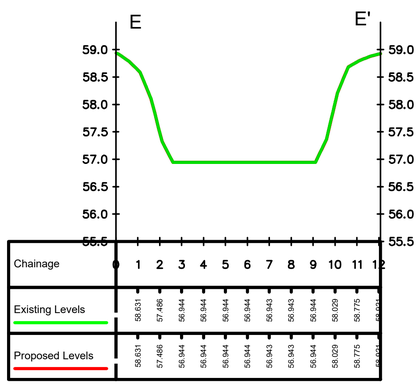


RIFFLE 1 SECTION 3

INFILL WITH RIFFLE/RAPID GRAVEL MIX TO 57.53 m A.O.D



RIFFLE 1 SECTION 2



RIFFLE 1 SECTION 4

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SECTIONS A-E

LEGEND
RIFFLE GRAVEL MIX:

20%: 150-200 mm
30%: 100-150 mm
30%: 50-100 mm
20%: 20-50 mm

SCALE
NTS

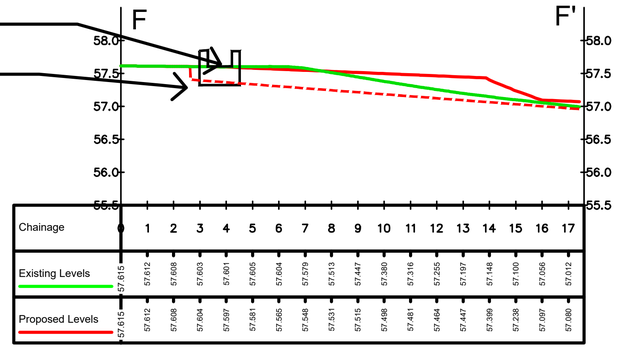
DATE
16/03/2019

SHEET
6

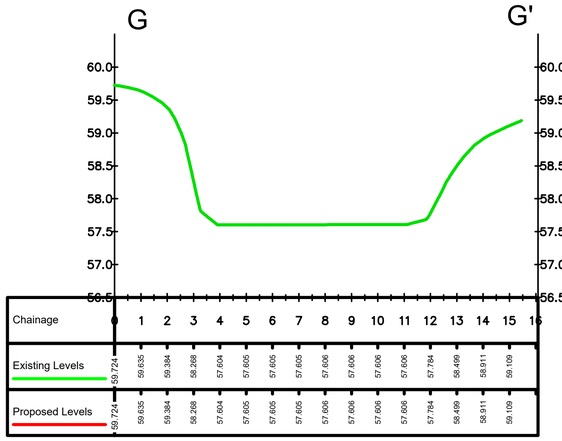
Author: RW Checked: SB Approved: GH

SIDE WEIR

OVER EXCAVATE AND INFILL WITH RAPID GRAVEL MIX



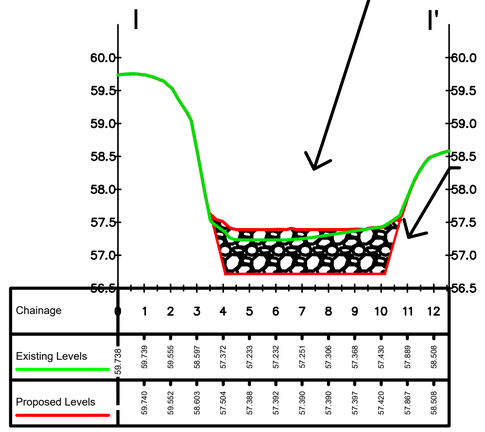
RAPID 2



RAPID 2 SECTION 1

INFILL WITH RAPID GRAVEL MIX TO 57.38 m A.O.D

EXTEND BED MIX 0.2 m UP LEFT AND RIGHT BANK. REFER TO SHEET 12 FOR SECTION DETAIL

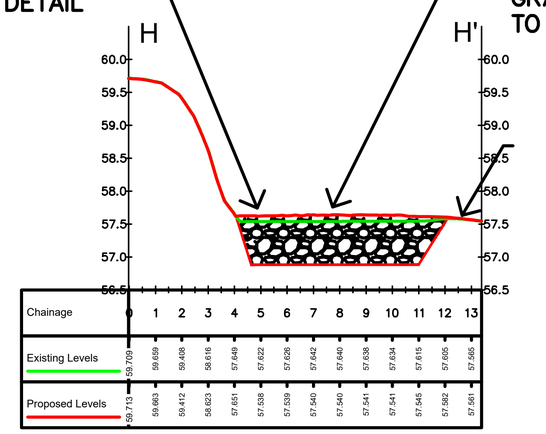


RAPID 2 SECTION 3

EXTEND BED MIX 0.2 m UP LEFT AND RIGHT BANK. REFER TO SHEET 12 FOR SECTION DETAIL

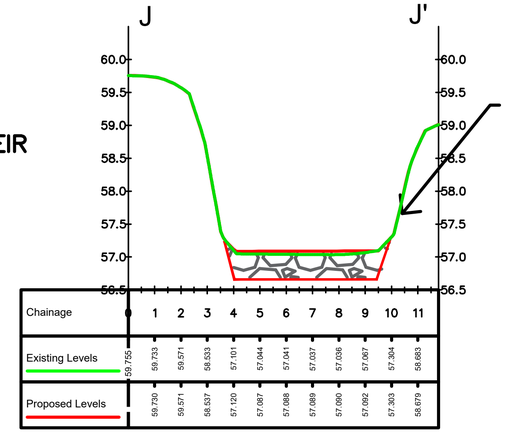
INFILL WITH RAPID GRAVEL MIX TO 57.64 m A.O.D

DROP INTO SIDE WEIR



RAPID 2 SECTION 2

OVER EXCAVATE TO 56.6 m A.O.D AND INFILL WITH BED GRAVEL TO 57.1 m A.O.D



RAPID 2 SECTION 4

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SECTIONS F-J

LEGEND
RAPID MIX:
30%: 500-600 mm
20%: 200-500 mm
20%: 100-200 mm
20%: 50-100 mm
10%: 20-50 mm

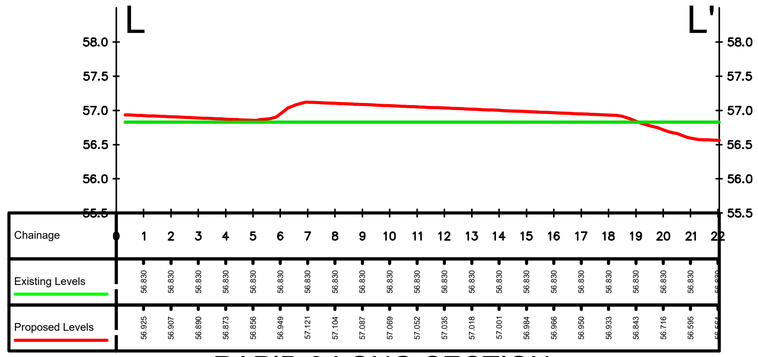
BED MIX:
40%: 100-150 mm
30%: 80-100 mm
20%: 50-80 mm
10%: 20-50 mm

SCALE
NTS

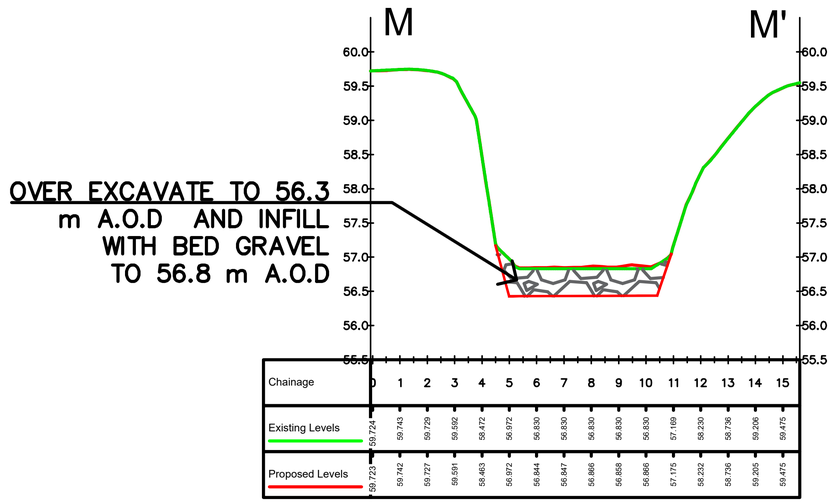
DATE
16/03/2019

SHEET
7

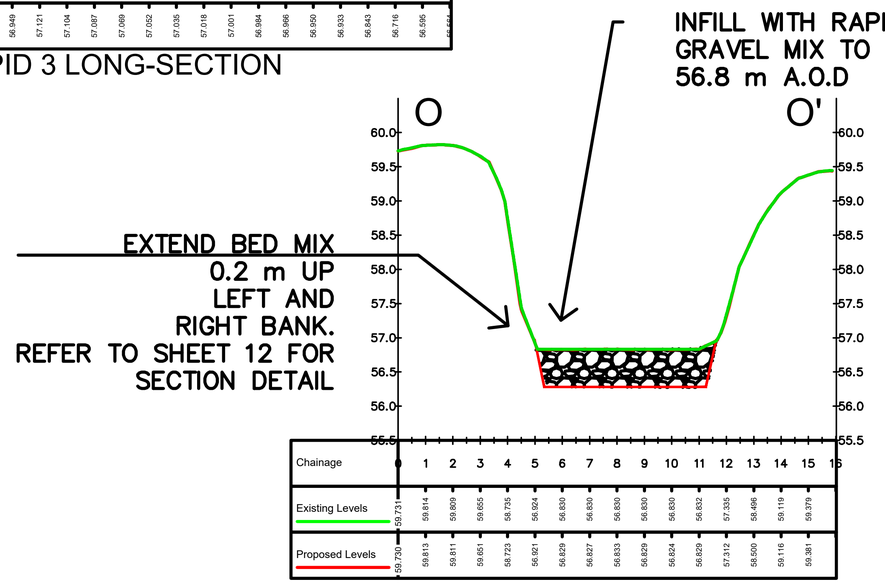
Author: RW Checked: SB Approved: GH



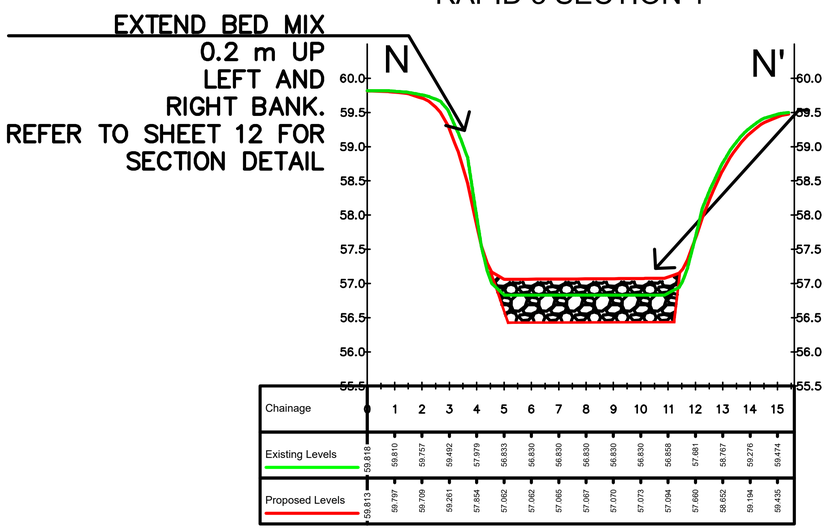
RAPID 3 LONG-SECTION



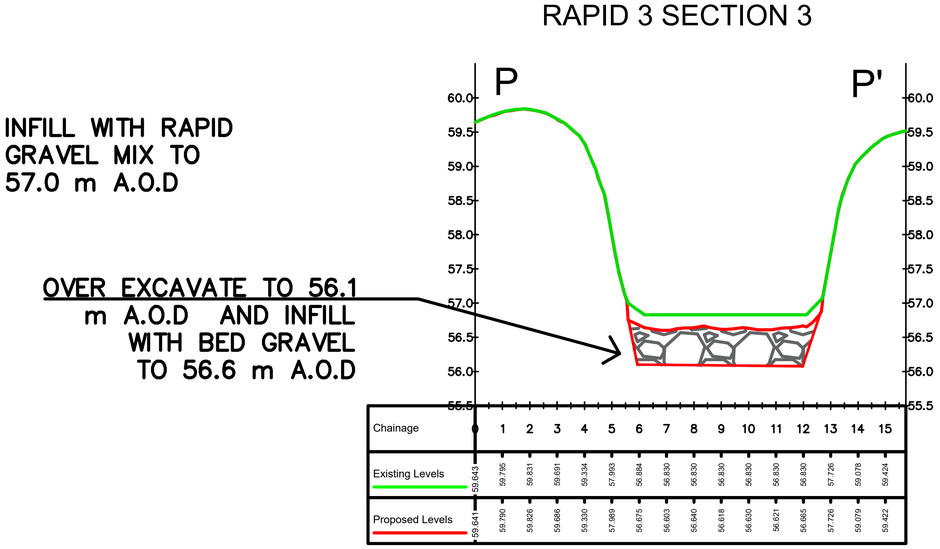
RAPID 3 SECTION 1



RAPID 3 SECTION 3



RAPID 3 SECTION 2



RAPID 3 SECTION 4

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Wateriooville
PO8 OWZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SECTIONS L-P

LEGEND

RAPID MIX:
30%: 500-600 mm
20%: 200-500 mm
20%: 100-200 mm
20%: 50-100 mm
10%: 20-50 mm

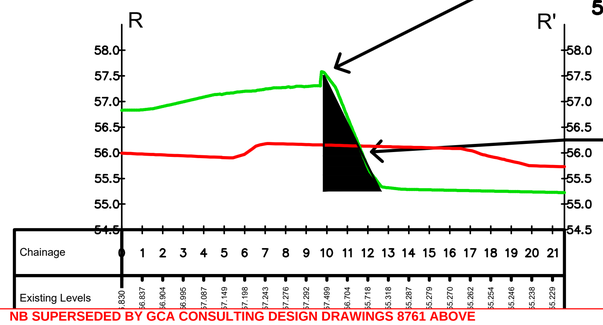
BED MIX:
40%: 100-150 mm
30%: 80-100 mm
20%: 50-80 mm
10%: 20-50 mm

SCALE
NTS

DATE
16/03/2019

SHEET
8

Author: RW Checked: SB Approved: GH



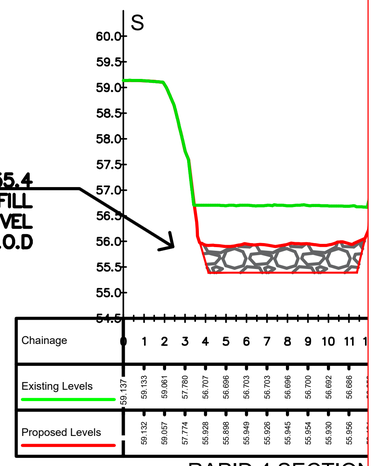
EXISTING WEIR CREST AT 57.7 m A.O.D

NOTCH WEIR TO 55.5 m A.O.D AND INFILL WITH RAPID GRAVEL MIX TO 56.13 m A.O.D

SEE SHEET 12 FOR FURTHER DETAIL

NB SUPERSEDED BY GCA CONSULTING DESIGN DRAWINGS 8761 ABOVE

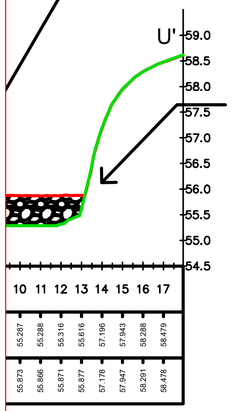
OVER EXCAVATE TO 55.4 m A.O.D AND INFILL WITH BED GRAVEL TO 55.9 m A.O.D



RAPID 4 SECTION

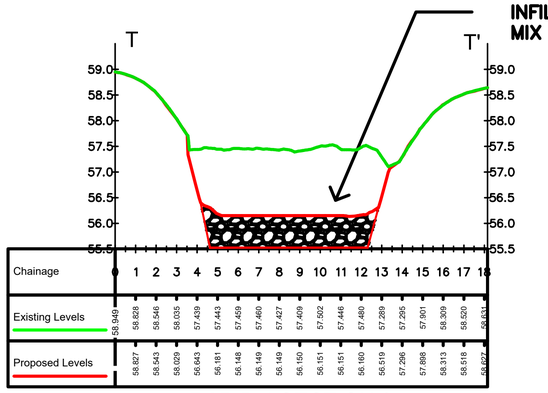
INFILL WITH RAPID GRAVEL MIX 55.9 m A.O.D

EXTEND BED MIX 0.2 m UP LEFT AND RIGHT BANK. REFER TO SHEET 12 FOR SECTION DETAIL



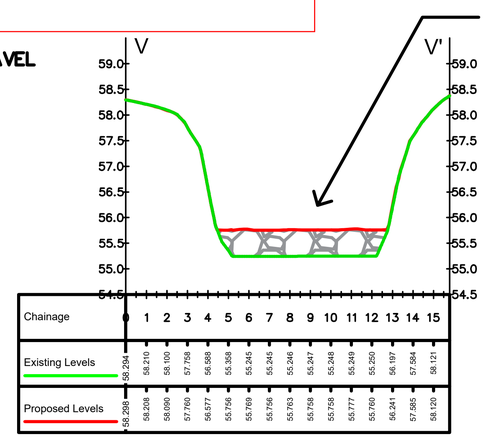
CTION 3

INFILL WITH RAPID GRAVEL MIX 56.15 m A.O.D



RAPID 4 SECTION 2

INFILL WITH BED GRAVEL MIX 55.7 m A.O.D



RAPID 4 SECTION 4

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

USE EXCAVATED GRAVEL./COBBLE MATERIAL IN FEATURE CONSTRUCTION WHERE IT MATCHES SPECIFICATION

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SECTIONS R-V

LEGEND
RAPID MIX:
30%: 500-600 mm
20%: 200-500 mm
20%: 100-200 mm
20%: 50-100 mm
10%: 20-50 mm

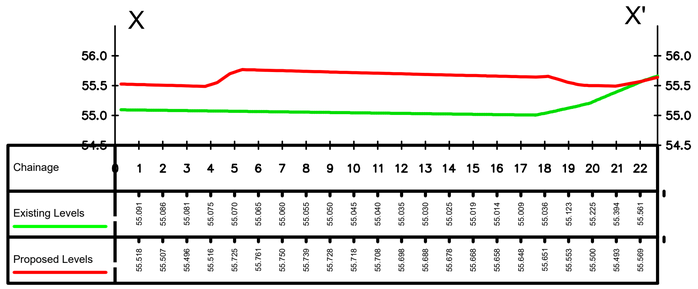
BED MIX:
40%: 100-150 mm
30%: 80-100 mm
20%: 50-80 mm
10%: 20-50 mm

SCALE
NTS

DATE
16/03/2019

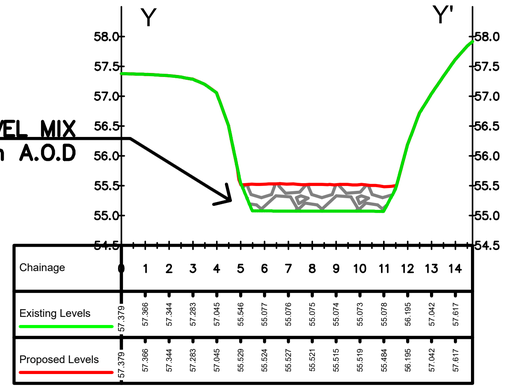
SHEET
9

Author: RW Checked: SB Approved: GH



RAPID 5 LONG-SECTION

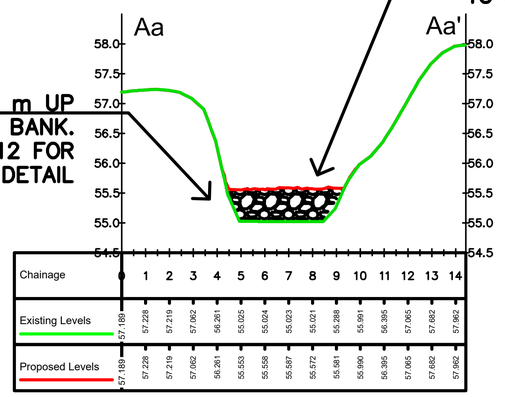
INFILL WITH BED GRAVEL MIX
TO 55.52 m A.O.D



RAPID 5 SECTION 1

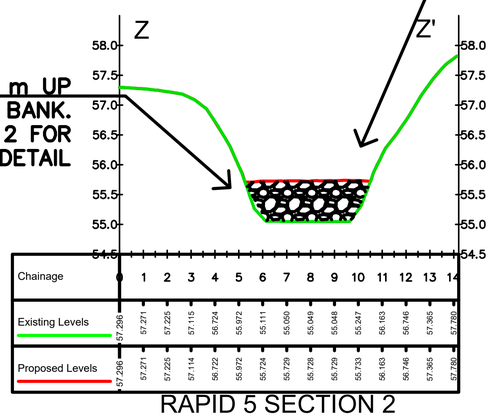
EXTEND BED MIX 0.2 m UP
LEFT AND RIGHT BANK.
REFER TO SHEET 12 FOR
SECTION DETAIL

INFILL WITH RAPID
GRAVEL MIX
TO 55.55 m A.O.D



RAPID 5 SECTION 3

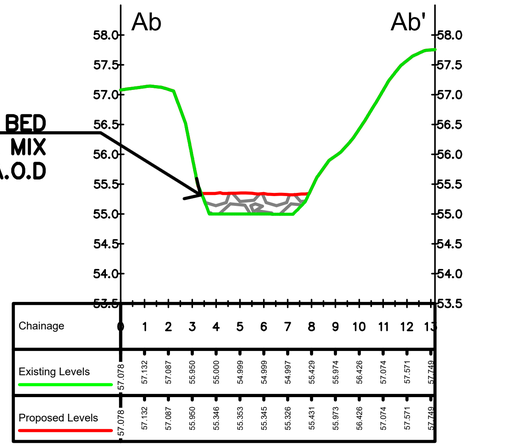
EXTEND BED MIX 0.2 m UP
LEFT AND RIGHT BANK.
REFER TO SHEET 12 FOR
SECTION DETAIL



RAPID 5 SECTION 2

INFILL WITH RAPID
GRAVEL MIX
TO 55.72 m A.O.D

INFILL WITH BED
GRAVEL MIX
TO 55.45 m A.O.D



RAPID 5 SECTION 4

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

FEATURES ARE NOT TO SCALE DO NOT MEASURE OFF THIS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
SECTIONS X-Ab

LEGEND

RAPID MIX:
30%: 500-600 mm
20%: 200-500 mm
20%: 100-200 mm
20%: 50-100 mm
10%: 20-50 mm

BED MIX:
40%: 100-150 mm
30%: 80-100 mm
20%: 50-80 mm
10%: 20-50 mm

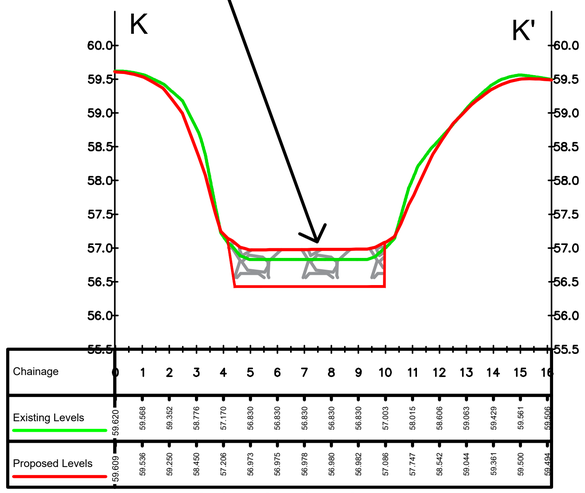
SCALE
NTS

DATE
16/03/2019

SHEET
10

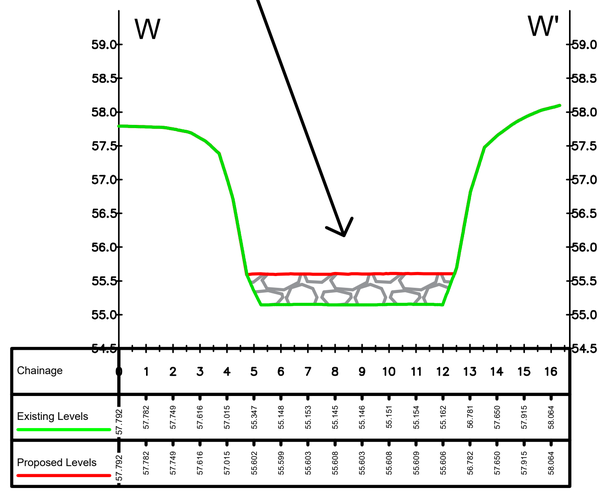
Author: RW Checked: SB Approved: GH

OVER EXCAVATE TO 56.45 m A.O.D AND INFILL WITH BED GRAVEL TO 56.95 m A.O.D



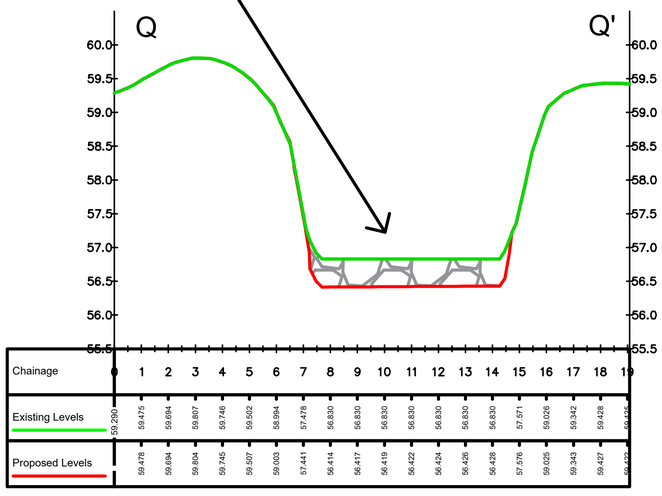
POOL SECTION 1

INFILL WITH BED GRAVEL TO 55.6 m A.O.D



POOL SECTION 3

INFILL WITH BED GRAVEL TO 56.4 m A.O.D



POOL SECTION 2

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS
AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS
WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES
ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE
POOL SECTIONS
SECTIONS K, W, Q, Ac

LEGEND

RAPID MIX:
30%: 500-600 mm
20%: 200-500 mm
20%: 100-200 mm
20%: 50-100 mm
10%: 20-50 mm

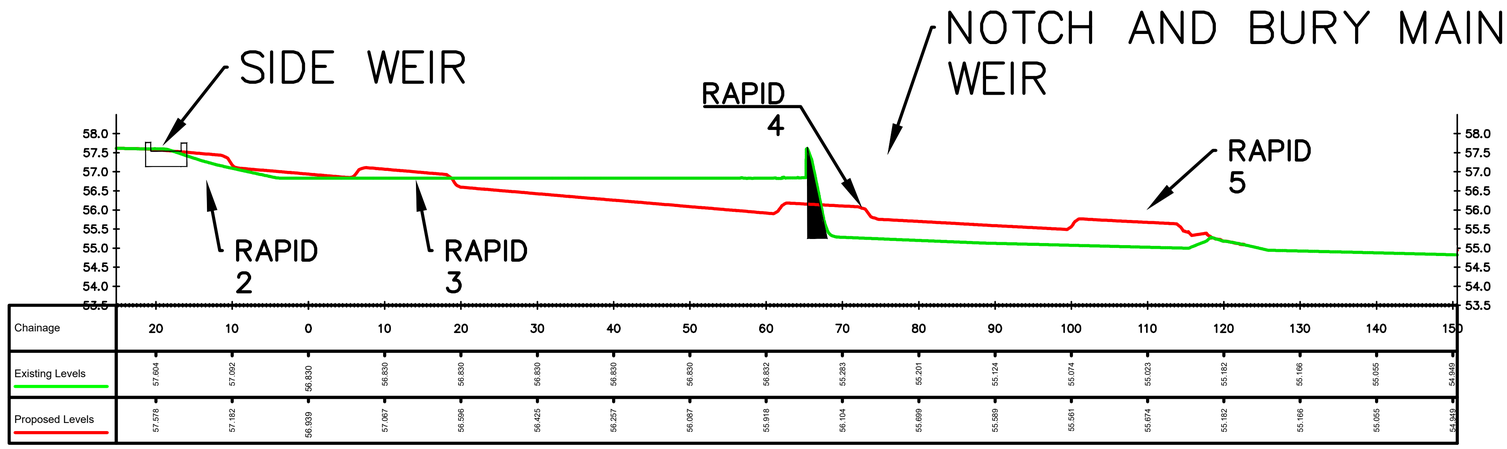
BED MIX:
40%: 100-150 mm
30%: 80-100 mm
20%: 50-80 mm
10%: 20-50 mm

SCALE
NTS

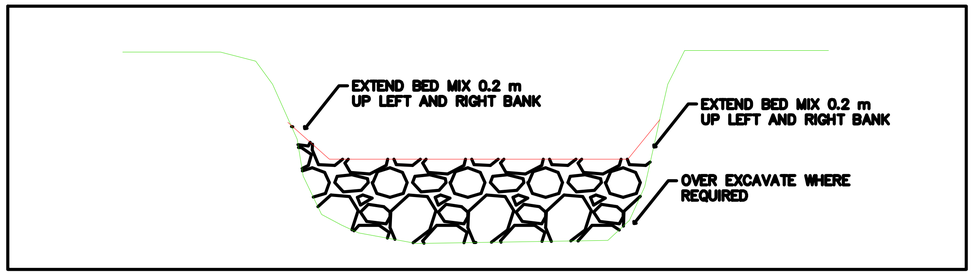
DATE
16/03/2019

SHEET
11

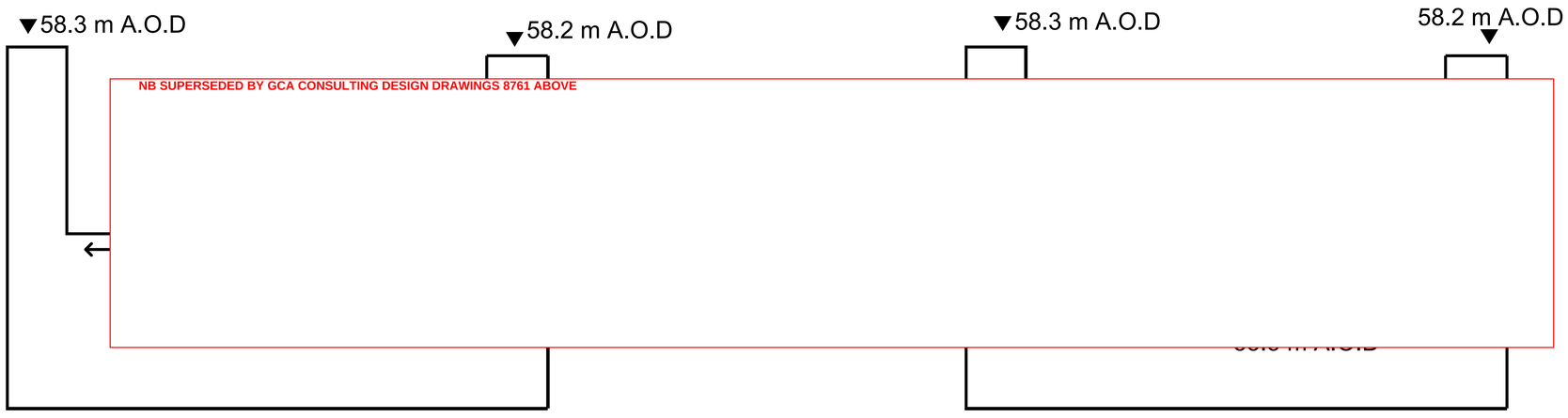
Author: RW Checked: SB Approved: GH



LONG SECTION



REPRESENTATIVE RAPID SECTION



MAIN WEIR FACE PROFILE

AquaUoS
Redefining Environmental Consultancy

PROJECT NAME
ECCLESBOURNE - SNAKE LANE

PROJECT NUMBER
ELCI0140

CONSULTANT ADDRESS

AquaUoS
Peel Building
The Crescent
Salford
M5 4WT

CLIENT NAME/ADDRESS

WILD TROUT TRUST

The Wild Trout Trust
PO Box 120
Waterlooville
PO8 0WZ

NOTES

ALL LEVELS ARE GIVEN IN M A.O.D (METERS ABOVE ORDNANCE DATUM)

PROPOSED LEVELS MAY VARY +/- 75 mm TO GENERATE BED VARIATION

CHAINAGE MEASUREMENTS ARE IN METERS

FEATURES ARE NOT TO SCALE DO NOT MEASURE OFF THIS

REVISIONS

3	REVISIONS	16/03
2	SECOND DRAFT	10/03
1	DRAFT FOR REVIEW	01/11

TITLE

LONG SECTION AND GENERIC WEIR AND FEATURE DETAIL

LEGEND

SCALE

NTS

DATE

16/03/2019

SHEET

12

Author: RW Checked: SB Approved: GH