### June 2023 (V01)

1. Discharge concept model for hydrogeomorphology assessment

#### July 2023 (V02)

1. Full draft concept drawing set for client approval

#### July 2023 (V03)

1. Added: new perimeter security fence, handrail to existing footway & EA sluice (all indicative only); plan of key elements of scheme; 3D view of ditch discharge / otter ramp.

#### July 2023 (V04)

1. Added: flood level information sheets

#### Sept 2023 (V05)

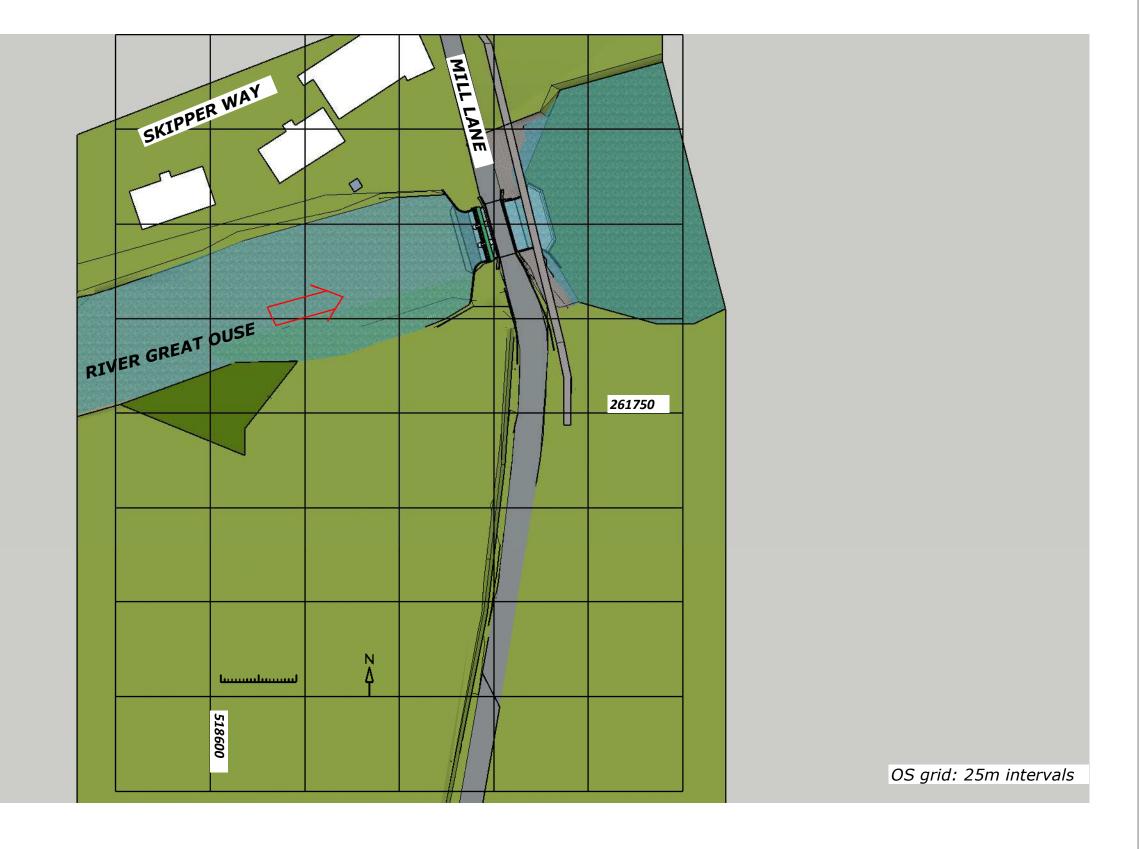
1. Minor amendments and corrections after client review

## **Drawings in Set:**

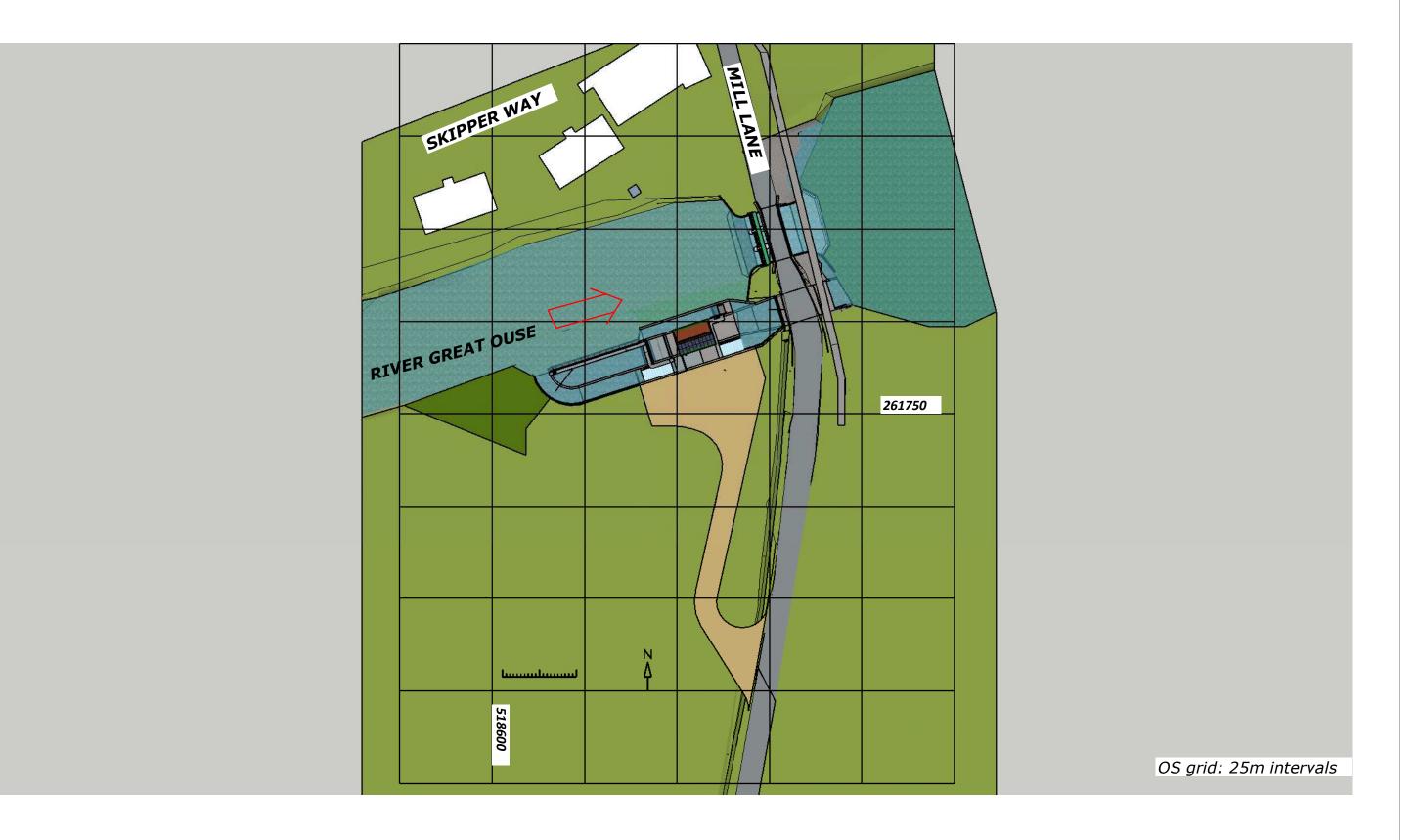
- 1. Change & Note Page (THIS PAGE)
- 2. Location as-is
- 3.Location as-proposed
- 4. Working area
- 5. Plan view comments
- 6. Plan view dimensions
- 7. Plan view elements of scheme
- 8. Discharge dimensions
- 9. ABC Points
- 10. Section fine screen intake
- 11. Section bywash
- 12. Section powerhouse / turbine
- 13. Section eel pass
- 14. Section fish pass
- 15. Cross section intake
- 16. Cross section discharge
- 17: 3D view North
- 18: 3D view East
- 19: 3D view South
- 20: 3D view West
- 21. Ditch discharge and otter ramp
- 22. Powerhouse interior, indicative
- 23. Flood level information (plan)
- 24. Flood level information (elevation)

#### Notes

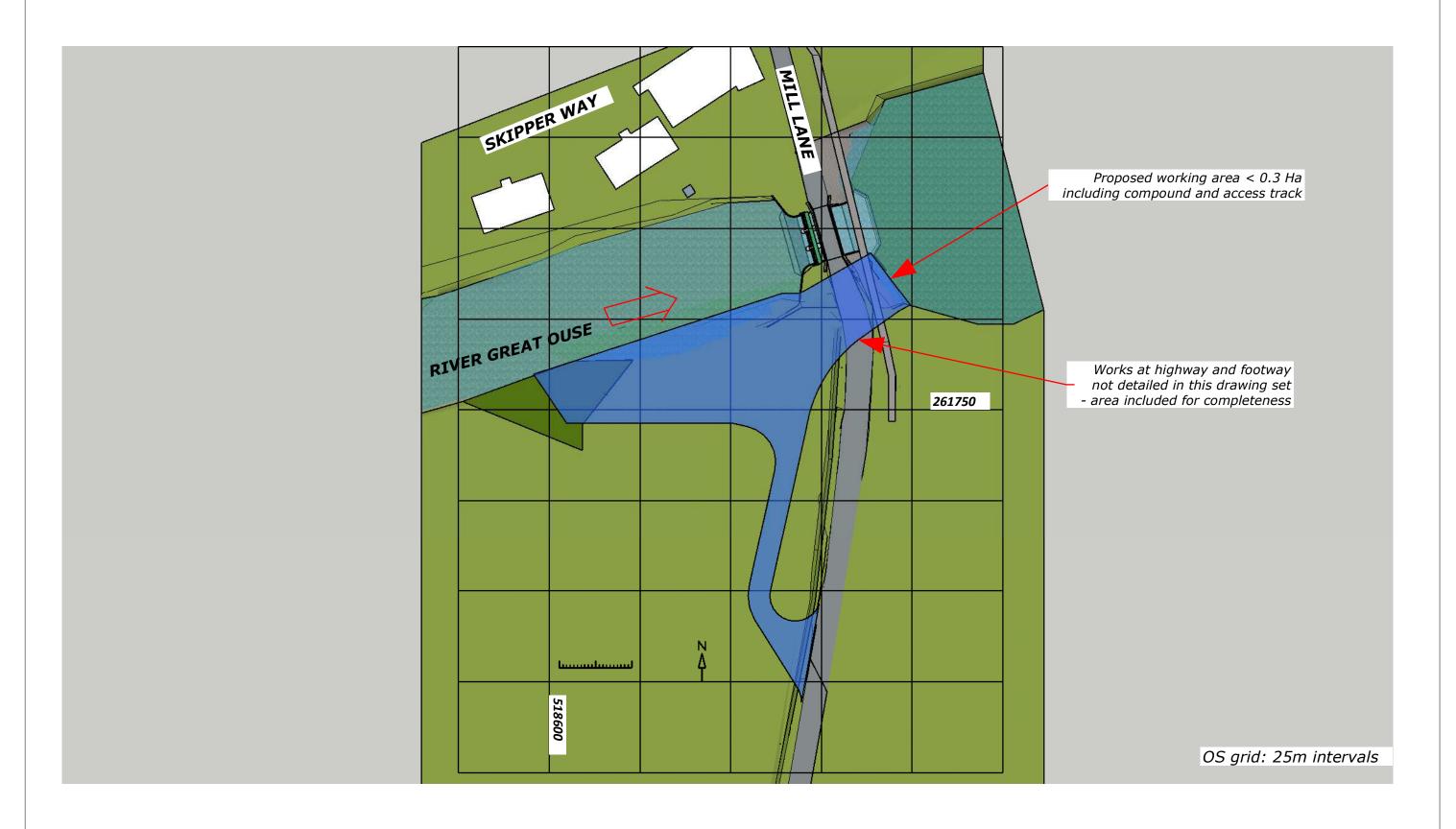
Dimensions in mm.
Elevations in mAOD
unless otherwise stated.
All plan views are North oriented
unless otherwise stated.
Grid shown is OS 25m grid.
Existing buildings are modelled only
approximately as a visual reference:
do not scale.
Ground contours approximated from
topographical survey: do not scale.



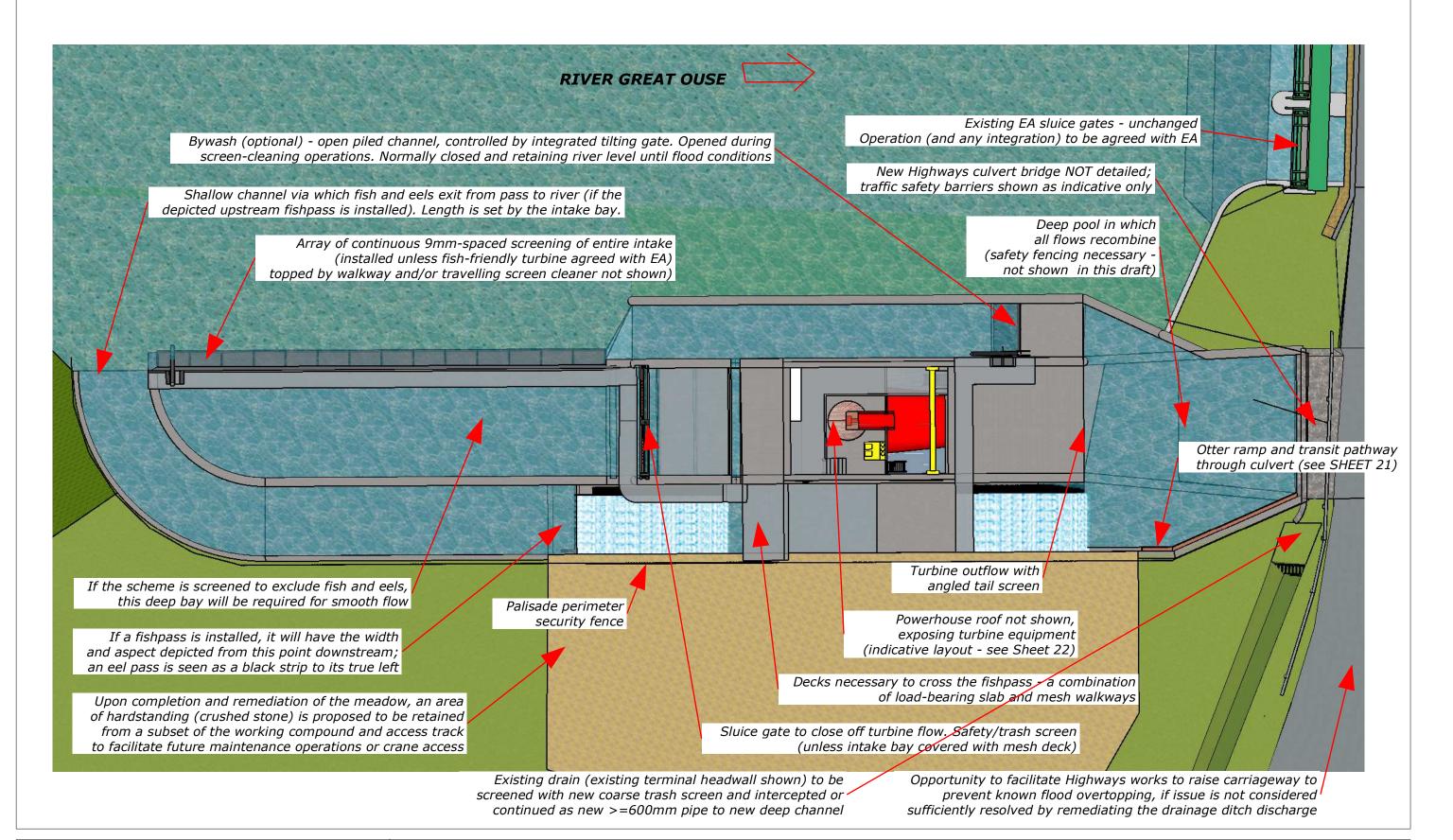




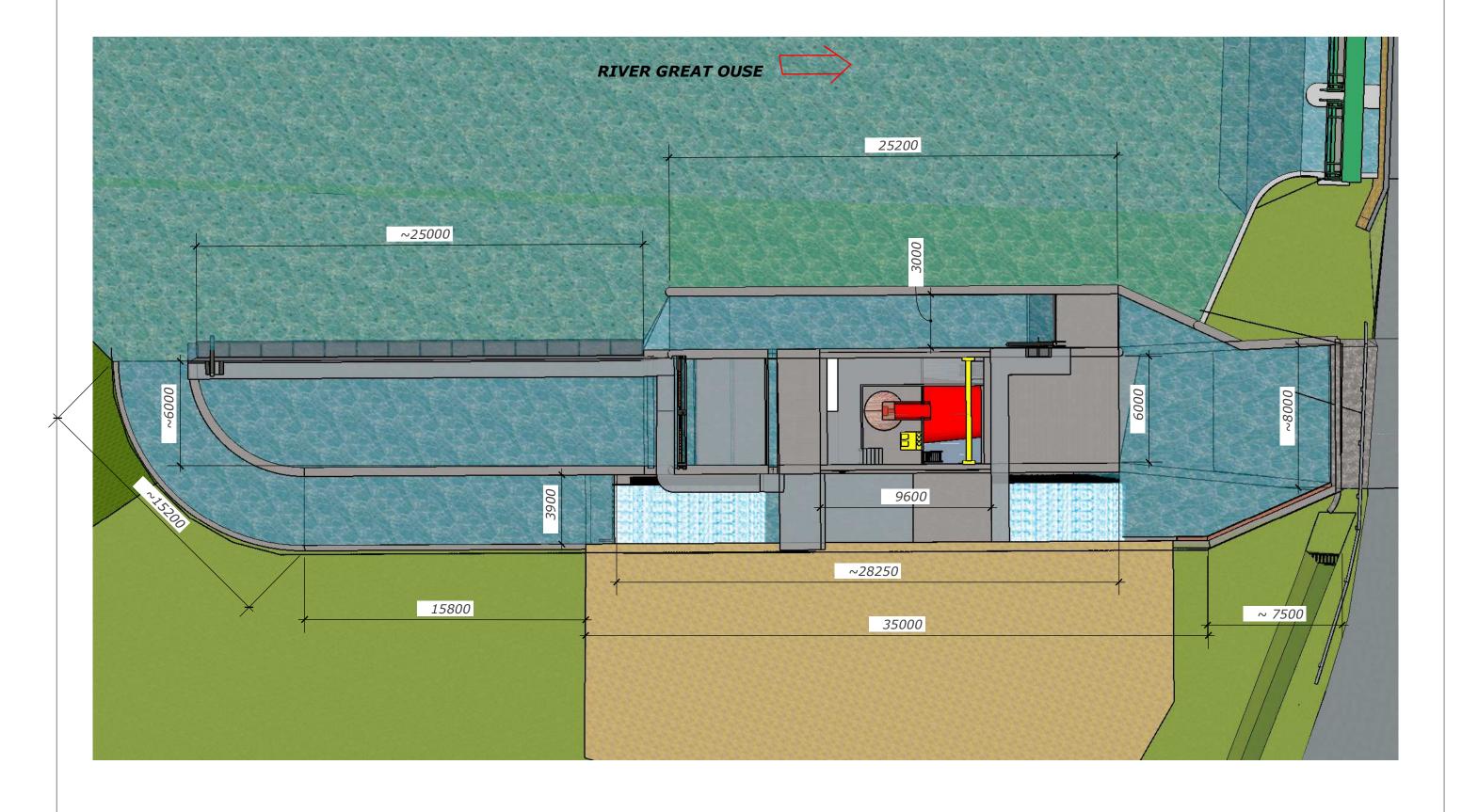




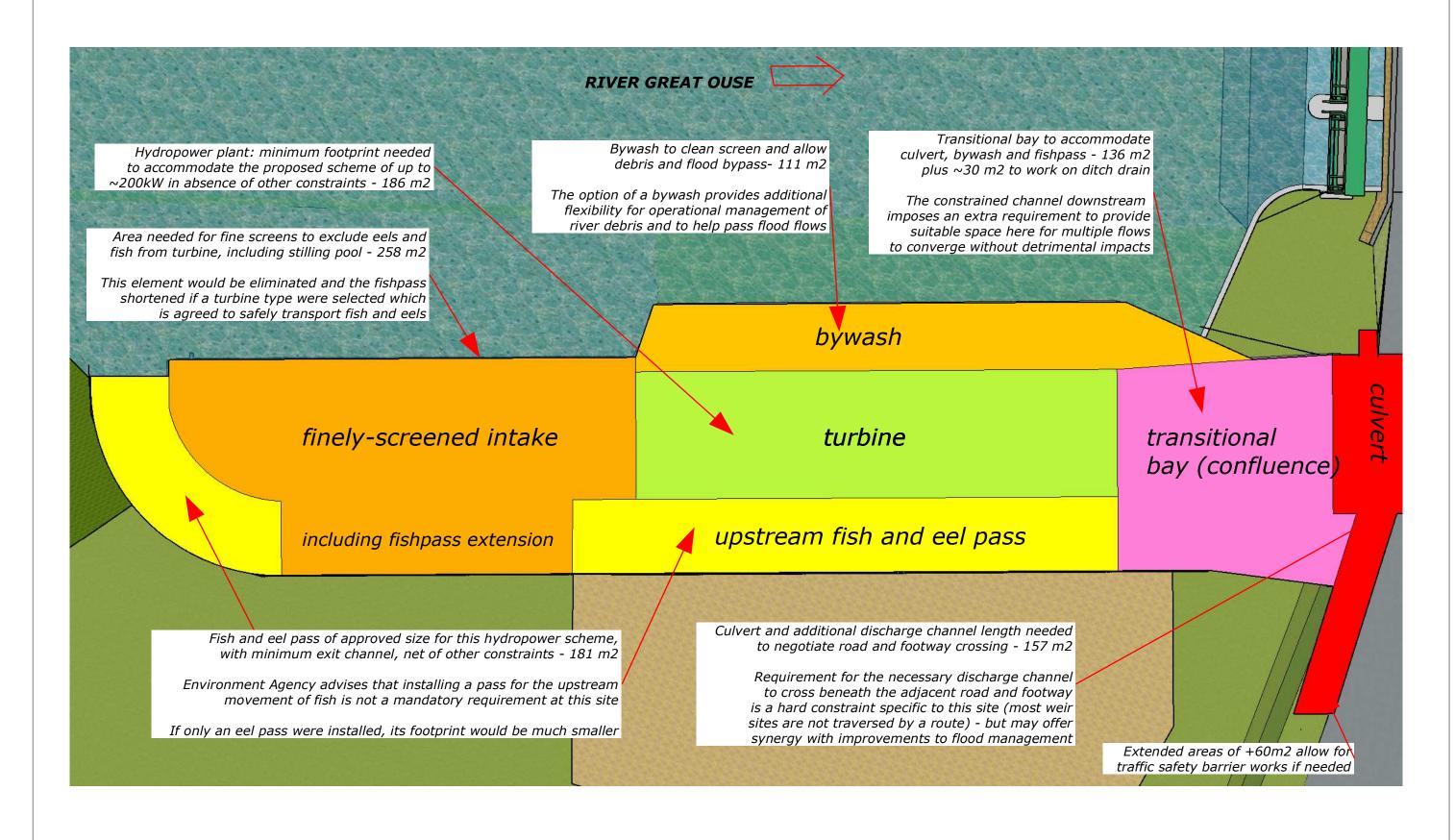








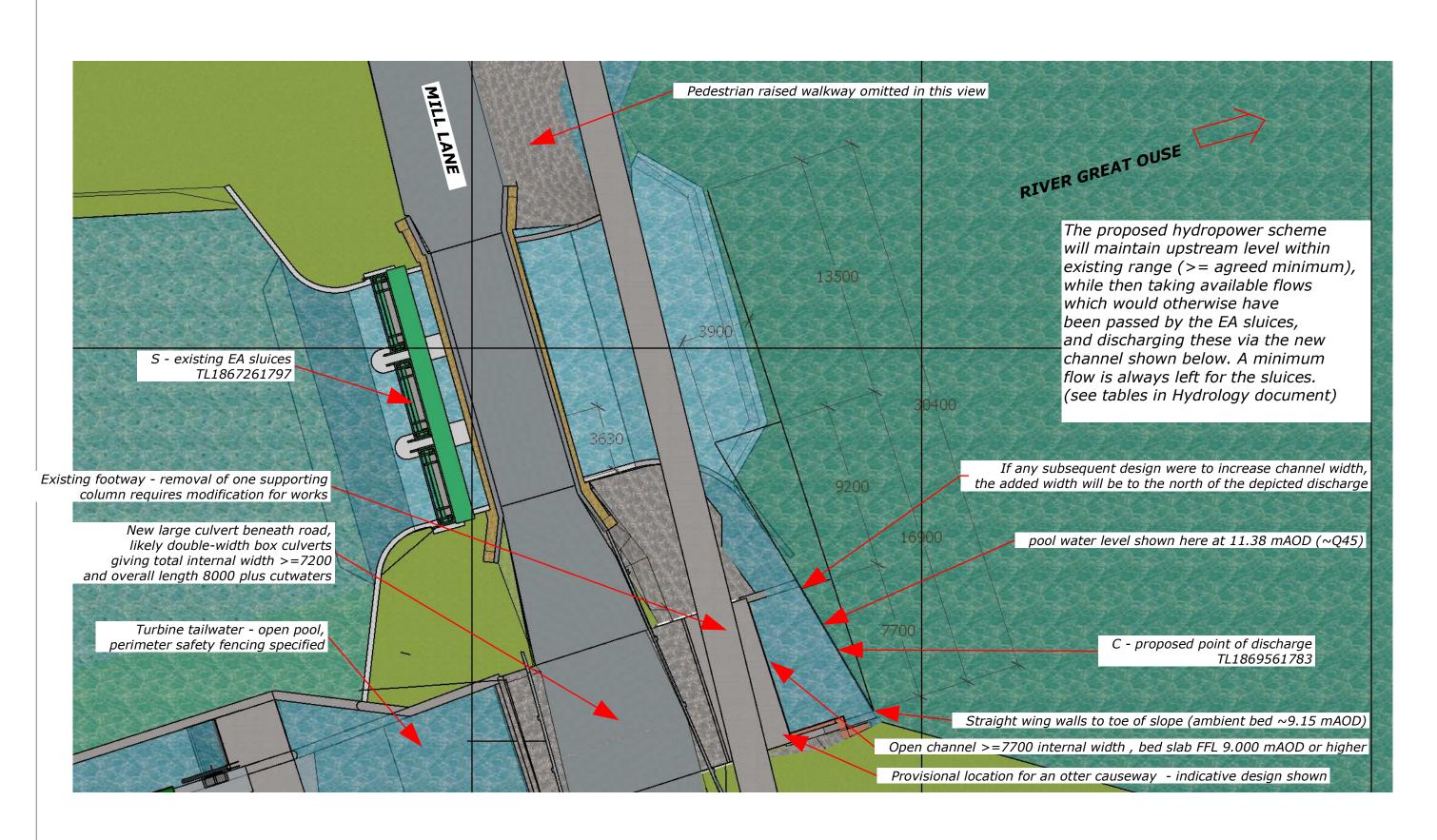






Site constraints and options illustrated as separable component zones: green (core function) yelow/orange (optional inclusions), pink (site-specific transition) and red (site-specific constraint)

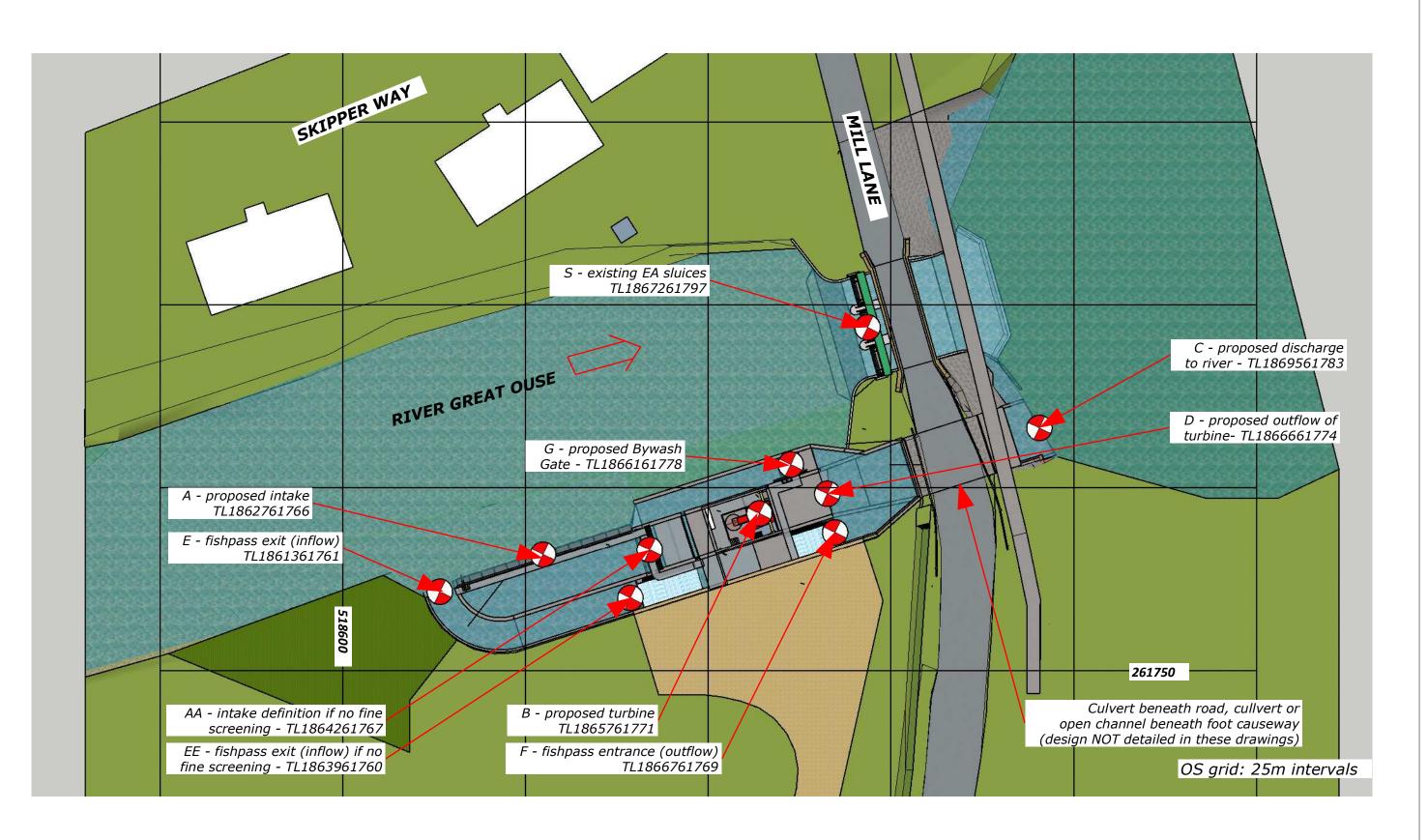
St Neots\_101-V05-20230906 Hydro Scheme Concept





This drawing is provided for the purposes of Enviornment Agency Licensing to allow EA internal consultees to consider the relationship of existing and proposed discharges

St Neots\_101-V05-20230906 Hydro Scheme Concept

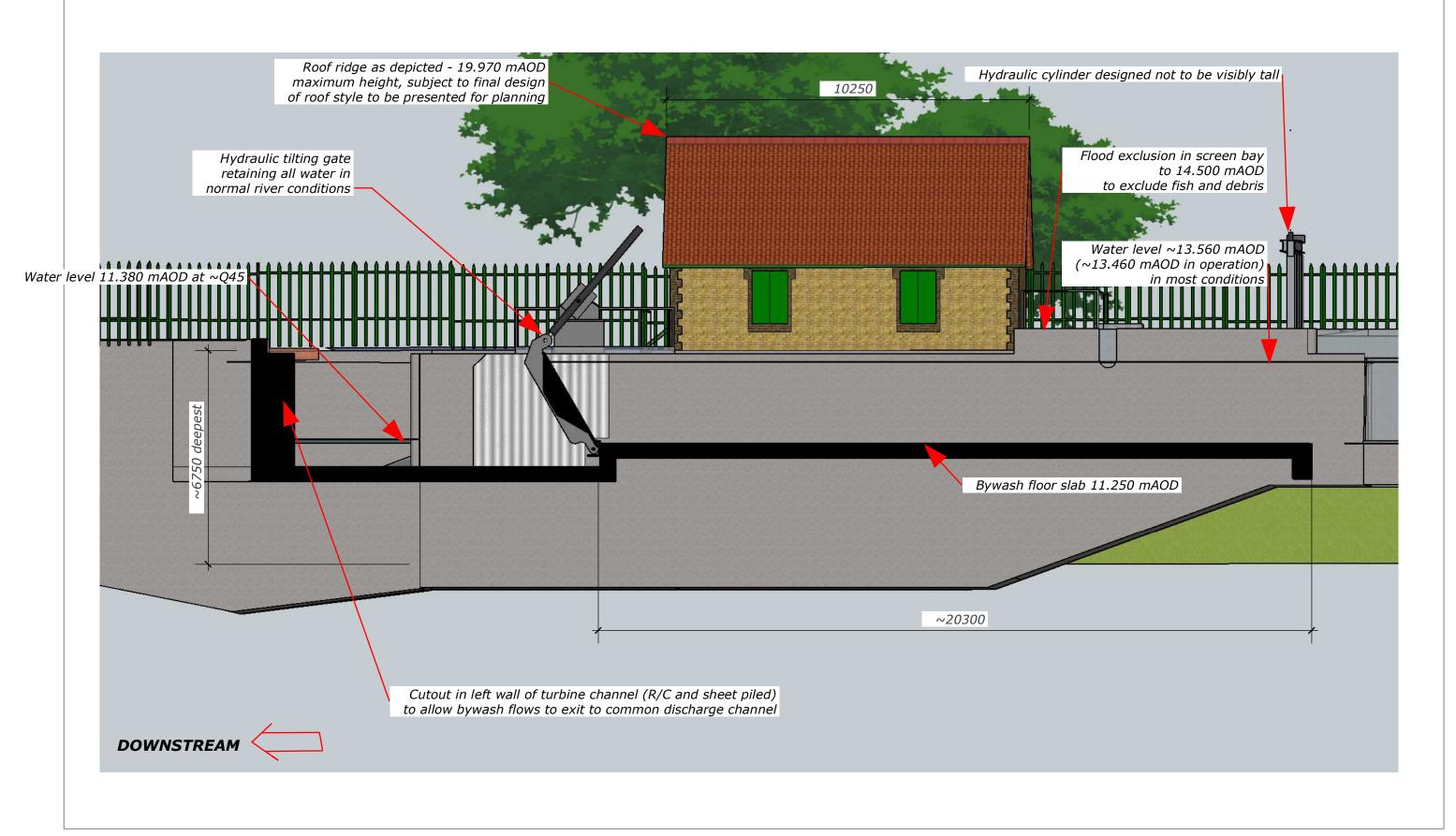




The ABC Points drawing is provided for the purposes of Enviornment Agency Licensing to precisely indicate all key points of licensing/operational interest

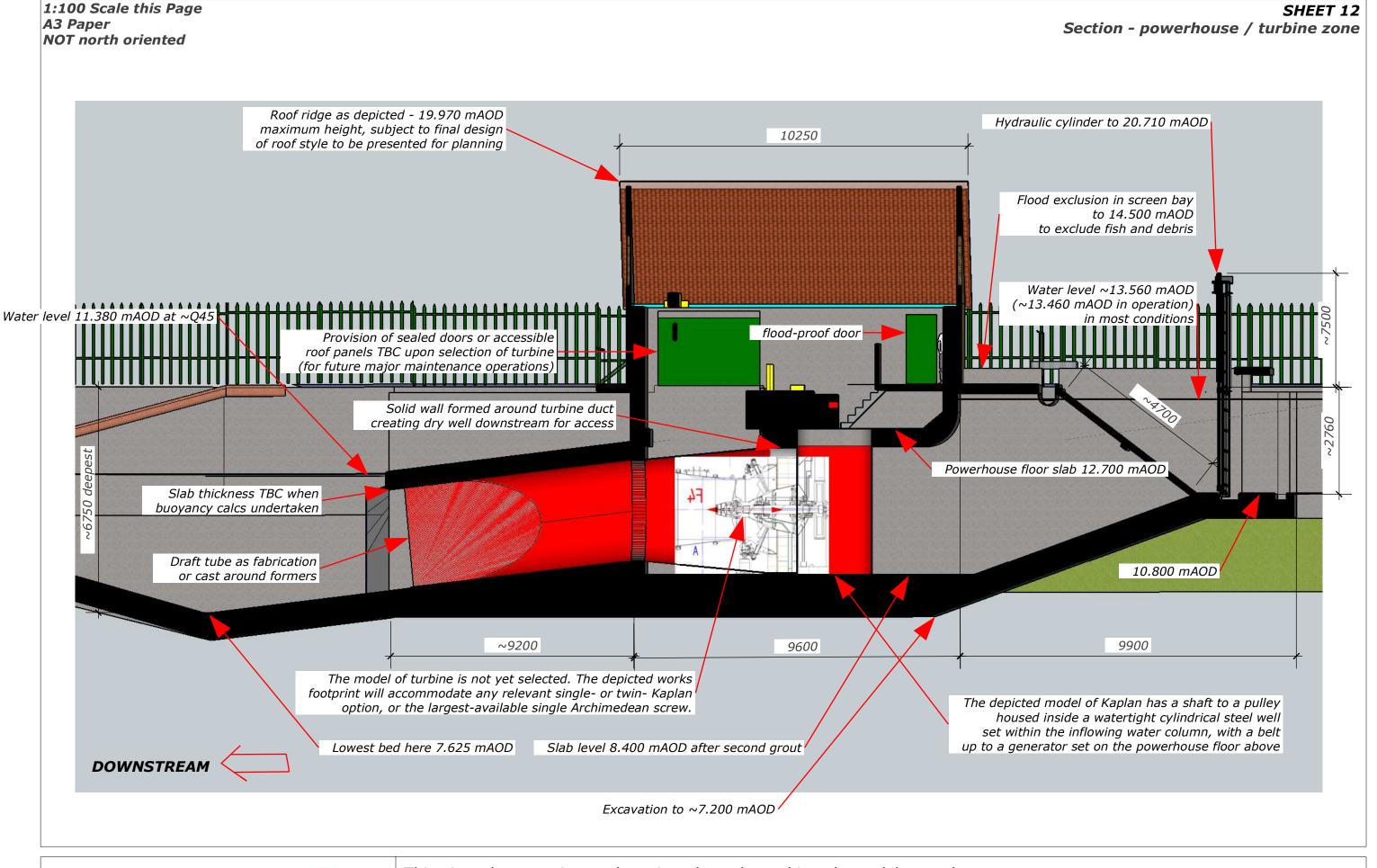


This view shows an elevation on the riverward face of the fine intake screen array which will be needed unless the EA approves a fish-friendly form of turbine



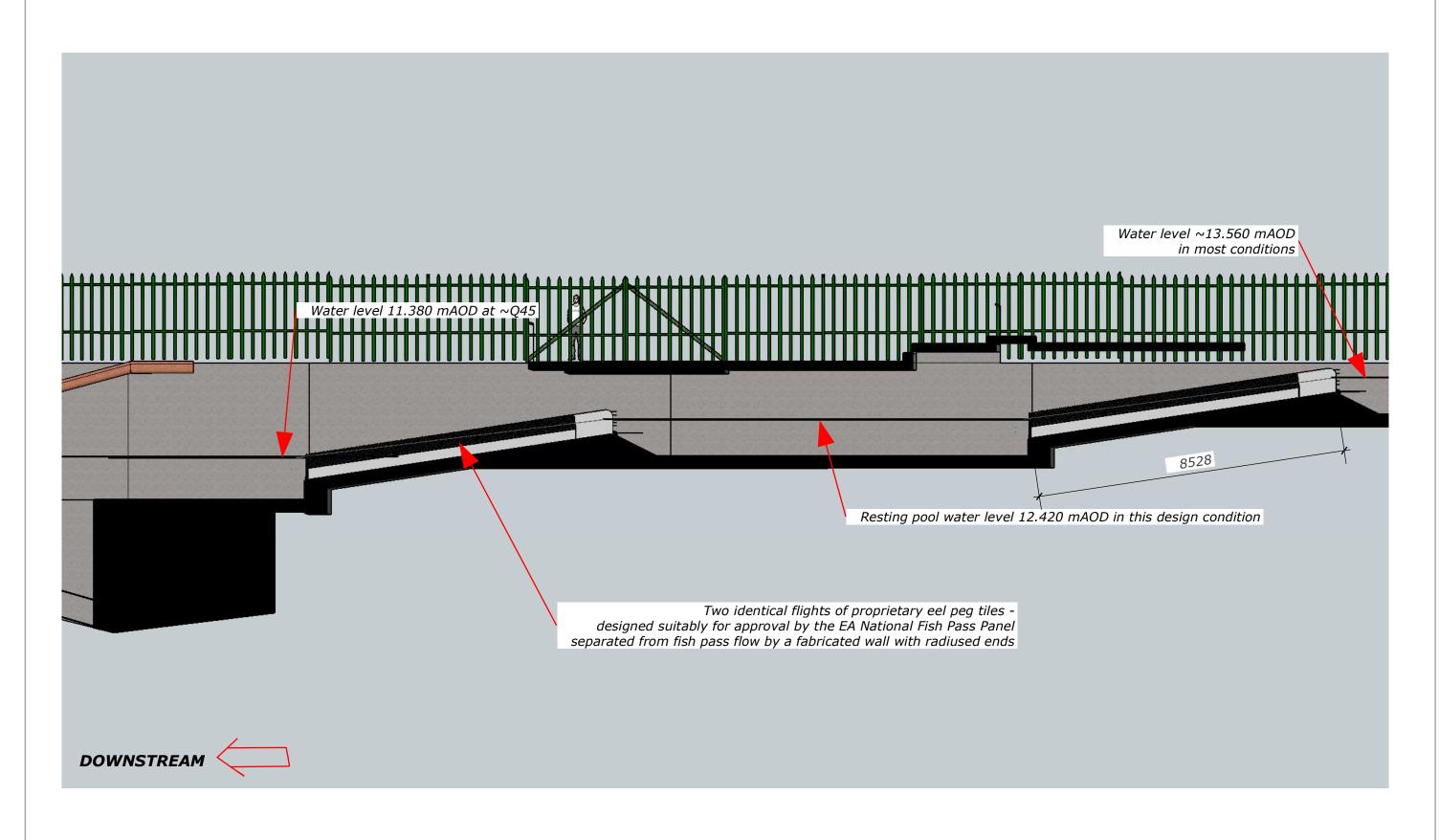


This view shows an internal section along the bywash channel (i.e. piled wall not shown) which serves to allow water to flush past the intake screen, drawing away any debris





This view shows an internal section along the turbine channel / powerhouse, centrally between the two main sheet-piled walls of the scheme





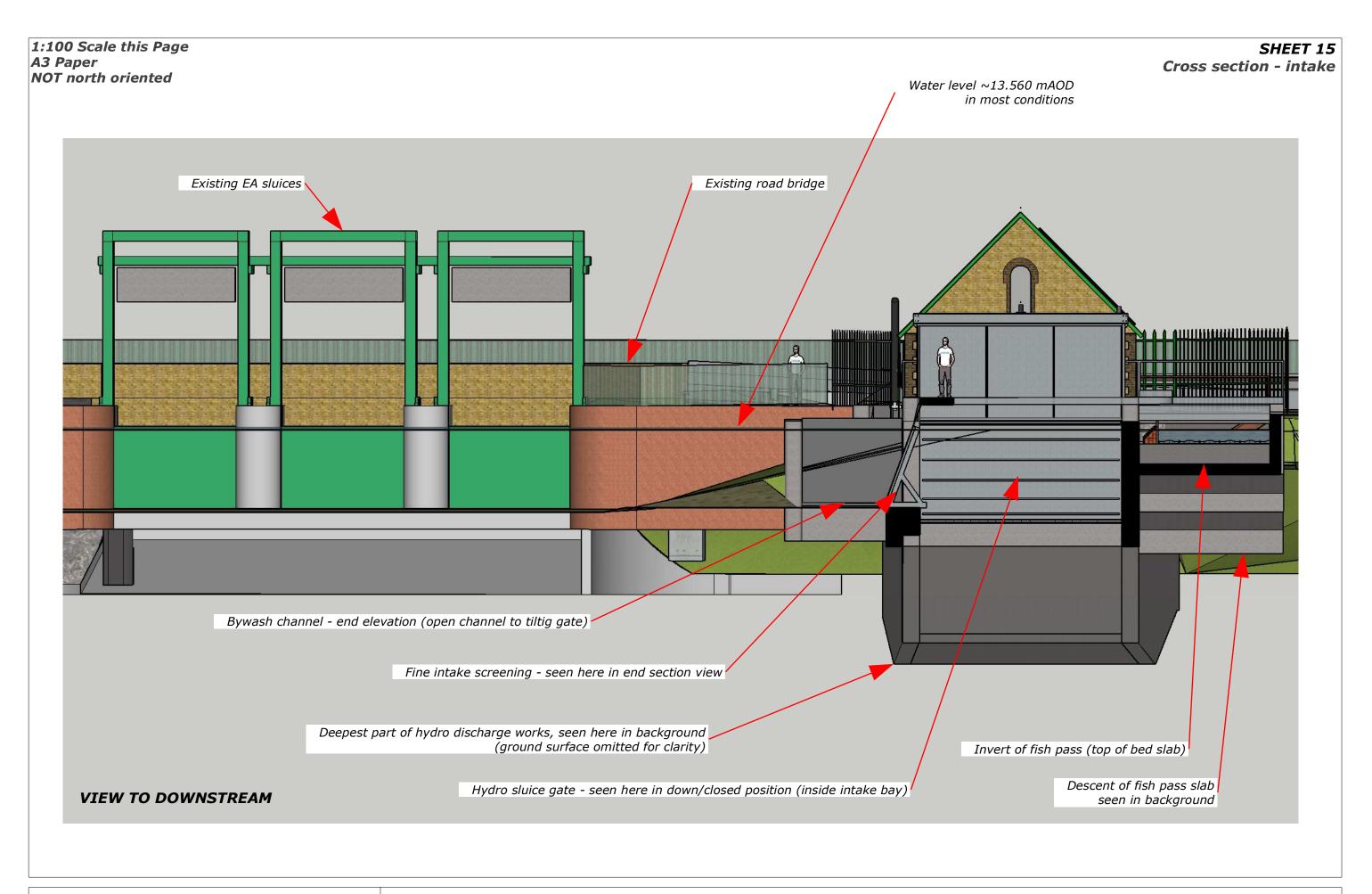
This view shows an internal section along the eel pass, which is nested on the left of the fishpass channel, to right or bankside of the main hydro channel



This view shows an internal section along the fishpass channel, to the right or bankside of the main hydro channel

St Neots\_101-V05-20230906

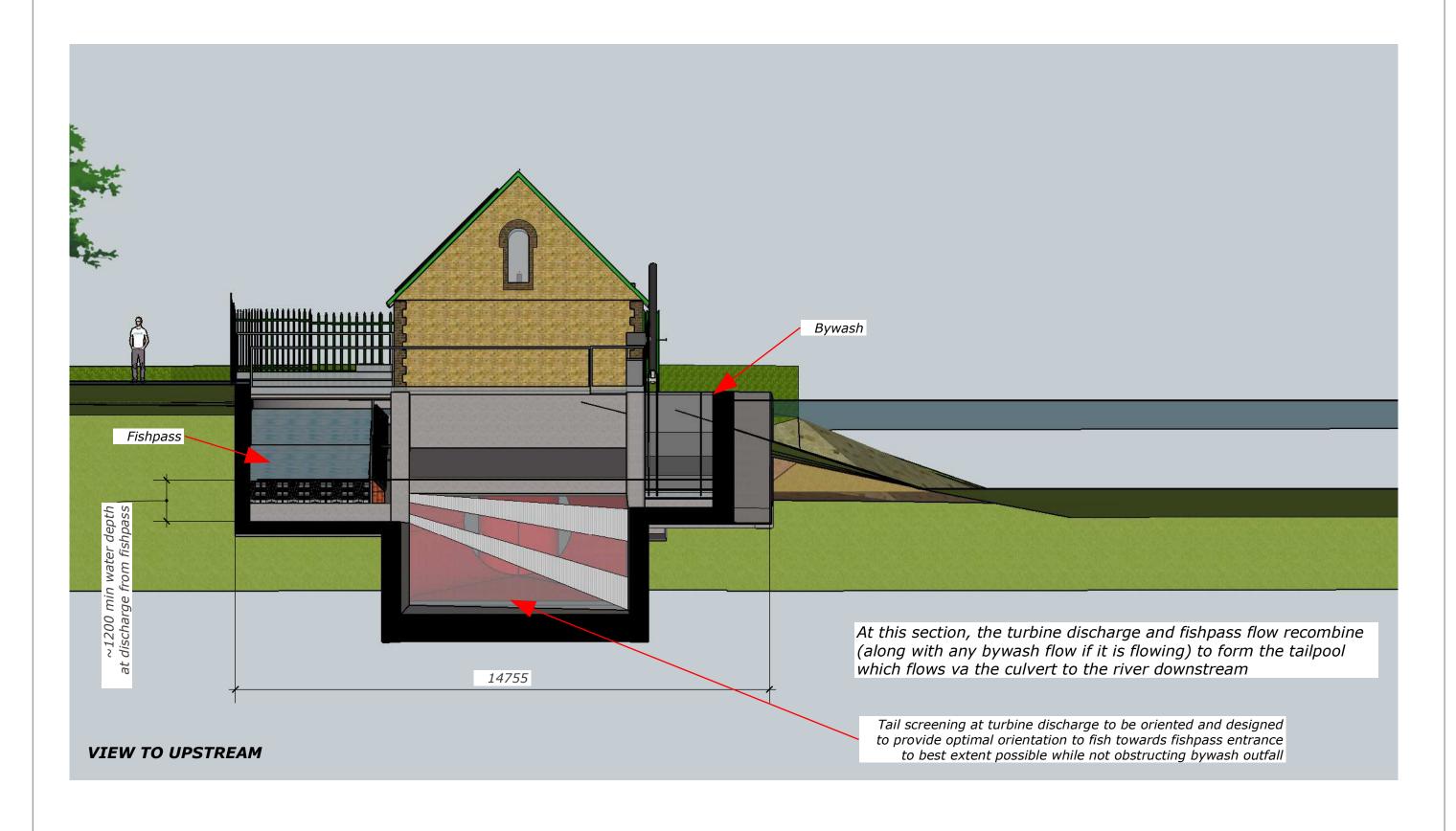
Hydro Scheme Concept





General view looking downstream, from around the point where the fine intake screen gives way to the bywash

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Hydro Scheme Concept

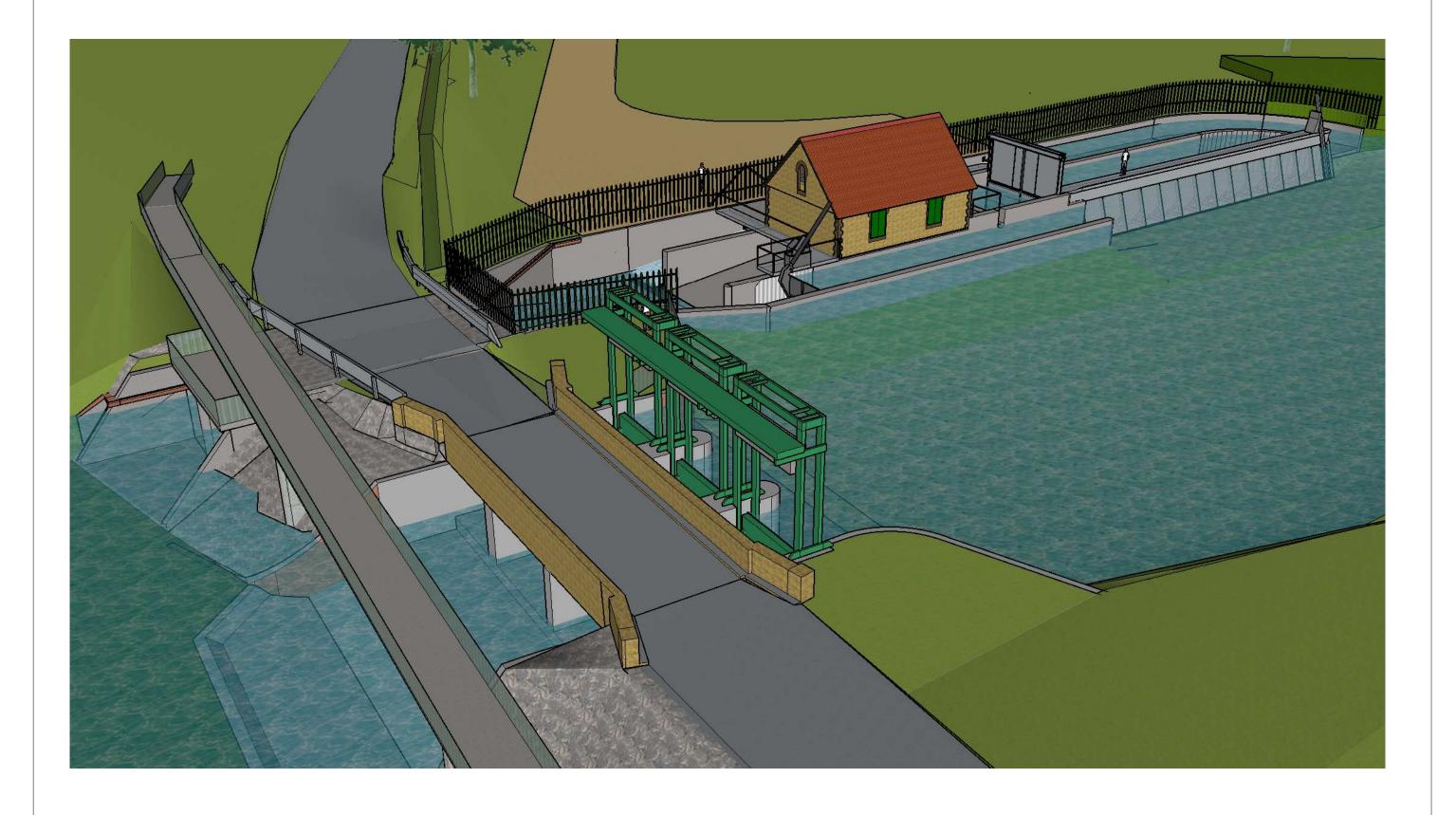




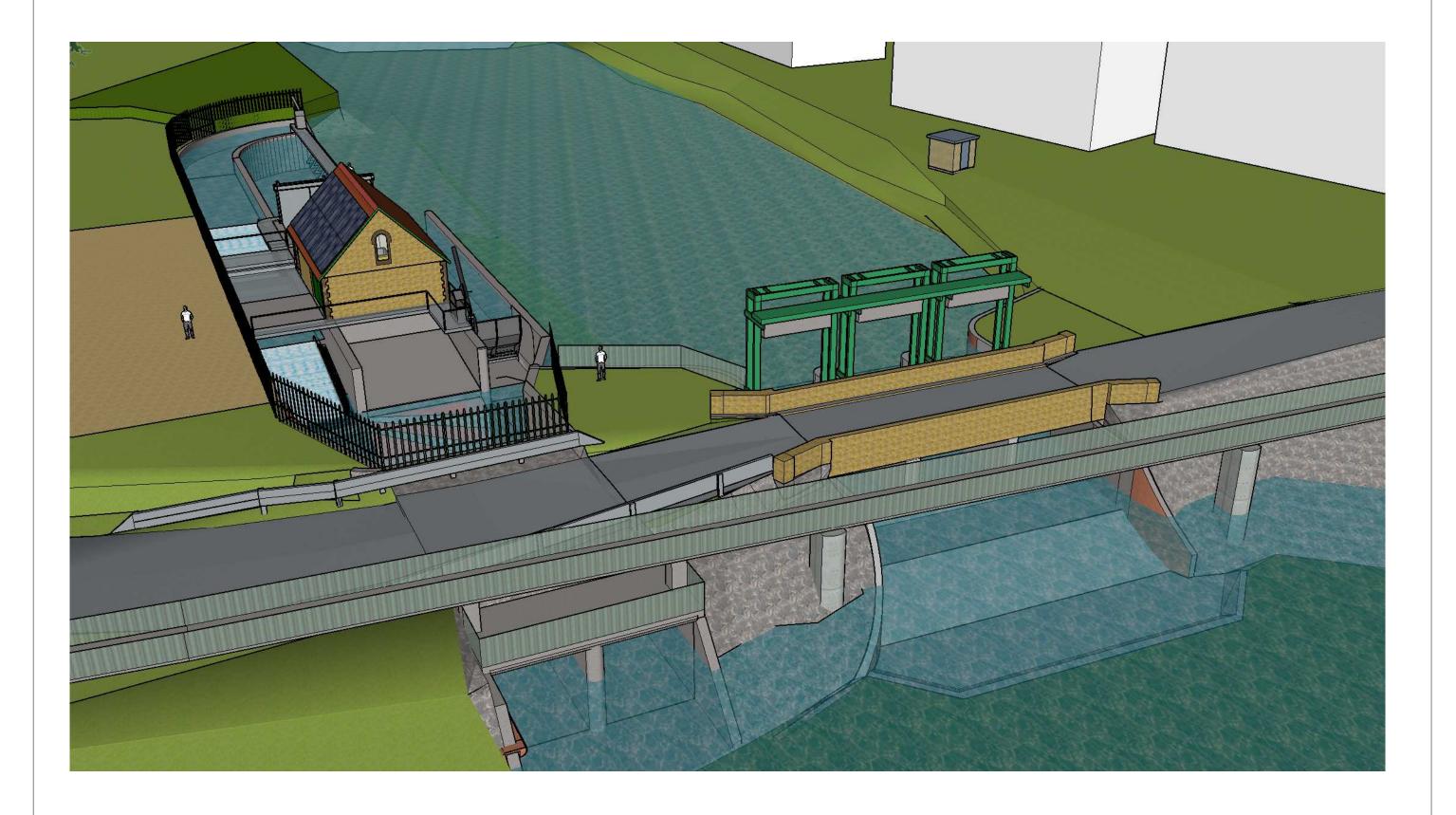
General view looking upstream, from the discharge to the river below the road crossing

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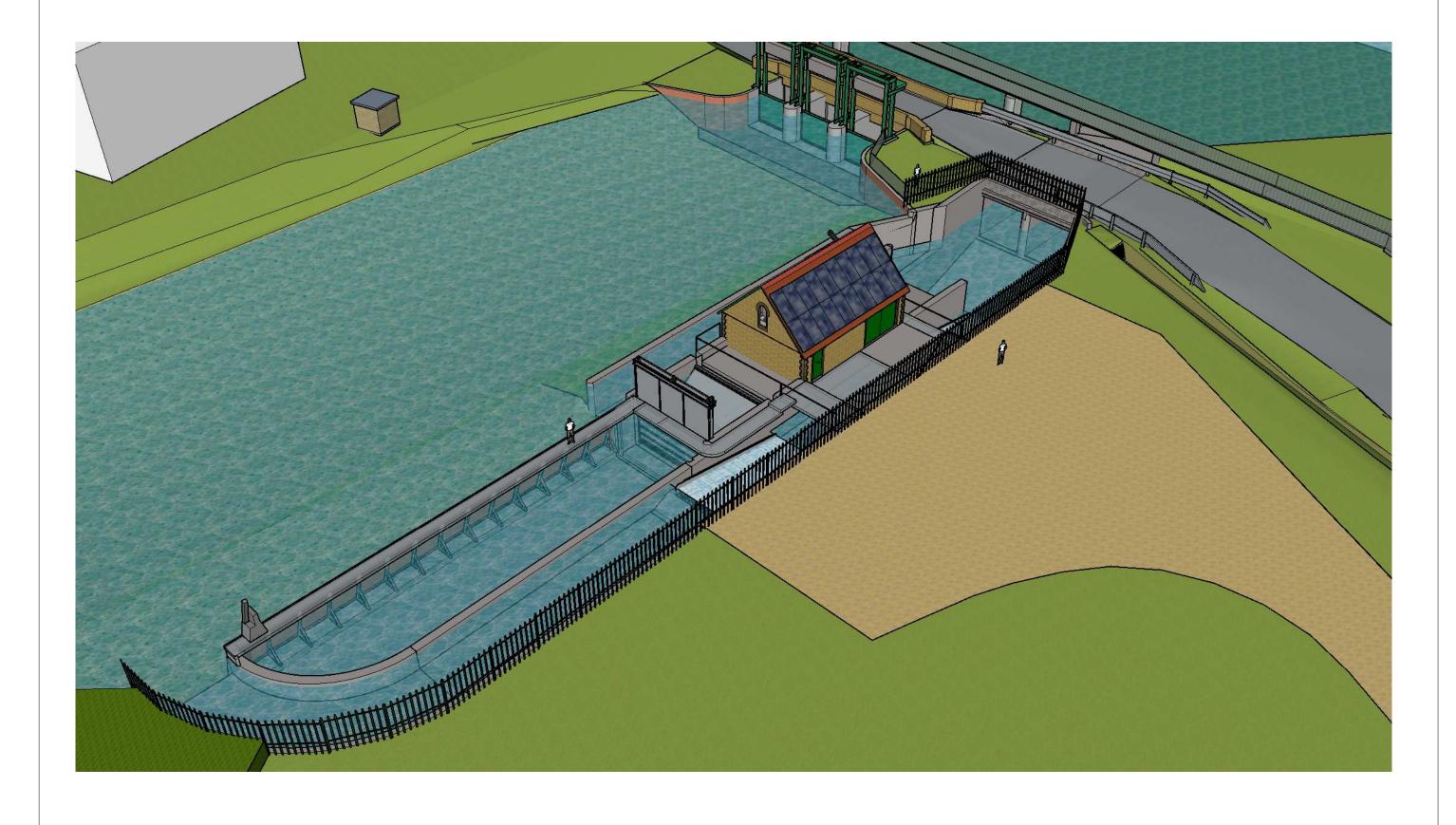
Hydro Scheme Concept









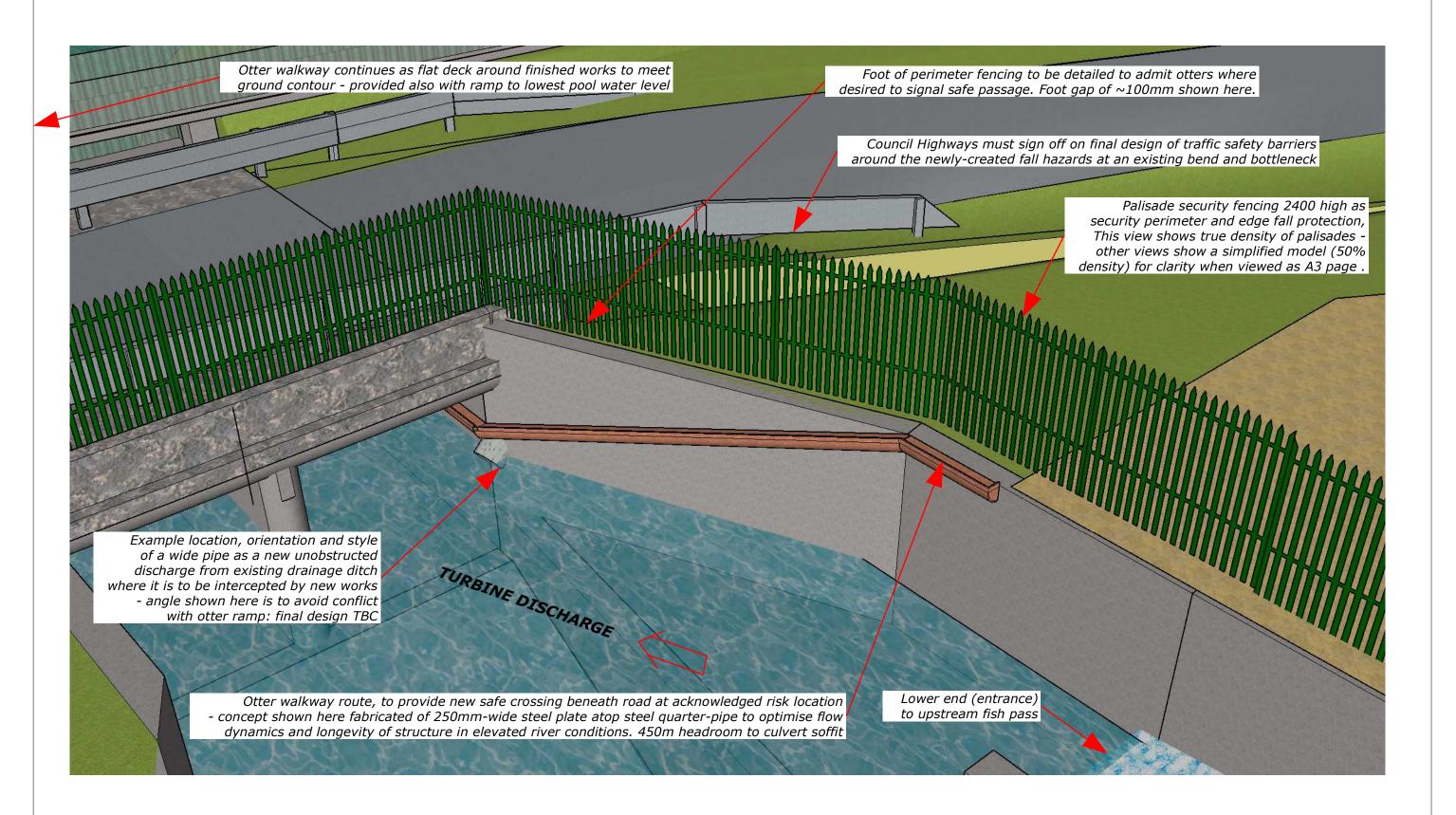








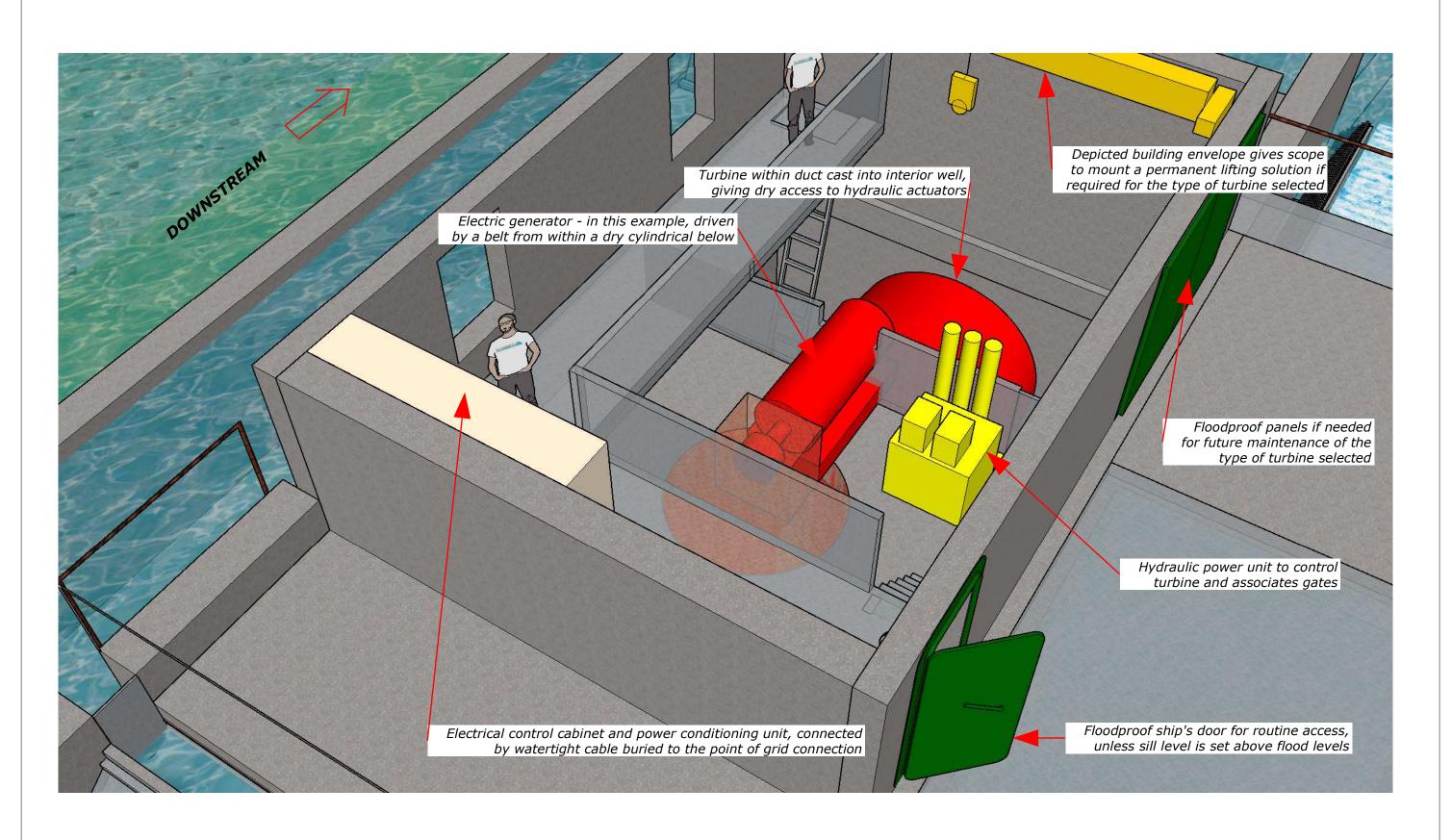
# SHEET 21 Ditch discharge and otter ramp



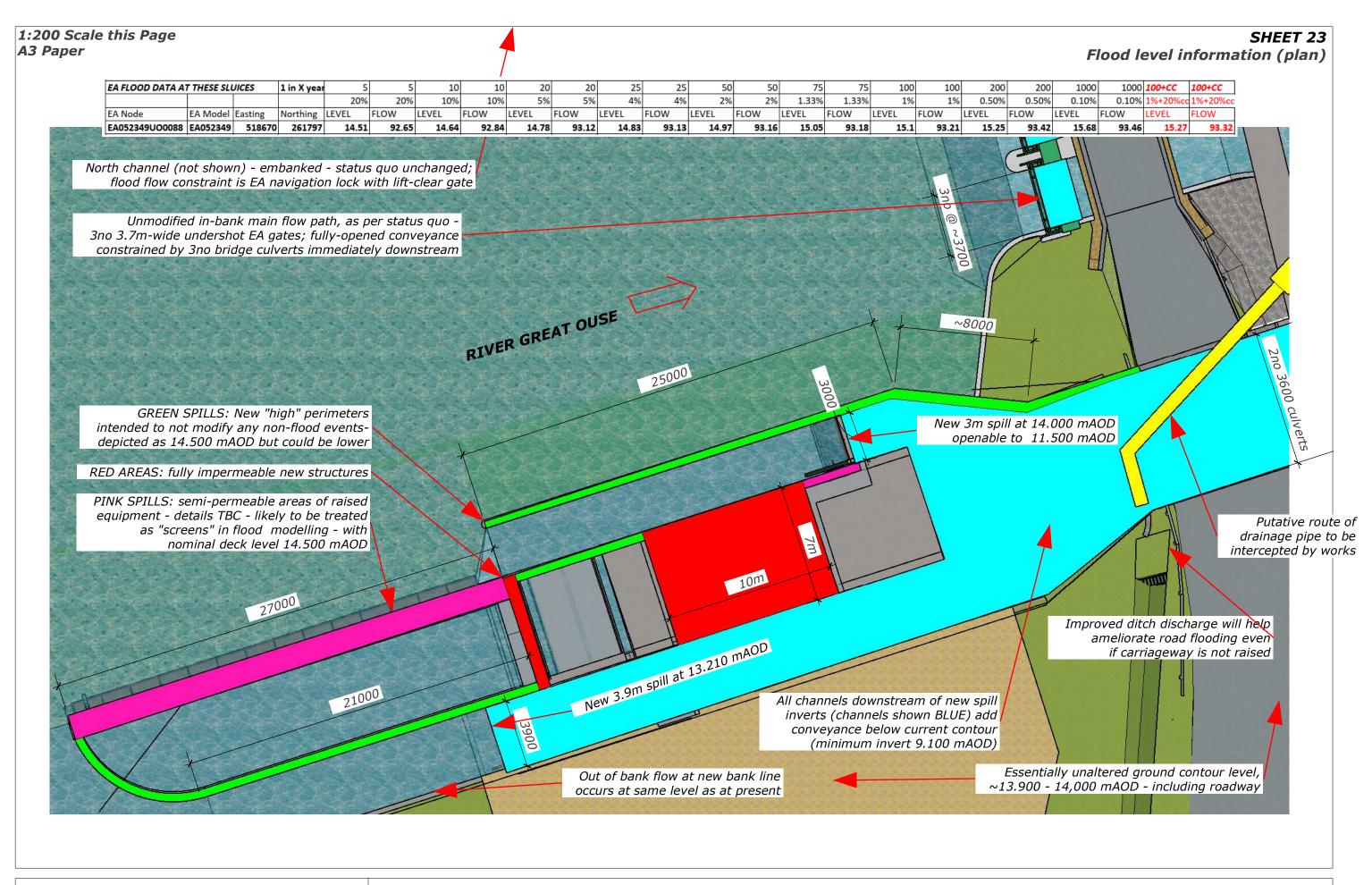


St Neots\_101-V05-20230906

Hydro Scheme Concept





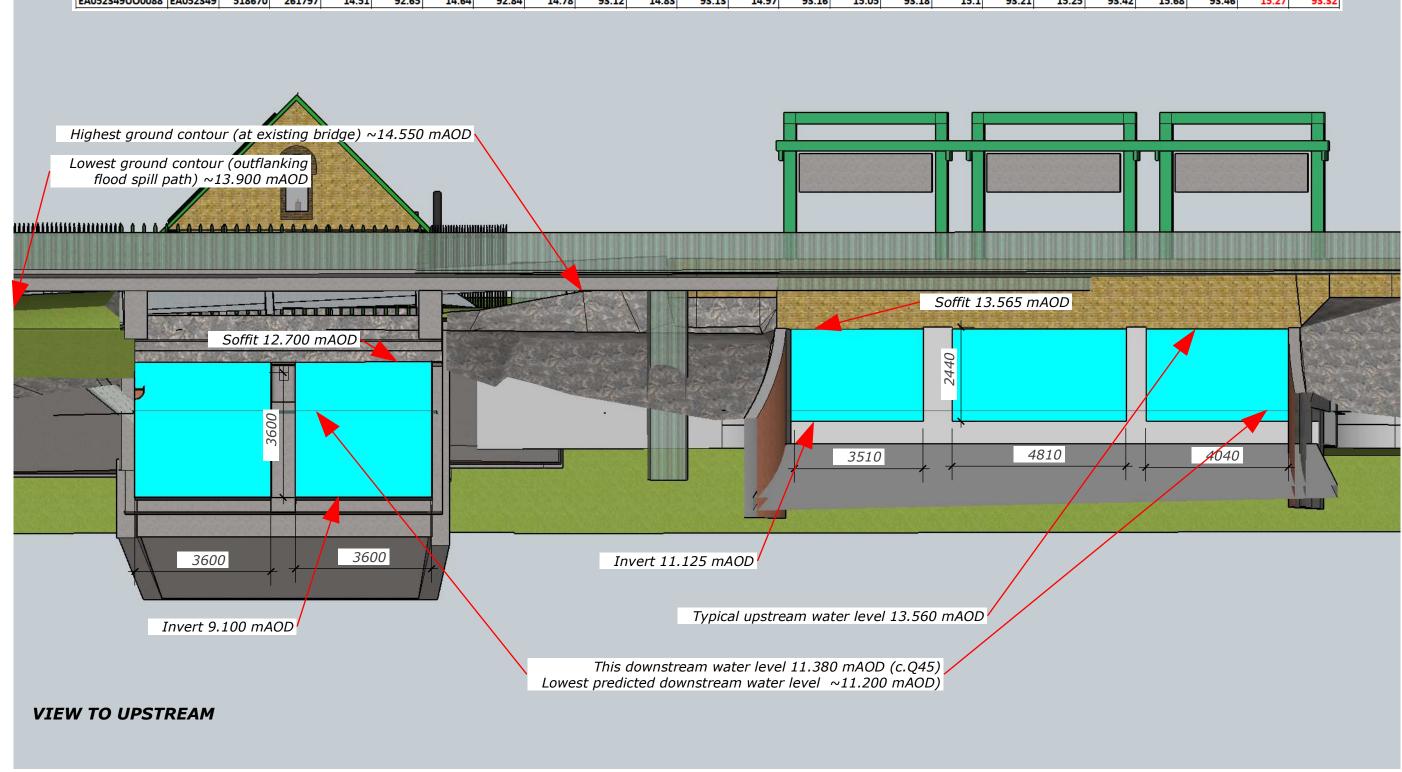




Plan view showing spill levels of the new elements (coloured) in relation to existing ground (retention c.13.950 mAOD) and main flow path (EA sluices)

St Neots\_101-V05-20230906 Hydro Scheme Concept

#### EA FLOOD DATA AT THESE SLUICES 1 in X year 200 1000 100+CC 100+CC 10% 4% 2% 2% 1.33% 1.33% 1% 0.50% 0.50% 0.10% 0.10% 1%+20%cc 1%+20%cc 20% 20% 10% 5% 5% 4% 1% EA Model Easting FLOW FLOW LEVEL FLOW LEVEL FLOW LEVEL Northing LEVEL FLOW LEVEL FLOW LEVEL FLOW LEVEL LEVEL LEVEL FLOW FLOW .EVEL FLOW 93.12 EA052349UO0088 EA052349 518670 261797 14.51 14.97 93.16 92.65 14.64 92.84 14.78 14.83 93.13 15.05 93.18 15.1 93.21 15.25 93.42 15.27 93.32





Isometric view upstream, showing existing and new flow paths at the discharge in relation to ground contour. Table of EA modelled flood levels and flows also shown.