

Mark Sealy, Brithdir Forest Hydro. Intake: Front Elevations, Levels and Take Calculations

Item	Level mAOD
Crest	313.707
Base of Screen	313.255
Existing water level 6m upstream	313.862
Downstream water level	312.329
X1	317.649
X4	316.043
X6	315.440
X5	314.785

Take

Total Crest Width : 2020mm + 866mm = 2886mm
 Screen Width : 2020mm
 Take : 2020/2886 = 70%

Hands-off-flow

Calculation of flow over broad crested rectangular broad notch:

Discharge coefficient, $C_d = 1.6$

Notch depth, $h = 0.097\text{m}$

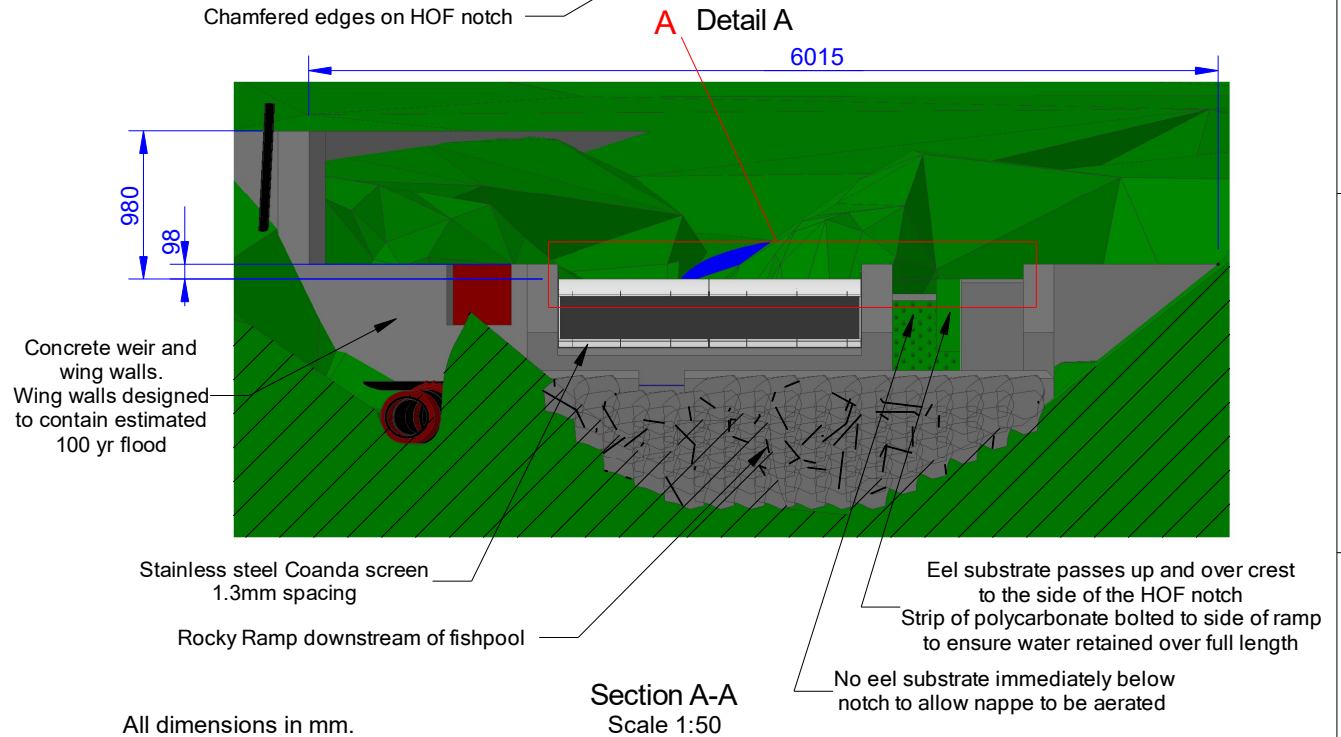
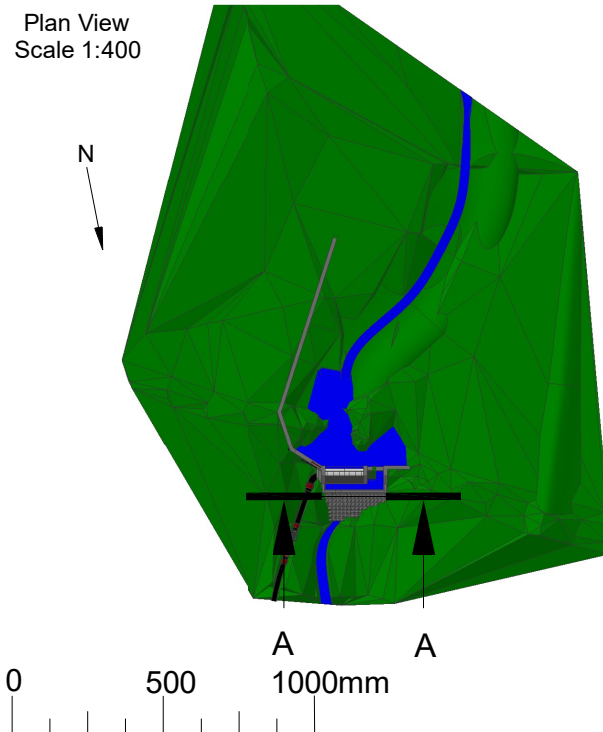
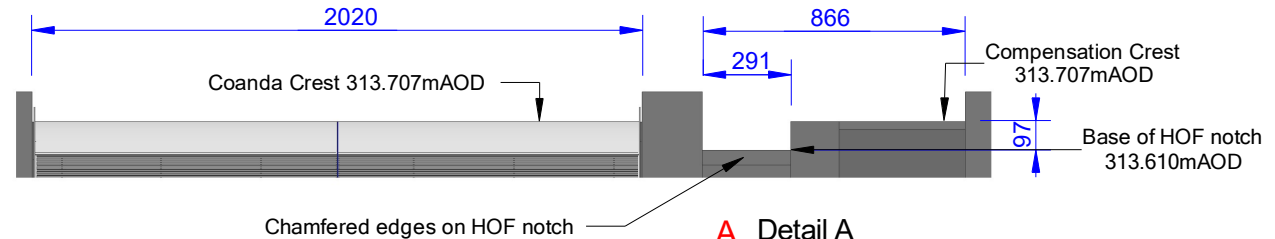
Notch width, $w = 0.291\text{m}$

$$Q = C_d * w * h^{1.5}$$

$$= 1.6 * 0.291 * 0.097^{1.5}$$

$$= 0.01407 \text{ m}^3 / \text{sec}$$

$$= 14.07 \text{ lps}$$



All dimensions in mm.

Section A-A
Scale 1:50

Client : Mark Sealy

Address : Brithdir Forest Hydro,
Brithdir, Dolgellau, LL40 2SA

Drawn By : MJP

Date : 08/03/23

Scale : 1 : 25 @ A4

Drawing No : 23030801

Version : 1

Revision Details

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MCS Hydro Transition Installer 123