

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

Item	Level mAOD
Crest	314.143
X1	317.649
X4	316.043
X6	315.440
X5	314.785

Take

Total Crest Width : 1000mm + 430mm = 1430mm
Screen Width : 1000mm
Take : 1000/1430 = 70%

Hands-off-flow

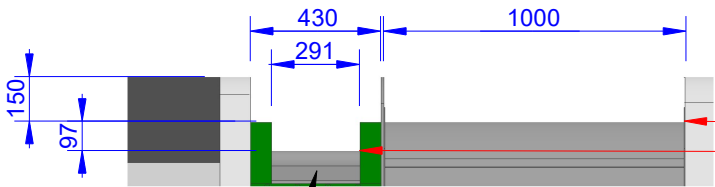
Calculation of flow over broad crested rectangular broad notch:

Discharge coefficient, $C_d = 1.6$

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

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

$$Q = C_d * w * h^{1.5}$$
$$= 1.6 * 0.291 * 0.097^{1.5}$$
$$= 0.01407 \text{ m}^3 / \text{sec}$$
$$= 14.07 \text{ lps}$$



Crest level & compensation crest level 314.143 mAOD
Base of HOF notch level 314.046 mAOD

Plan View
Scale 1:400

Clearance below HOF notch to allow
the nappe to be aerated

Detail A

A

2700

Concrete wing wall
Concrete surround
for tank

Stainless steel
tank and 1.3mm
Coanda screen

Top, inner edge
of bellmouth
Level 312.965 mAOD
Base of tank
Level 312.631 mAOD



All dimensions in mm.

Section A-A
Scale 1:50

Client : Mark Sealy
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Drawn By : MJP

Date : 14/09/22
Scale : 1 : 25 @ A4
Drawing No : 22091401
Version : 1

Revision Details

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