

123456

Stephen Cochrane Intake : Front Elevation and Calculations

Hands-off-flow

Calculation of flow over rectangular broad notch in rock:

Discharge coefficient, $C_d = 1.6$

Notch depth, $h = 0.189\text{m}$

Notch width, $w = 0.321\text{m}$

$Q = C_d \cdot w \cdot h^{1.5}$

$= 1.6 \cdot 0.321 \cdot 0.189^{1.5}$

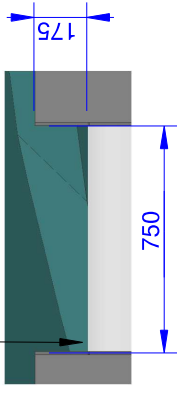
$= 0.0422 \text{ m}^3 / \text{sec}$

$= 42.2 \text{ lps}$

Detail B

Coanda crest
Scale 1:25

Coanda Crest Level : 21,993



Detail A

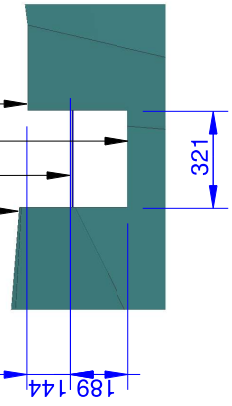
Compensation Notch
Chiselled from existing bedrock
Scale 1 : 25

Coanda Crest
Level 21,993

Level 22,165

Level 21,804

Level 22,137



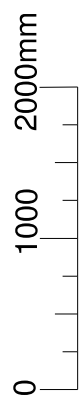
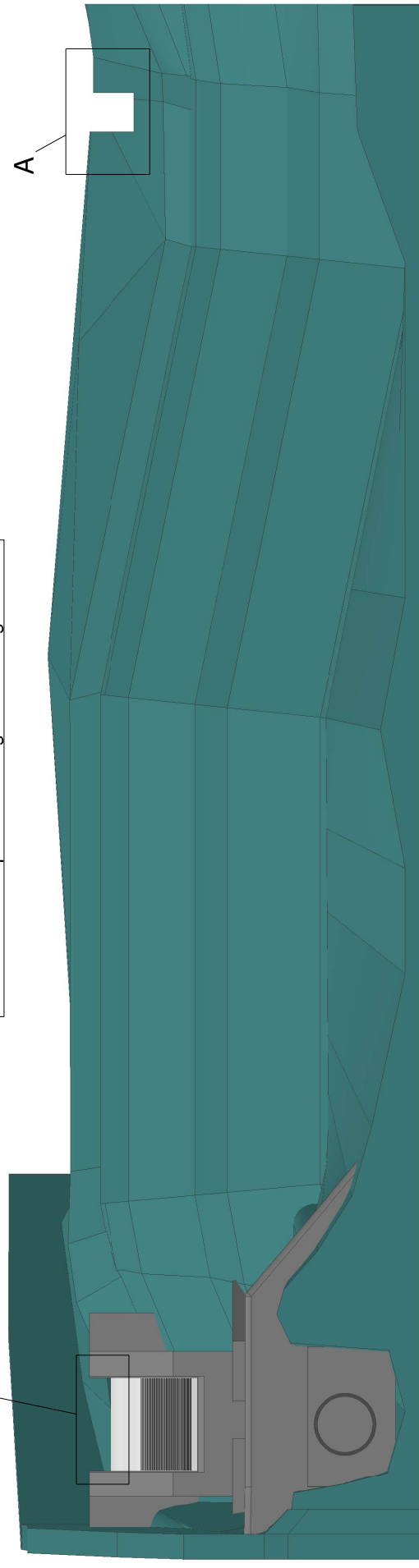
Take

Total Crest Width : 750mm + 321mm = 1071mm

Screen Width : 750mm

Take : 750/1071 = 70%

Notch overall depth provides 144mm flow depth over Coanda crest required for design flow through screen



All levels relative to Newlyn. All dimensions in mm.

Client : Stephen Cochrane Address : Glandwr Mill Gwynedd, LL42 1TG Drawn By : MJP	Date : 27/07/21 Scale : 1 : 50 @ A4 Drawing No : 21072701 Version : 2	Revision Details v2 : Levels added	Greenearth Hydro Greenearth Hydro Limited The Cottage, Rhw, Pwllheli, LL53 8AE Tel: 07980 670046 www.greenearthhydro.co.uk Company Registration Number 7417466 MCS Hydro Transition Installer 123
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