

Design Calculations
Whitehaven Golf Club

Pipeline Surcharge Loads

Client

Western Lakes Ltd.

Ref: K41188

Version	Date	Prepared By	Checked By	Approved By
original	10-07-24	DH		DH

Project: WHITEHAVEN GOLF CLUB

Office: Kendal

Prepared By: DL

Title: UV PIPE CROSSING

Project Ref: K41188

Checked By: _____

Revision: _____

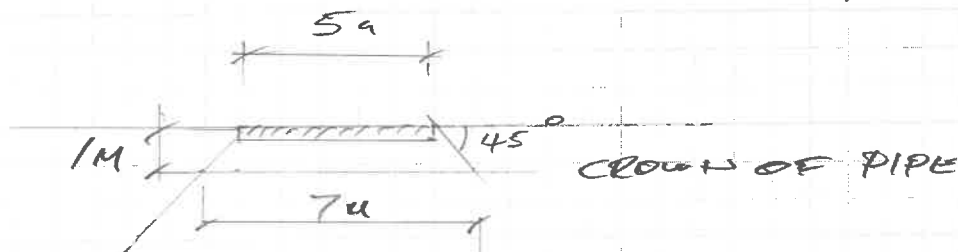
Date: 07/24

From Load Schedule provided by client,
max excavator weight $14t = 140kN$.

CROSSING POINTS TO BE $25m^2$ ($5m \times 5m$)
TIMBER SLEEPERS.

Surcharge Pressure at surface $\frac{140}{25} = 5.6kN/m^2$

Assume 1m cover to crown of water main,



Area over which pressure dissipated = $49m^2$

Surcharge Pressure at Crown of Pipe

$$= \frac{140kN}{49m^2} = 2.8kN/m^2 < 8.5 \checkmark OK$$

∴ USE 5×5 sleeper mats at
Pipe Crossing.