



# D MORGAN LTD

## NORTHERN GATEWAY

Temporary wellpoint dewatering to enable construction of a foul drainage system

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**Stuart Wells Limited**

# Temporary wellpoint dewatering system to generate a 5m groundwater drawdown

For the Northern Gateway Development temporary dewatering was essential to facilitate the construction of a foul drainage system.

A 5m groundwater drawdown was specified which required a minimum 48 hours of continuous pumping from a double-sided wellpoint system located at a nominal 6m distance apart. A 100m double-sided wellpoint pumping system was commissioned and 'leap-frogged' as drainage works occurred, allowing for 3 days (60m) pumping ahead and a 20m behind any 20m working section.



## Objective

D Morgan approached us to provide temporary dewatering to enable the construction of a foul drainage system at a pipelaying rate of 10-20m per day. Normal groundwater level is 0.5m with the deepest excavation at 5.5m below ground level.



## Solution

Initial modelling indicated that 48 hours of continuous pumping from a double-sided wellpoint system, spaced 6 meters apart, would achieve a 5-meter groundwater drawdown. A wellpoint dewatering system was installed using conventional water jetting methods with some wellpoints installed from a reduced ground level to ensure they reached sufficient depth to achieve the required drawdown.

<b>Services</b>	<u>Wellpoint Dewatering</u>
<b>Location</b>	Northern Gateway, Deeside
<b>Industry</b>	Civil Engineering