

Lawsons Rise, Whalley Attenuation Ponds

Customer:	Redrow Homes Lancashire	Value:	£1.4m
	14 Eaton Avenue, Buckshaw Village, Chorley Lancashire PR7 &NA	Contact:	Craig Ward Technical Director

Scope of Work

- Tree clearance and protection
- Weight restricted earthworks adjacent UU HP Cumbria/Manchester water supply
- Pond design and build Bentomat and clay construction to off-set 2m+ artesian groundwater pressure
- Major dewatering (well-pointing) and watercourse diversion
- Environmental Monitoring (Dust, Vibration, Noise)
- Liaison with LCC Flood Risk Management and UU asset protection
- Construction of surface water outfall drainage system
- Continual Resident & LPA liaison



Project Description

The works involved the installation of two attenuation ponds within an area between major United Utilities pipe infrastructures (Haweswater Aqueduct and a 250 dia medium pressure water main) and an existing watercourse (Wiswell Brook). Extensive site investigation characterised the existing groundwater as near surface with 2m+ artesian head. To counter this, the ponds were designed to present a stable counterbalance to the groundwater pressure, by means of Bentomat Liner supplemented by a up to 2m clay liner to the sides and base of the ponds, incorporating additional Rip-Rap erosion control, RC headwalls and connection g pipework and hydro-brake installations.

Access to the work area was restricted to a max 15T laden weight limit over bespoke RC concrete crossings to protect the 4 no large diameter HP water pipelines and adjacent 250 dia. water main.

The nature of the ground required the use of well pointing to temporarily reduce the natural GW levels during the construction period. The works were completed 1 month ahead of programme, as a consequence of the UR site team's management of this challenging project and also, in part, as a result of the exceptional weather experienced during the summer of 2018.

