



Leak Sealing & Waterproofing • Concrete Repairs • Crack Injection • Pressure Pointing & Grouting • Structure Condition Surveys • Protective Coatings • Joint Sealing
Diamond Drilling & Sawing • Concrete Bursting & Crunching • Robotic Demolition

Scheme: **Liverpool WwTW BAFF Cell Plant**

Problem: **Suspected structural damage to reinforced concrete BAFF cell floor slab**

Solution: **Structure condition surveys and removal of defective floor slab**

Client: **United Utilities Water** Main contractor: **Birse Water**

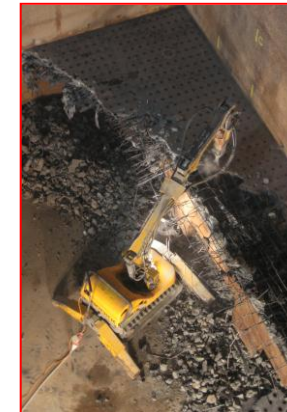
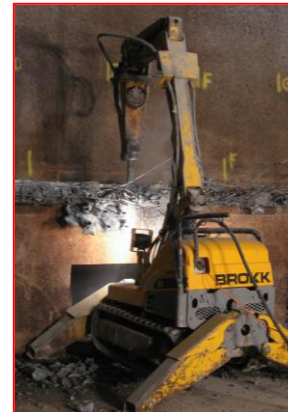
Following concerns being raised regarding possible structural damage to BAFF cell floor slabs at Liverpool WwTW, Ram Services Limited's technical staff were tasked to undertake structure condition surveys of eight BAFF cell floors to check for structural damage arising from possible overloading.

Using a variety of concrete investigation techniques, each cell floor was checked for signs of cracking and structural movement prior to a detailed condition report being prepared. These included;

- Dimensional and level checks
- Concrete sampling and testing for cement content, sulphate, chloride and carbonation levels
- Half cell potential measurements and cover meter checks
- Hammer and PUNDIT testing

The condition of one cell floor was considered such that replacement was necessary, and Ram Services Limited diamond division was brought in to demolish and remove the floor prior to re-construction by others. Limited access and the need to maintain adjacent BAFF cells in service called for the use of a robotic demolition unit to break up the floor slab into small fragments, whilst keeping vibration levels to a minimum.

All debris was then removed via existing 600mm diameter manways on electrically powered conveyor belts.



Contract duration: 12 months

Contract value: £140,000.00

For further details please contact our Structural Refurbishment and Diamond Drilling Teams.