

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

Controlled demolition utilises a wide range of specialist techniques and equipment to takedown or remove parts of an existing structure in a safe predictable manner.

Use of a Brokk demolition robot is one example. This wireless, remote control machine increases productivity and dramatically improves safety, with the operator being as far as 50m away from the work area.

The high productivity of a Brokk demolition robot coupled with the safety of remote control, places these machines at the forefront of controlled demolition field.

There is nothing to compare with a Brokk machine when it comes to demolition in confined spaces. There are no fumes, no operator vibration, minimal dust giving good operator visibility and high productivity levels drastically reduce risks in such environments.



Manoeuvrability, together with the other benefits outlined above, also make the Brokk machine suitable for soft stripping offices and retail premises.

Examples of the use of Brokk demolition machines by Ram Services Limited includes the removal of a reinforced concrete filter floor from within a large concrete tank at a waste water treatment works.

The slab condition had been investigated by Ram Services technical staff, and following an adverse report, the client instructed Ram Services to remove the filter floor slabs in its entirety.



Additional benefits are the low weight of the machine allowing it to work on shop, hotel, offices and similar buildings.

The Brokk machine can move itself up and down stairways, will fit readily into most lifts or can easily be craned into place.

The machine has a high power to weight ratio, and carry heavy attachments compared to its size.

Brokk operation has low noise and vibration levels, especially when utilising the crusher jaws, making it ideal for use in critical environments such as hospitals, retail premises, offices etc.



With the floor slab measuring 15m x 10m x 150mm thick, with associated support columns and beams, some 35m³ of heavily reinforced precast and insitu concrete needed to be broken up and removed.

The configuration of the structure was such that all debris had to be passed through a single 600mm diameter man way.

During a previous similar exercise, the work was undertaken using hand held breakers, requiring some 10 men and several weeks to complete.

Using the Diamond Division's Brokk 90 robotic demolition rig, four operatives, and a series of electrically powered conveyors, Ram Services completed the work in just 20 days, leaving the BAFF Cell clear for a new floor to be constructed.



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Project	Value	For	Work
Liverpool WwTW	£43,000	Birse Water	Controlled demolition of suspended concrete filter floor slab in BAFF Plant using Brokk 90
Lister Mills	£18,000	Urban Splash	Formation of new corridor openings in 700mm thick masonry boiler house walls
Esholt WwTW	£87,000	Morgan Est	Diamond drilling, sawing, wall sawing and controlled demolition on waste water treatment works project
Plaza Hotel Liverpool	£165,000	MITIE Property Services	Diamond drilling, wall sawing and controlled demolition on hotel development
Penrith 132kV Substation	£10,000	United Utilities Electricity	Controlled demolition of cable strain gantries and associated structures using Brokk 90 and hydraulic cruncher on 22 tonne excavator
Trawsfynydd Power Station	£90,000	Watkin Jones	Stitch drilling and removal of sections of 1.8m thick wall in nuclear power station
Plaza Hotel, Leeds	£600,000	David McLean	Controlled demolition and formation of openings using diamond drilling and sawing techniques
Piccadilly Rail Station, Manchester	£200,000	Laing O'Rourke	Controlled demolition and drilling of 300mm x 6m deep holes on station refurbishment
Rochdale Shopping Centre	£25,000	Mansell	Controlled demolition and formation of openings using diamond drilling and sawing techniques
Paradise Street Retail Development, Liverpool	£265,000	Grosvenor Estates	Formation of openings in floor slabs using diamond drilling and sawing techniques
Portland Chamber, Manchester	£25,000	Bruntwood Property	Controlled demolition and diamond drilling as part of structural refurbishment
Sale WwTW	£74,000	GallifordTry Costain Atkins JV	Diamond stitch drilling and wire sawing on waste water treatment works upgrade project
Preston Mill Re-development	£60,000	Mandale	Formation of window openings in walls of former mill using diamond chain sawing techniques
Leeds Mill Re-development	£54,000	Mandale	Diamond drilling and sawing
Buxton Quarry	£33,000	Tarmac Quarries	Controlled removal of concrete plant bases using wire and wall sawing techniques

