

CASE STUDY

DIAQUIP DIAMOND COREDRILLS

KILNBRIDGE

OVERVIEW

The Company:	Kilnbridge
Project:	Piccadilly Circus, London
Location:	London, UK
Employees:	100+
Industry:	Building & Civil Engineering, Fabrication, Fire Protection, Environmental, and Concrete Cutting & Controlled Demolition
Customers for:	15+ years
Website:	www.kilnbridge.com

Kilnbridge

Kilnbridge is a multi-disciplined building and civil engineering company providing a portfolio of contracting solutions and construction services to the built environment.

They specialise in 5 industry sectors, one of which is concrete cutting and controlled demolition. They are a leading contractor operating throughout both the UK and internationally. In order to solve the more complex concrete cutting projects, this sector has become synonymous with their engineering solutions sector.

THE CHALLENGE

UK concrete cutting specialist Kilnbridge, took on a tough deep drilling job in Piccadilly Circus, London. The project involved the conversion of the former Regents Palace Hotel, in Piccadilly Circus, London. The new mixed use development of shops, offices, restaurants and residential buildings will retain 50% of the original facade, all of the basement perimeter walls, and elements of the basement and superstructure slabs but will otherwise be completely re-built.

To prepare for construction of the foundations needed to support the new structure, extensive mini-piling work had to be undertaken. Kilnbridge took on the job of coring holes in the basement slab, ready for piling.

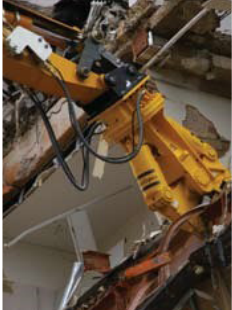
The sheer amount of drilling involved in the job was impressive - over five hundred 400mmØ holes were drilled, averaging at 2 metres deep. In some parts of the hotel basement, the holes were reaching and incredible 5m deep. Whilst 400mmØ was the most common diameter, Cores up to 600mmØ were also used on the perimeter of the building.

As if drilling 400mmØ 5 metres deep wasn't a difficult enough challenge, the concrete involved made conditions even harder. The concrete was extremely hard, with a Thames London Flint aggregate. This was no small aggregate either - the concrete was mostly filled with large, 40 - 50mmØ Flints, with some chunks over 100mmØ. Not only did the basement slab contain rebar with the usual 40mm steel, Kilnbridge found steel

With a tight budget, and a demanding completion date, Kilnbridge had to get everything right every step of the way.



THE SOLUTION



The only question then was which Diamond Segment to use – testing began immediately, with Kilnbridge Construction Services' highly trained, professional men operating 5 – 6 electrical 5Kw set ups, testing at least 4 of the UK's leading Core Drill manufacturer's specifications. It was soon clear that the AERO® segment had the best performance, with a good life too.

Once it was established the AERO was the segment of choice, Kilnbridge made use of the versatile AERO range to fine tune the specification. Diaquip technicians and Kilnbridge operators worked together on site to find the best mix of the four



AERO specifications, including the unique W shaped segment. Once this was found, Kilnbridge could braze the segments supplied by Diaquip, Manchester in their workshop, using the mix developed out on site. This ability to mix segments (i.e. use 60% standard shape and 40% W shape on a core drill) allows companies such as Kilnbridge, who braze their own segments, to make the optimum core drill for the biggest contracts.

THE RESULT

This job further established the quality of the AERO® Core Drill Segment. It is becoming more evident that this technology is very advanced, as professional Concrete Cutting Specialists, such as Kilnbridge Construction Services Ltd, prove them on the biggest contracts.