



## RETROFIT BASEMENT

A new basement was dug beneath a Victorian end of terrace property and waterproofed with a Type C cavity drain membrane system and a liquid applied waterproofer. Providing space for a home cinema, large bedroom suite and plant room, the property was used as a showcase for similar basement projects by the developers..

A perimeter drainage discharging to sumps to the front and rear of the property.

To maintain maximum headroom, a semi-engineered brick course was installed around the perimeter to house the perimeter drainage over which a screed finish was laid, incorporating a latex admixture to improve the durability and adhesive bond of the mix.

As an alternative to using a membrane to waterproof the floor, and to facilitate the installation of under floor heating, two coats of liquid applied waterproofer were laid to the floor slab, continuing up and over the perimeter step detail with a 150mm upstand to the internal walls. Sand blinding of the surface provided a key for the subsequent levelling compounds before the installation of the Poly-Plumb heating system and finally a feature wood floor. The total basement area measures 22m x 8m and features doors to an external light well at the rear and a glass covered internal light well to the front.

A cavity drain membrane system provides an alternative to conventional cementitious tanking systems, which work by holding the water back. Cavity drain membranes work on the principle of allowing water to continue to penetrate the structure but control it in the air gap and divert it to a suitable drainage point. They do not allow pressure to build up against the internal construction and the air gap behind the membrane allows the structure to breathe and to some extent to dry out. They can be used in conjunction with a liquid applied membrane to the floor or used as part of a 'sealed system' where membranes are also laid to the floor and the wall/floor junction made watertight using wall/floor and corner sealing strips. Once the membranes have been fitted, wall surfaces can be dry lined or plastered directly and floors can be screeded or a floating dry board system installed.

To minimise any compatibility issues, where possible, all products were sourced from a single source of supply and installed by appropriately trained operatives or manufacturers' approved installers.



No shortage of daylight in this new basement



The provision of a new, watertight basement to properties like these provides a further storey of valuable living space



Engineering brick detail housing perimeter drainage, with non-return odour resistant valve awaiting fitting (far left)

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