



## Beautiful Basements Case Study

Traditional new build basement with open excavation – Oadby, Leicestershire

**Client**  
**Waterproofing Designers**

**Mr. Bahia**  
**Beautiful Basements**

### Background

Located in a very popular suburban area just south of Leicester. A large 5 bedroom family house had been run down and neglected for over 10 years. The house was purchased and demolished to allow a new, modern family home to be built. The new house would have a very large basement which included a gym and spa with steam room, sauna and hot tub.

On this project Beautiful Basements was asked to design and build both the basement structure and the waterproofing system. The best option for this project was to create a reinforced concrete basement, and have the rest of the house built using that as the foundation.

### Construction Method

The old building was demolished and a large, open excavation was dug with angled banks for the safety of the workforce below. The basement floor and walls were built using mass filled concrete between temporary timber shuttering with concrete containing a waterproof additive.

Once the main basement build had been complete and back-filled with a layered, compacted, granular material, the adjoining foundations for the rest of the new house were built and tied into the sub-structure with reinforcing steel to avoid any movement and give more strength to the super-structure.

### Waterproofing Method

#### Type B – Integral Protection

The basement was constructed using reinforced concrete with an additive, making the concrete waterproof. All external construction joints were treated with a cementitious waterproofing slurry, giving extra protection to the Type B system.

#### Type C – Internal Cavity Drainage System

The internal walls and floor were lined with a cavity membrane, all linked to a sump and pumping station via a series of perimeter channels. Two pumps and a high level alarm were installed.

All waterproofing materials were supplied by Triton Systems Ltd.

### Build Programme

3 months



**Basement Build**  
**Conversion**  
**Retro-fit**  
**Waterproofing**

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