

# Abbey Pynford

## Case Study—Highbury Quadrant

### Residents in Situ.....

#### Abbey Pynford Selected for the Decent Homes Project

Working closely with a Resident Liaison Officer Abbey Pynford were able to successfully underpin two 5 storey blocks of flats whilst residents remained in their homes with the least possible disturbance to them.

It was also necessary to switch piling methods from a Dry Open Auger to a Tremmie Grouting method because of water ingress. Abbey Pynford not only dealt with this quickly and effectively but throughout maintained no movement to either of the two buildings. This was confirmed by Level Surveys obtained before and after works.

It is believed that the original subsidence was caused by the trees pictured below and anti heave precautions had to be taken into account. Contract specific temporary stools were designed to provide stability whilst the new reinforced raft foundation was installed.



**Scope of Works:** New piled raft underpinning slabs to two 5 storey blocks of flats

**Location:**  
Highbury Quadrant,  
London,  
N5 2TX

**Main Contractor:**  
Kier Islington in association with  
Homes for Islington

**Duration:**  
14 weeks, per block  
Jan—May 2010

#### Abbey Pynford

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#### Testimonial

*“Mark and Rob were both very professional, helpful with the residents and their work was to the highest standard”*

**- Tony O’Keefe, Keir Site Manager**

*“We had to work closely with Kier and the resident’s liaison officers in order to minimise disruption to the occupants of the flats while the underpinning works were being undertaken”*

**- Nick Tidman, Contracts Manager**

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### Construction Phase Highlights— Highbury Quadrant



#### Mass Concrete Underpinning

In order to provide suitable bearing for the temporary support props to the external walls mass concrete underpinning sections were cast to support the existing concrete downstand slab edge.



#### Diamond sawing of existing reinforced concrete slabs and reduced level excavation

The existing reinforced concrete floors had to be diamond cut (both sawing and chain drilling) and detached from the existing walls to reduce vibration and noise. The slab was then broken up and the reduced level excavation completed.



#### Installation of 300 mm diameter piles

The piles were installed using a specialist mini piling rig capable of drilling to 20+m the piles for this project were installed to 16 m tremmie grouted as necessary to deal with ground water.



#### Installation of the Raft Slab

In order to ensure the stability of the building each raft slab was cast in 3 sections. The first part of the process was to install temporary support props to the walls (as shown). Then install anti heave precautions, tie and fix the steel reinforcement and concrete the slab. The final element was to remove the temporary props to maintain the antiheave precautions.