

Making Homes

Decent

WITH **HELIFIX**

With the launch of the Government's Decent Homes initiative in 2000 a commitment was made to bring all council houses and housing association properties up to a decent standard by 2010.

Large numbers of homes have already been brought up to the required standard by making them weatherproof and warm and through the installation of reasonably modern facilities. However, before improving any domestic services it is important to ensure that the building is structurally sound. To this end Helifix has been successfully involved in the Decent Homes programme where its structural repair products and fast track installation techniques have proven themselves to be efficient and reliable, saving both time and money while causing minimal inconvenience to the residents.

Helifix Masonry Repairs

For more than a quarter of a century Helifix has been at the forefront of technical innovation in the design and manufacture of masonry repair systems and the development of non-disruptive installation techniques. During this time it has built an enviable reputation for product quality, engineering excellence, technical support and comprehensive customer service.

- Purpose designed stainless steel products
- Manufactured by Helifix in its own UK factory
- Independently tested and approved
- Stress-free by accommodating normal structural movement
- Fully concealed following rapid installation
- Cost-effective solutions for all common structural faults
- High quality, effective, reliable and economical
- Understanding and diagnosis of structural problems
- Schematic designs and specifications by qualified in-house engineers
- All designs underwritten by Helifix professional indemnity insurance
- Nationwide network of trained Approved Installers approved who offer 10 year insurance backed guarantees

Experience and Technical Expertise

With its proven track record and established credibility, Helifix has established a range of precision engineered stress-free products that are effective in all forms of construction. They are extensively tested by accredited independent bodies and approved and recommended by the principal manufacturers of various construction materials. Consequently they are well recognised, highly regarded, widely used and fully proven.

Operatives from Fastrack Brickwork & Scaffolding Ltd carrying out masonry repairs under the Decent Homes scheme on the Stonehouse Estate, Birmingham





Window replacement

The Helifix technique of installing stainless steel HeliBars into the existing masonry to create lintels has been particularly useful during window replacement programmes to upgrade single glazed steel frames to modern double glazed units. Local authorities and housing associations have found that in many cases there are no lintels above the existing windows as the masonry was built directly off the steel frames and removing them will probably result in structural

movement. The traditional approach of installing a new concrete lintel is expensive, time consuming and disruptive to both the property and its occupants. However, bonding concealed HeliBars into appropriate mortar beds above the windows enables lintels to be formed by creating masonry beams within the existing brickwork and is proven as a rapid, economical and viable alternative.

Stonehouse Estate, Birmingham

Built in the mid 1930's, the Stonehouse Estate has some 300 houses, the majority still owned by Birmingham City Council. An initial survey had been commissioned in 1986 when concerns were raised about various cracking of the properties due to settlement. Geo-technical reports showed that the properties were built on made-up ground consisting of poor quality fill, above very soft silt clay, that would not be suitable for using traditional strip foundations using current building standards.

The range of serious structural faults was extensive and included settlement cracking of the masonry, separated internal and external walls by up to 40mm, bowed elevations, failed wall ties and the absence of lintels. Initially it was considered that the structural work required to make



A HOUSE BEFORE REPAIR



A HOUSE AFTER REPAIR

the properties viable would prove too expensive and hence the houses were not considered eligible for Decent Homes funding. Local councillor John Lines had campaigned for 10 years for properties to be upgraded and with the introduction of Helifix systems the reduced cost of structural repairs became acceptable and Decent Homes funding was granted for the upgrading of 185 properties.

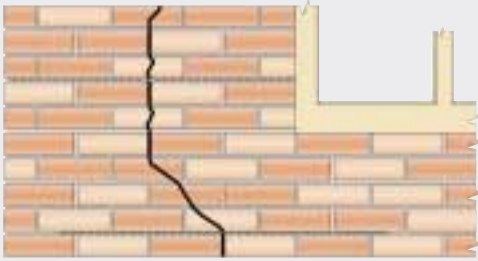
Without the structural repairs being carried out that were needed to stabilise the properties, it was most likely they would have been demolished as they were not considered viable for the Decent Homes programme, especially as they had little or no re-sale value and residents could not exercise their right to buy.

Structural engineers were commissioned by Birmingham City Council and Wates Living Space won the repair contract. Their preferred contractor was the local Helifix Approved Installer, Fastrack Brickwork & Scaffolding Ltd. Following discussions with the Helifix Technical Department a full repair programme was devised to deal with all identified faults, including necessary drain



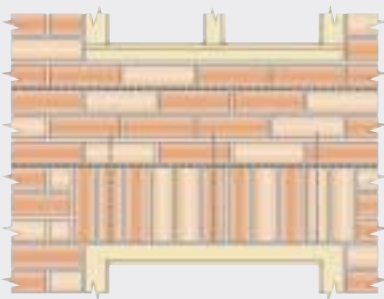
Crack Stitching

Involves bonding stainless steel HeliBars into channelled out mortar beds, using HeliBond cementitious grout, to provide a fully concealed non-disruptive solution by stabilising the masonry, redistributing the tensile loads and avoiding taking down and rebuilding.



Lintel Repair/Creation

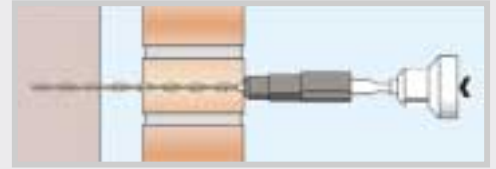
Where lintels are absent or have cracked and failed, masonry beams are created above the window, using the existing brickwork, by bonding HeliBars into specified mortar beds. This enables rapid, easy, cost-effective window replacement without movement of the masonry or disturbance to the residents.



Main repairs undertaken

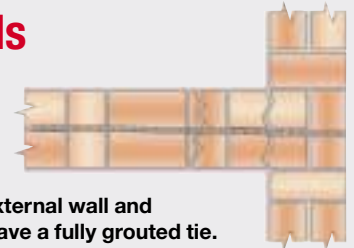
Wall Tie Replacement

To replace failed or absent wall ties some 40,000 DryFix remedial ties were installed. A slim, one-piece stainless steel helical tie, DryFix is simply power-driven into the far leaf using a special adaptor, via a small pilot hole in the near leaf, to provide a reliable mechanical connection without the need for any grouts or resins.



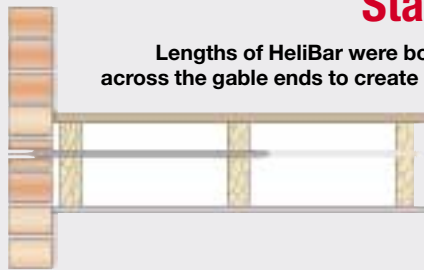
Reconnecting Party Walls with External Walls

Separated walls were reconnected using long CemTies which are installed simultaneously with HeliBond grout into angled clearance holes, drilled through the external wall and into the party wall to the required depth, to leave a fully grouted tie.



Stabilising Bowed Walls

Lengths of HeliBar were bonded into pre-determined mortar beds across the gable ends to create masonry beams and provide horizontal restraint. BowTies were then installed through clearance holes in the masonry and driven into the internal floor or roof joists before resin bonding the outer ends in the masonry to provide lateral restraint and stabilise the walls.



repairs and the removal of any vegetation likely to cause problems. Various special purpose Helifix products were used to solve specific problems, all of which were installed externally and fully concealed to provide non-disruptive repairs.

LEFT TO RIGHT: **Fred Paterson, Sales & Marketing Director, Helifix** with **John Lines, Birmingham City Councillor**, **Andy Jack, MD, Fastrack** and **Tom Langley, Wates Living Space**, as Helifix insurance-backed guarantees are handed over.

The houses are now fully repaired and the Decent Homes programme has been re-commenced. The provision of insurance-backed guarantees for the structural work under the Helifix professional indemnity scheme means that the Birmingham City Council can

now confidently expect another 30-40 years of life from the housing stock and have the option to sell properties and pass on the guarantees to any new owner. The Council also now automatically uses Helifix for all lintel repair programmes.



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Hampstead, Birmingham

To enable a window replacement programme to be undertaken under the Decent Homes scheme by main contractor Connaught, Approved Installer, Structural Restraint Solutions Ltd, won the competitive tender contract to create lintels on a nine storey 1960's tower block owned by Sandwell Metropolitan Borough Council.

SRS bonded lengths of stainless steel HeliBar into channelled out

mortar beds above the windows on 32 flats. These formed masonry beams that allowed the steel frame windows to be safely removed, without disrupting the brickwork that they had been supporting. Some 350m of HeliBar was installed with all work being undertaken externally to provide a fast, cost-effective and non-disruptive solution to the problem of non-existent lintels and allow the new UPVC windows to be fitted.

An on-going contract of similar work by SRS, for Morrison Construction, is also being conducted on many 1930's to 1960's semi detached and terraced properties throughout the city owned by Birmingham City Council. Over 12,000m of HeliBar has so far been installed to produce lintels in over 300 homes.



Willow Park Estate, Manchester

On the Willow Park Estate in Wythenshawe, Manchester City Council undertook a window replacement programme on various 1950's and 60's properties under the Decent Homes initiative. However, there were no structural lintels, as the original metal window frames had been supporting the masonry above. Installing the Helibeam System was the most cost-effective and least disruptive method of providing lintels by using the existing brickwork.

Working for main contractor, G & J Seddon, the Helifix Approved Installer, Quadriga Ltd bonded HeliBars with HeliBond cementitious grout into the channelled-out mortar joint above each window on some 250 properties. These formed masonry beams that supported the brickwork and enabled the windows to be removed and replaced with new UPVC units without any structural cracking or additional mechanical support, causing minimal disturbance to the buildings or their occupants and avoided any expensive taking down and the installation of proprietary lintels.

HELIFIX

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