

Subsidence Remediation Project, Dublin

Objective

The key objective was to stabilise a row of terraced houses experiencing subsidence following adjacent construction works. A non-intrusive solution was needed allowing residents to remain in their homes.

Challenges

Subsidence was affecting 15 properties due to a weakened ground layer above Dublin boulder clay, caused by adjacent construction activity.

The requirement was for a non-disruptive remediation approach to avoid relocating residents or causing significant local community disruption.



Solutions Implemented

Our engineering team designed a treatment plan for the site based on data from comprehensive site investigations, and further probing on site which verified soil conditions.

The technical site teams executed the geopolymer injection works targeting rear wall foundations, extension foundations, extension slabs, party walls, and boundary walls to achieve stabilisation pressures between 25-125kPa.

The project was executed over 50 shifts across ten weeks by a single on-site team, with minimal disruption to occupants and the local community.

Why Geobear

Geobear was chosen for its expertise in providing non-disruptive solutions.

The method required no mass excavation, minimised occupant and local community disruption and had a lower carbon footprint compared to traditional methods. Geobear solutions emit upto 34% less carbon than alternative methods.

Verification of the solution's effectiveness was carried out through pre and post probing at each property.

Results and Impact

Over a period of ten weeks, Geobear successfully stabilised all of the affected properties without significant disruption to residents or the local community.

The project demonstrated the effectiveness of geopolymer injection as a sustainable and less invasive method of subsidence remediation.

Conclusion

The project showcases an innovative approach to addressing subsidence issues in urban areas, prioritising the well-being of residents and the community while employing environmentally friendly methods.

