

Our clients include...

- Bullen Consultants
- Considere & Partners
- Carl Bro Consultants
- Cornhill Building Services Ltd
- Cundall Johnston & Partners
- David Narro Associates
- Elders Consulting Engineers
- Falkirk Council
- Halcrow Crouch
- Harley Haddow Partnership
- Historic Scotland
- IKM Consulting
- North Lanarkshire Council
- Jim McColl Associates
- Ramage Young Partnership
- Sir Frederick Snow & Partners (Scotland)
- Stuart McTaggart
- The City of Edinburgh Council
- Thomas and Adamson
- WS Atkins
- West Lothian Council
- URS Corporation

Services:

Visual & hammer testing surveys
Covermeter surveys
Dimensional surveys and production of 'as-built' drawings
Reinforcement inspection
Half-cell potential surveys
Diamond drilling of core samples
Drilling dust sampling
Depth of carbonation
Surface hardness tests
Ultrasonic pulse velocity surveys
Full scale structural load testing
Crack width monitoring
Borescope surveys
Trial pits
Sampling of materials

CAPITAL TESTING SERVICES LTD

**Units 13 & 14 Laverock Road
Stirling Industrial Estate
Airdrie ML6 7UD**

Phone: 01236 752763

Mob: 0771 348 7684

Email: capitaltesting@aol.com

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Structural Investigation



Tel/Fax: 01236 752763

Structural Investigation

Structural investigations may be required as a result of:

- design or construction defects; deterioration or accidental damage; change of ownership or change of use.

The appraisal of an existing structure can be more challenging to the engineer than new-build projects due to the greater number of unknowns involved. It is often necessary to carry out investigation



Cover meter survey & rebar exposures in trial pit to confirm outer corner bars on portal frame.

and sometimes testing to provide the data required to assess the adequacy of an existing structure.

Structural investigation forms a large

part of our workload and we have experience of many types of reinforced concrete, steelwork and masonry structures. As building investigations are often carried out in occupied premises and also as an increasing number of older properties are now listed, we are used to dealing with special requirements from owners/tenants in respect of working hours, dust protection and limiting damage to the structure.

We aim to provide you with a high quality service, with the information you require presented in a clear and concise report.

Our experience in the investigation of existing structures includes.....

Large public building in Glasgow – investigation of reinforced concrete “flat slab” type floors and roof slab showing excessive deflection; extensive cover meter surveys; rebar exposures; diamond core drilling; material properties and ultrasonic pulse velocity surveys.

Numerous metal, reinforced concrete and masonry bridges throughout Scotland – visual & dimensional surveys; ultrasonic thickness measurements; cover meter surveys; half-cell potential surveys; rebar exposures; trial pits; sampling of metal and rebar; diamond core drilling and powder samples; strength of materials.



Masonry bridge investigation

Large office block in central Edinburgh – (proposed change of use with structural modifications) – cover meter surveys, rebar exposures and diamond core drilling on columns, walls, slabs and beams throughout building to determine reinforcement configuration and concrete strengths.

Late 19th century hospital ward blocks in

Edinburgh – (change of use) - investigation of existing reinforced clinker concrete slabs and jack arch floors to establish structural details and concrete strengths.

Listed building in North Edinburgh – determination of the floor construction details throughout the building, including exposure and measurement of section sizes for beams and girders; diamond core drilling.

Redevelopment of Grade A listed public building in Edinburgh – (preliminary invasive survey) – investigative diamond core drilling in masonry walls and floors to a depth of 1.5 metres; CCTV survey of underfloor ducts

Refurbishment of late 19th century office block in central Glasgow – the proposals called for the use of a raised access computer floor which would impose a series of point loads on the existing un-reinforced clinker concrete floor slabs spanning between steel filler joists. Testing carried out included diamond core drilling and concrete strength testing. Load testing of representative areas of slab was also undertaken using a mock-up of the proposed flooring system.

Multi-storey building in central Edinburgh – condition survey of thin stone cladding, including intrusive inspection of fixings and videoprobe investigation of displaced panels.



Bore scope inspection of wall ties.

Edinburgh office block – borescope inspection of sandstone masonry cladding to determine fixing type and condition.

Multi-storey flats, Central Scotland – condition survey and investigation of reinforcement configuration and structural connections on precast concrete projecting balconies.