

*An update from CoveKinloch and our wider industry*

### A Reminder of our Core Services

Many of our long term clients engage CoveKinloch for one specific service and are unaware that we offer a range of core services. These are:

- Building Surveying;
- Building Consultancy;
- Project Management;
- Property Consultancy;
- Architectural Design & Documentation;
- Building Compliance;
- Fire Engineering;
- Fire Evacuation Planning.

Ken Moynihan and Peter Bamford continue in their roles as Managing Directors supporting the staff within the three offices – Wellington, Hamilton and Auckland.

### Protocols Prior To and Post a Trial Evacuation Drill

The New Zealand Fire Service is authorised via statute to administer building evacuation planning and trial evacuations. A couple of very simple protocols prior to and post the six monthly trial evacuation drills are often forgotten or completely ignored by those carrying out the trial. They are the requirement to:

- notify the Fire Service 10 days prior to a trial evacuation;
- complete a Trial Evacuation Report and supply to the New Zealand Fire Service within 10 days of the trial.

The Fire Service wishes to know in advance of a pending trial evacuation drill and may choose to attend. They also require the report to monitor if any injuries occur during the trial and what length of time the trial took to complete.

Both processes can simply be handled online via [www.evaconline.fire.org.nz](http://www.evaconline.fire.org.nz) using the 'Trial Evacuation Notification' and the 'Trial Evacuation Report' templates. Should you require assistance with or have any queries relating to trial evacuation schemes contact Ian McKenzie or Kath Atkins at CoveKinloch.

### Surprising Facts and Figures from Statistics New Zealand following the Devastating Christchurch Earthquakes

- The commercial property damaged in Christchurch is less than 1 percent of all commercial property in New Zealand.
- There are approximately 1.6 million houses in New Zealand. The 5,100 houses currently (as at early October 2011) in the 'red zone' represent 0.3 percent of this total.
- More than 500 large businesses that Statistics NZ contacted continued operating after the earthquake – many from their usual premises, others from new, temporary or permanent locations. A few ceased operation.
- Before the September 2010 earthquake EQC employed 21 staff. At 31 August 2011, EQC employed 1064 personnel including adjustors and estimators.
- The Treasury reported within their July 2011 Monthly Economic Indicators: "There was little measured negative impact from the Canterbury Earthquake."

### Due Diligence Commercial Building Report What do Clients Want?

Requests for building due diligence services have continued even within the more subdued real estate market of recent years. We often receive requests for a 'Structural Report' when in fact purchasers are seeking a broader evaluation of the building than just structure.

Typically we are able to provide a report inspecting and covering the following:

- roof, rainwater collection, exterior cladding and windows;
- HVAC, electrical, plumbing and drainage, fire systems and building compliance;
- building structure, structural engineering earthquake review if required;
- interior, flooring, walls, ceilings, fittings and fixtures;
- maintenance/making good obligations;
- lifts;
- obtain and review a LIM;
- cost estimates associated with all of the above;
- feasibility assessments and budgets of proposed building alterations or change of use.

Our clients are seeking independent technical advice to gauge the condition of their proposed purchase and to uncover any serious or unusual issues within the due diligence period. Our offices in Wellington, Hamilton and Auckland can quote and deliver these services within NZ.

### CoveKinloch Continues Steady Growth

**Gary Tipler**, Dip. Bldg Surveying, MBOINZ, is now well established in our Wellington office providing building consultancy, building surveying and project management services. Gary has a trade background followed by a career with Local Authorities and has extensive knowledge of the NZ Building Code and Local Authority procedures.

**Andrew Hyett**, who is a RICS qualified Chartered Building Surveyor, has recently immigrated to New Zealand from England with his family and joined our Wellington office. Andrew is providing schedules of condition and reinstatement and other building surveying services for clients throughout New Zealand.

**Ian McKenzie** has joined our Building Compliance team in Auckland to focus on the preparation of fire evacuation schemes. Ian is a registered IQP, a trained fire systems technician and has a career background with the NZ Fire Service as a Fire Officer. Ian is also providing independent advice to our clients in respect of fire protection systems upgrading and maintenance.

**Alan Turner** has recently joined our Auckland office as a Property Consultant. Alan is a Senior Member of the Property Institute of NZ and brings to CoveKinloch additional property skills. Alan is delivering schedules of condition and reinstatement, building due diligence reporting and other specific property consultancy services.

**Simon Parry** has recently re-joined the team in Auckland and we are pleased to have him back with us. Simon is a Registered Building Surveyor whose main areas of work are commercial property due diligence reports, maintenance planning and schedules of condition and reinstatement. Simon is also a WHRS Assessor involved in weathertightness investigation and survey work for the Department of Building & Housing's Weathertight Services Group.

We are pleased to have recently employed **Clive Sucks** who is a third year student at UNITEC NZ studying for a degree in Construction Management. Clive will be assisting senior staff and obtain an all-round training in our Auckland office.

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## Initial Evaluation Process Structural Engineering Evaluation of Existing Buildings

Article by **Dr Arthur Park** of **Clendon Burns Park**

### IEPs – Why are they Used?

Following the Canterbury Earthquakes the perception of seismic risk has increased and increasingly tenants, employees and insurers are wanting to know how their building stacks up compared with a building built to the current NZ Building Codes, often referred to as NBS (New Building Standard).

### Background

IEP is an acronym for Initial Evaluation Procedure and is a concept developed by the New Zealand Society for Earthquake Engineering. When assessing whether or not buildings are potentially Earthquake Prone they recommend the adoption of a two-stage evaluation process. The IEP is intended to be a coarse screening process involving as few resources as reasonably possible. It is expected that this would then be followed by a more detailed assessment for those buildings identified as likely to be Earthquake Prone (EPB) in terms of the provisions of the New Zealand Building act 2004. Buildings scoring less than 34 out of a 100 are assumed to be potentially an EPB.

**Note** The objective of the IEP is to identify with an acceptable confidence level all those buildings which will be potentially EPB's but at the same time it must not catch an unacceptable number of buildings which on detailed evaluation prove to pass the criteria.

It is envisaged that the IEP would be carried out by experienced earthquake engineers on behalf of:

- A territorial local authority - to review all relevant building stock as part of its seismic policy preparatory to issuing notices to building owners.
- Building owners and managers – as part of the overall risk management and in response to new legislation.

In preparing the IEP it is envisaged that the following is the minimum required:

- review original structural drawings together with any subsequent ones that have altered the building's original form;
- carry out a visual inspection of the site to confirm the relevance of the drawings;
- obtain and review any relevant site data such as geotechnical reports and site hazard maps that may have been prepared by local regional councils;
- peer review of key decisions in IEP assessment.

The IEP is designed as a mainly qualitative process involving considerable knowledge of earthquake behaviour of buildings and judgement as to key attributes and their effect on its seismic performance. The age of a building and building codes used when it was constructed will influence the IEP result.

Due to the qualitative nature of this assessment in some circumstances it is possible that the evaluation of the same building by two or more experienced engineers will produce different outcomes.

An IEP assessment figure of less than 33% NBS (see below) should only be taken as an indication that the building is potentially earthquake prone and a detailed assessment may well show a higher level of performance is achievable. The slight skewing of the IEP towards conservatism should give confidence that a building having been assessed at greater than 33% is unlikely to be shown by a later detailed assessment as being earthquake prone.

Below is a table which summarizes the building grading system. It broadly compares where buildings designed to various design codes are likely to sit relative to current coded requirements. It is also important to note that the assessment of building risk is not linear. This is shown in the relative risk column.

STRUCTURAL PERFORMANCE SCORE (SPS)	LETTER GRADE	RELATIVE RISK (RR)	NZS 4203 1976 OR BETTER	1965 – 76 NO CSWS	1935 – 65 NO CSWS	2/3RDS CHAPTER 8	BUILDING WITH CSWS
>100	A+	> 1 time					
80 – 100	A	1 -2 times					
50 – 80	B	2 – 5 times					
33 – 50	C	5 – 10 times					
20 – 33	D	10 – 25 times					
<20	E	> 25 times					

**Table 1: NZSEE Grading System**

The notation "CSWs" is an acronym for critical structural weaknesses. These are elements or characteristics of the building that make it more vulnerable to severe damage or even collapse during an earthquake. Critical structural weaknesses generally occur in buildings designed before the 1976 Loadings Code come into effect, where a previously accepted practice is now considered to be unacceptable as our knowledge of earthquakes has increased. The Structural Performance Score (SPS) is the percentage capacity compared to a new building designed to the current code (%NBS).

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