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Position: Retired Senior Building Inspector
& Project Development Coordinator

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Building Stronger Foundations Consultation
Regulatory Policy, Better Regulations Division
Department of Finance, Services and Innovation
2-24 Rawson Place, Haymarket NSW 2000

Dear Sir or Madam,

Re: Building Stronger Foundations –Discussion Paper

Following a perusal of the proposed reforms to the building and construction sector for large commercial and residential multi-storey buildings, I make the following comments.

It would be great to have all current owners, tenants and subsequent owners protected against defective work or negligence. Unfortunately, what is proposed will come at a very high cost e.g. the cost of such administration placed on the many practitioners/consultants involved in the building's design and construction, plus the high cost of adequate Professional Indemnity insurance will end up so expensive many Architects, Engineers and Building Practitioners will leave the industry in droves. In the event this happens the cost of all these large projects will rise astronomically.

And construction growth would dangerously slow down in this sector, leaving thousands of construction workers and other associated with the industry without a job. This we definitely don't want to happen,

One of the large hurdles that requires negotiation would be liaison between all the State Governments, Territories and Commonwealth Government with the large Insurance companies who provide Professional Indemnity insurance for practitioners or consultants in the Building Industry. It is considered if these companies are aware of the stringent regulations that will be in place for future large construction works. The process proposed will reduce the risk of future claims, this would enable any reputable insurance company to review their current conditions and lower

premium costs. Also, if the premiums for policies are more reasonable more people would stay in the industry and take out insurance cover.

I believe in the old saying prevention is better than curer. The same applies for the construction of any building. The most important area to investigate to get things right is the development site. Once it has been thoroughly investigated by the relevant Consultants only then can the Structural or Civil Engineers complete their drawings, details and documentation properly without any unnecessary future changes or costly surprises.

Firstly ,prior to any work on site, a thorough Dilapidation report is required to any adjoining properties including clear digital photographs of all external walls, internal areas, pathways, driveways, retaining walls and fencing of all the adjoining properties.

It is imperative for any large commercial or residential multi-storey buildings, or low rise buildings that the foundations for the buildings design footprint, and it's expected live, dead and wind loads are signed off with a Statutory declaration by a practising Geotechnical Engineer with current and adequate Professional Indemnity insurance. The subject Engineer's report must take into account any mine subsidence, sub-terrain streams or excessive water seepage, depth of any water table. Tunnels or large authority services nearby and/or site contamination.

The report must cover the type and depth of the foundation material e.g., sand, soil, clay, shale or rock. The recommended depth of any piercing to adequate bearing.

At this stage it is of great importance to thoroughly investigate the type of footings that exist on any adjoining neighbour's properties, i.e in the event underpinning will be required prior to any work being commenced on the Development site.

In regard to the kinds of plans ,specifications, drawings, details, documentation, reports and certificates that should be signed off with a Statutory declaration. In addition all Consultants and Companies below must have current adequate professional Indemnity insurance for their work.

- A Dilapidation Report for any adjoining properties
- An Environmental Engineer's Audit Report of the site
- A Geotechnical Engineer's Report and details for the foundations
- The Architect or Draftperson's plans, details, specifications, schedule of finishes , Prime Cost items and Provisional Sums for the proposed building
- The Structural or Civil Engineer's drawings, details and specifications
- A Fire Engineer's report on all relevant fire protection for the building internally and externally including composite cladding, egress, hose reels and signage
- The Hydraulic Engineer's drawings, details and specifications
- The Electrical Engineer's plans, wiring diagrams for all services e.g, power, light, lifts, NBN, internet, security and cameras
- The Mechanical Engineer's drawings and specifications for all air-conditioning and mechanical ventilation within the building
- A Land Surveyor's check survey report prior to site work commencing, and a survey and report progressively at each floor level, up to when roof and site landscaping are completed, when a final survey certificate can be issued
- An Acoustical Engineer' report for the building's sound proofing
- A Waterproofing membrane certificate from a Registered company stating all work of the applicator and materials of the manufacturer, applied to all relevant areas of the building

e.g, concrete roof or terrace, basement carpark ,bathrooms, ensuites, laundries ,balconies and flower boxes are guaranteed for a period of 15 years

- A Termite Prevention Certificate from a Registered Pest control company stating all floors and walls below ground level have been adequately treated and/or preventative measures are in place
- A Building Sustainability and/or Energy Efficiency Certificate including BASIX Certificate if (NSW) or NaTHERS Certificate (as per State specific requirements)
- A Certificate of Practical completion from the Builder or the Project Manager
- A Certificate of Classification and Occupation of the building from the Private Certifier
- Note: I have not taken into account the final inspections and reports from the Electricity, Water and Gas authorities as they act as Statutory organisations.
- Also the requirements of Work Cover, and Occupational Health and safety for all onsite machinery operators.

Please note: When looking at the risk and safety responsibilities of the above consultant and companies. I would expect the premiums to be higher for Geotechnical, Structural or Civil Engineers, Fire Engineers, Builders or Project Managers than any of the others above.

Trade Contractors and Sub-contractors who are responsible for these Trades:

It is considered the responsibility of the Builder or the Project Manager to sign off on completion all work carried out and completed by all the relevant Contractors and Sub-contractors i.e, Concretors, Bricklayers, Carpenters, Plumbers, Drainers, Gas Fitters, Electricians, Air-conditioning metal workers Window and Door Installers, Plasterers, Ceiling Fixers, Gyprock Fixers, Waterproofers, Termite prevention installers, Crane Drivers, Floor and Carpet layers plus any other miscellaneous trades

Prior to any of the above trades commencing work on site, it is up to the Builder or the Project Manager to ensure all persons carrying out work on site have the relevant qualifications and current Registration with Fair Trading for their work. In the event of poor workmanship or non-compliance this provides the builder and the consumer some confidence in the system.

I do believe the original Home Owners Warranty insurance was more realistic for protecting consumers being 7 years for major defects, and 3 years for minor/other defects. For reasonable Consumer protection, I would strongly recommend that. the original 7 years and 3 years be reconsidered and reinstated by the State Governments

The provision for structural sections of the building being made off site:

Should any structural sections or components of the proposed building be constructed off site. All this work must be completed to a practicing Structural or Civil Engineer's details by qualified trade persons to ensure the correct reinforcement steel is installed and the specified concrete strength is used with adequate vibration and compaction. The quality control for these sections of a building is crucial, particularly with concrete beams or concrete wall panels. The same goes for prefabricated steel beams or trusses manufactured off site. All the above require a sign off with a Statutory declaration for the structural adequacy of each section for its future design loads.

New Creative Building Designs:

Where new creative designs have been drawn and new products and innovative technologies are applied, this can be a challenge for the Structural or Civil Engineer, to ensure this part of the building is structurally adequate, and also meets its performance requirements.

Building Materials and Products from Overseas:

With the increase of many building materials and products, coming from overseas countries that do not have the stringent testing required in Australia. We are allowing building elements and components that maybe unsafe and fail. I believe our marking/stamping of all these products require a more complex method that cannot be reproduced. A type of DNA barcode with electronic reading Data Dots. It requires to be extremely difficult to copy. What we have in place currently is easily reproduced and placed on inferior products and materials that could fail, without any warranty, replacement or support.

Our current over worked Infrastructure services:

Another area of concern are the State Government's and Local Council's continuing approval of large multi-storey developments. It is having a critical and ongoing effect on the current inadequate infrastructure available, for our most important essential services i.e, Water, Sewerage Waste, Electricity, Gas, Stormwater and Train and Bus Transportation. Very soon, in our near future it will be another expensive problem.

In addition to the above, the following important issues require action as soon as possible:

The State Government needs to get its act together for Home Warranty Insurance. This important part of Consumer protection is essential and can only be properly run by the Government, as Private Insurers have continually failed.

We are now in the 21 Century and the good old days no longer exist. All Stakeholders want to make money and plenty it. They are the State and Commonwealth Governments with their Stamp Duty, Land Tax and GST. Then we have the Local Councils with all the Rates they rake in, and the greedy Developers and Builders, who have not provided sufficient or adequately trained Supervisors, to ensure all work carried out on site by the Contractors and Sub- Contractors complies with the BCA and is to an acceptable standard. Until more supervisory cost are allowed for in any future Developments budget, very little will change.

Good Luck & Kind Regards

Bill Mowl