

Submission on "Building Stronger Foundations"

By Matt Mushalik 24/7/2019

Introduction

I am a retired structural engineer with a Master degree in stability of highrises. In the 70s I worked in a big, accredited consultancy in Frankfurt. The CEO was a professor teaching at the Technical University Darmstadt, 20 kms south of Frankfurt. We were commissioned by the City Council (population 700 K) to

- (1) Check structural calculations and drawings submitted by developers along with DAs
- (2) Inspect construction sites and check that structures were built according to drawings and specifications including reo-bars and concrete
- (3) Exercise delegated authority to issue verbal and written instructions to site staff including stop-of-work orders if necessary

I also have a post-graduate degree in town/regional planning. I am now an expert in analysing oil statistics. The 2008 oil price shock caused the financial crisis which was responded to by governments lowering interest rates and introducing quantitative easing, thereby creating a dangerous asset bubble, one of the problems the building industry is facing.

Comments

Quote: "In the last two decades, NSW has supported a construction boom driven by a growing population and greater diversity in building use"

Population changes in Australia's capital cities in 2016-17



Comment: The growing population is caused by an unsustainably high immigration program deliberately designed to grow the GDP because governments have run out of ideas how otherwise to develop (not necessarily grow) the economy. This rush is one of the root causes of sloppy building works. If immigration is not reduced immediately, problems will only get worse, no matter what the government does with building regulations.

27 Feb 2017 Sydney would peak at 4.9 million with zero net overseas migration

<http://crudeoilpeak.info/sydney-would-peak-at-4-9-million-with-zero-net-overseas-migration>

Natural population growth is very modest. It would best be accommodated in completely new, low-rise, energy frugal cities OUTSIDE the commuting distance of Sydney. The plans are here:

Sustainable Cities Master Plan

<http://crudeoilpeak.info/sustainable-cities-master-plan>

The term “diversity in building use” embellishes the trend that apartment towers (anything but diverse) are approved and built everywhere – even in prestigious, leafy suburbs – destroying them in the process. An example is Epping where a beautifully landscaped business park (left) was knocked down and replaced by residential towers now owned by the Chinese government (right). In fact, this



rezoning is an indicator that Sydney is full, not a sign of any diversity.

I mention this here because not only are building standards low and/or not enforced but proper town planning is totally absent in Sydney. There are only land sales. The result over decades is an unstructured settlement pie. This has an impact on the performance of buildings (see item 4 below)

Quote: “Modern buildings are no longer four walls and a roof – construction is complex, integrated and evolving”



Comment: Often, these are not modern buildings (which would have the objective to reduce the need for cooling and heating) but fancy architecture like the Garland Lofts in Zetland where money is often spent on eye-catching features instead of essentials like water proofing. A more traditional 2nd floor addition to the existing ground floor would have avoided this.

New apartment towers are mostly NOT integrated. They are mainly mono-functionally residential. Where Councils have rezoned “mixed use” this is abused by developers. Some symbolic flower and perfume shops at ground level don’t make a residential tower mixed use.

Recommendations

- 1) The private certification should be abolished. The problem is that developers engage certifiers from whom they know they will be lenient because they want to get more jobs (conflict of interest). Certifiers with proper insurance must be appointed by Councils, who will build up over time a list of reliable certifiers. The cost must be reimbursed by the developer. The certifier is to be answerable to the Council, not the developer.

- 2) The Greater Sydney Commission (GSC) must be dissolved. It has the objective of achieving immigration targets so that Sydney's population grows to 8 million by 2056. These targets are forced onto Councils, even under the threat of amalgamations or boundary changes (example Hornsby – Parramatta) and have contributed to the haste under which this apartment boom is happening. One Hornsby Councillor in a public meeting said they are just rubber-



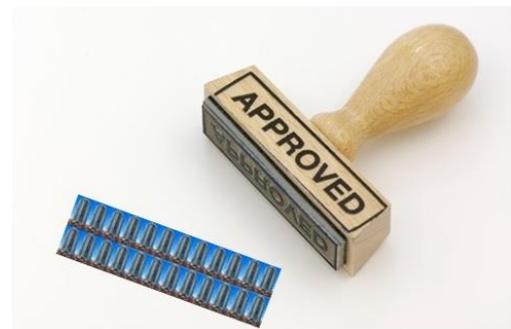
Opportunities and challenges



stampings what the State government tells them to do. Decisions under duress are actually null and void. The root cause for this problem is that Local Government is not mentioned in the Constitution, a fundamental flaw. The Councils exist at the pleasure of the State government. The GSC is an artificially created planning layer between the State government and the Councils which violates the principles of a 3-tier government. The GSC has the function to wave through DAs, especially those which Councils have not approved. I attended one such panel hearing in which one of the panel members opined he wants to see a green light despite unsolved pedestrian access problems to an important rail station. This interference by the State government has created unnecessary pressures on Councils and ultimately results in suboptimal design solutions. Why has the GSC not discovered that the Sugercube apartments in Erskineville were built on contaminated soil of previous industrial land which the GSC is so keen to turn into residential?

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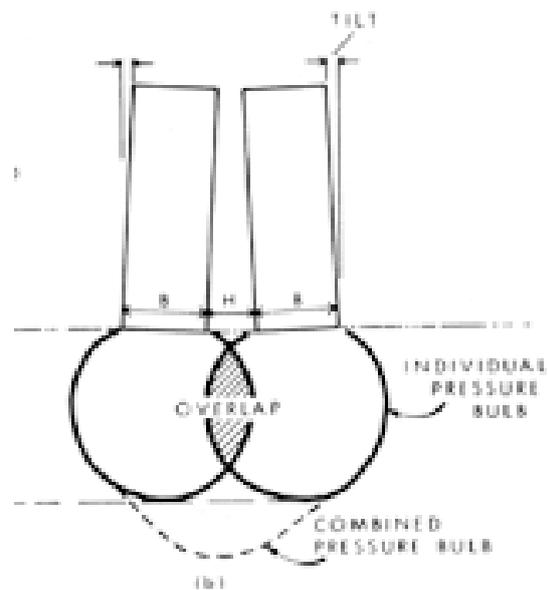
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- 3) BASIX is outdated and must be re-written.

It should include compulsory solar water heaters and panels. Dark coloured bricks, Black roof tiles and driveways should be prohibited as they worsen the heat island effect which creates more cracks in buildings, road pavements, water pipes etc.

- 4) Reduce densities. The proximity of towers increases subsurface strain where pressure bulbs overlap which can lead to tilting buildings and cracks. Ground water flows are also impacted, resulting in changing soil and rock conditions. This is all geology 101. The GSC has no idea about all these parameters.



- 5) A Building Commissioner will just be another State appointee (possibly with a law but not engineering degree) with very little hope that he can solve the problems created by the root causes of the apartment boom: high immigration, cheap money and energy & engineering illiteracy of governments.
- 6) Duty of care by the government. The NSW State government abrogated its duty of care by privatizing many sectors which are inherently government functions. This must be re-versed.

Conclusion:

Minister Kevin Anderson's introductory message already contains untested assumptions and hidden objectives which exacerbate the problems in the building industry. This is not a good start for a genuine reform. A frank, system-wide assessment of all these problems is necessary – free of privatization ideology and party politics. No doubt legislation will be changed somewhere but the fundamental drivers in Sydney's monopoly game remain the same until some external event stops it all.

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