



LEGISLATIVE ASSEMBLY
FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON ECONOMIC DEVELOPMENT AND TOURISM
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Submission Cover Sheet

Inquiry into Building Quality in the ACT

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Canberra Business Chamber

SUBMISSION PAPER

Inquiry into building quality in the ACT

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Table of Contents

Introduction.....	3
About Canberra Business Chamber	3
Canberra Business Chamber Response	3
The key Issues.....	4
Conclusions.....	4
Background.....	5
Key issues impacting building quality	7

Introduction

The Canberra Business Chamber supports the Standing Committee on Economic Development and Tourism inquiry into building quality in the ACT. The Chamber welcomes the Committee's willingness to look at this matter and seeks to put forward its views to the Committee for its deliberations. The Chamber would also welcome the opportunity to present before the Committee to elaborate on any of the matters discussed within this submission.

Members of the Chamber are interested in business growth and prosperity of the Canberra Region and recognise that building quality ranging in all its forms, from domestic to commercial, has a significant impact on consumer and business confidence. Ensuring building quality will be an important driver of infrastructure and economic growth for the ACT. The Chamber's view is that there is an entire supply chain that is involved in the quality of buildings and that there should be a holistic approach to address the issue which will include a multi-pronged approach to achieve real change with long lasting results.

About Canberra Business Chamber

The Chamber is an employer organisation representing over 5,000 organisations and businesses in direct membership, and over 10,000 affiliated industry and association groups across the ACT Region. Members of the Chamber are typically small to medium sized businesses and community organisations.

The Chamber's aim is to represent the interests of the private sector, by providing access and avenues for members and industry to both Federal and Local Government to assist shape and develop policies that are in the best interest for ACT business.

Canberra Business Chamber Response

The Chamber openly supports the ACT Government in its commitment to ensuring that the integrity of the built environment is upheld due to the broad ramifications that occur when this is compromised.

The Chamber advocates for Canberra to be a livable, international, connected, agile and resilient city that attracts investment for economic growth. The Chamber acknowledges that the issue of building quality is not unique to Canberra and that this matter has been the subject of many inquiries and reviews at the Federal and State Government levels over many years. A recent report 'Building Confidence'¹ looks holistically at the system which supports resilient building quality and reinforces the Chambers view that there is a need to look systematically at the process and the actors in the building process to achieve real outcomes in building quality.

¹ Building Confidence, Improving the effectiveness of compliance and enforcement system for the building and construction industry across Australia, Peter Shergold and Bronwyn Weir, February 2018. Inquiry into building quality in the ACT

The Chamber also notes the two prominent expert appointments by the ACT Government of the ACT Architect and the Chief Engineer and would raise the question about what role they may take in raising building quality.

The key Issues

Underpinning each of the items below is a need to enhance the current level of education and awareness of the role and responsibilities of each of the actors within the building supply chain and consumers who have their own expectations about building quality.

- Defining building quality and quality standards – consumer understanding of the difference between minimum building standards to ensure building quality rather than quality standards relating to finishes.
- A building supply chain approach to education on respective roles, responsibilities and building quality. Changes to the building industry have seen a decline in the level of detailed design documentation (design and construction approach to developments is common place and the level of recorded ‘as built’ construction documentation has declined), greater onus on building contractors to select and install building systems and components, less building practitioner on-site supervision and an increase in substitutable building products. These factors can have an impact on the resultant building quality outcome.
- ACT Government could provide a leadership role by ensuring that ACT Government procuring requirements include a higher level of engineering and architectural design and enforcement. This could be lead by the Chief Engineer and the Government Architect through the setting of benchmark design documentation standards and auditing. The results of this work could inform targeted education and awareness for practitioners.
- Improving regulatory oversight and education of roles and responsibilities of building certifiers/practitioners which could include the ability for some form of auditing (by a third party or Government) of the building work with disciplinary consequences. A code of conduct with a legislative basis for building certifiers to ensure that there is a clearly defined expectation where their role starts and finishes.

Conclusions

The Chamber recognises that the inquiry into building quality in the ACT has broad terms of reference which has an emphasis on the building certifier role in terms of compliance. The Chamber sees there is a much broader perspective to be taken in ensuring that some of the systemic issues that have contributed to the reduction in building quality need to be addressed. Purely looking to regulatory levers and licensing is not the solution in isolation, there needs to be a focus on education and training along the supply chain and consumer awareness about building quality. This would be facilitated by the clear delineation of the roles of each of the actors within the supply chain. As discussed within this submission the standards set for building quality may not address consumers concerns relating to quality of finishes and the like.

However, fundamental build quality issues such as water tightness, structural integrity and basic building services do need to be addressed to ensure that building quality in the ACT is of an appropriate standard which will lead to increased consumer confidence. This confidence is critical to ensure ongoing investment in the ACT building sector and its contribution to the economy.

Background

Ensuring Australia's building construction quality standards keep pace with the fast moving and evolving building industry

The construction industry is continuously evolving with significant development in the application of technology, the uptake of more sustainable solutions and improvements in the efficiency of design and construction of buildings. During boom times we see skills shortages, faster construction techniques and demands for quick completion to ride the wave and in leaner times there is the need to cut costs through reduced design and services fees, lower cost construction techniques and reduce labour costs. All which impact in their own way to a reduction in quality.

Defining building quality

Quality performance is referenced to the standard of the delivered project and that specified in the contract documents. The expectation is to receive what is specified, no more and no less, and often this is judged in the detail of the finishes and the workmanship applied. There is no convenient unit of measurement for quality, and it therefore involves a collection of issues, some of which are objective (e.g. number of identified defects) and others are subjective (e.g. craftsmanship).

Quality is influenced by several related factors, all of which would normally add cost and time to some extent commensurate to the level of quality. These include buildability, innovation, building height, extent of fit-out, design life, environmental performance, compliance, standard of finish, supervision levels and efficiency. While quality defies objective measurement, relative comparison is possible. Hotels, for example, are classified according to quality and assigned a star rating, so what to expect from a five-star hotel is well understood. Relative quality performance involves comparing like with like. Standards and expectations differ between residential, commercial and industrial applications, between urban and rural settings, between different countries and cultures, and between project stakeholders.

In addition, it should be noted that the building quality may also reflect the intended design life of the building. A building with a 'short' design life could be a temporary building on a mining lease which would not be expected to be of a high quality due to its functional life

span. However, a building with a 'long' design life, like monumental building structures or buildings of high importance would be expected to have a high build quality to endure.

Setting our quality standards

The building code and Australian/International standards set the level of minimum quality and performance, they normally only provide high level requirements and in a lot of cases only set the performance outcome to be achieved. The actual quality of finish is not covered nor is it a building code regulatory requirement. Finish quality relies on the competency and design specification of the installation contractor, the site foreman and the consulting engineer/architect.

The building industry has shifted toward a design and construction approach to development. This approach generally reduced the level of upfront design detail to reduce time and costs initially. This process places more pressure on the building supply chain. The review and inspection of the works by the foreman and the consulting engineer/architect are also generally reduced significantly. This leaves the majority of onus of quality to the installation contractor, who also must work within a tight fee competitive market.

Common building quality issues

Building quality issues are most commonly reported in terms of building defects. The most significant building defects reported in the media stem from apartment blocks. The most common problems with modern apartment blocks relate to inadequate or defective waterproofing and water ingress.

In fact, the Australian Institute of Architects building advisory service, Archicentre, found 4% of properties inspected between 2010 and 2015 in Australia (and as high as 9% in NSW) had a major water problem. A major water problem means it will cost more than \$10,000 to repair, and that it is affecting the structure or integrity of the building. A further 34% of properties had a minor water problem, which could turn into a costly defect if not fixed.

Most common defects reported by owners in apartment blocks²

1. Internal water leaks – 42%
2. Cracking to internal or external structures – 42%
3. Water penetration from outside – 40%
4. Guttering faults – 25%
5. Defective roof coverings – 23%
6. Defective plumbing – 22%

² UNSW City Futures Research Centre – *Governing the Compact City: The role and effectiveness of strata management, 2012*
Inquiry into building quality in the ACT

7. Tiling problems – 20%
8. Building movement – 17%
9. Noise break-through – 17%
10. Defective balcony balustrades – 15%
11. Lack of or defective fire safety measures -15%
12. Electrical faults – 14%
13. Inappropriate or correctly installed materials – 12%
14. Defective machinery – 12%
15. Other – 5%

Key issues impacting building quality

The building industry has changed to meet the demands of the market to achieve greater cost and time savings. The impact of these changes may be contributing to the building quality issues identified above.

a. Reduction in level of detail

Engineering consultants and architects are increasingly providing a reduced level of design detail in their documents and relying on skilled contractors to provide a level of finishing design to achieve the key design objectives.

Engineering designs have been minimised to focus on key equipment requirements, key spatial requirements and coordination of the main services elements. Much of the detailed design which was undertaken in the past is no longer produced as it is seen as time-consuming and restrictive to installation contractors who may have more efficient means of producing finishing details for the works.

Many specialist engineering sectors rely significantly on this model of delivery, including building façade design, vertical transport design, automatic controls design, structural steelwork design and others.

Given the fierce competition between design firms, low profit margins and the push for reduced delivery times the move to minimal design documentation is becoming common place.

This is an area where the Chief Engineer and the Government Architect could provide a role in setting the design documentation standards within ACT Government contracts, auditing and education.

b. Less head contractor supervision of works

Head construction contractors have not been immune from cost pressured with the provision of highly experienced and skilled on-site supervisors and foremen being reduced. The trend is to rely on the trade contractors to look after their own quality requirements and to undertake co-ordination with the other building and engineering trades.

There has also been a change in the supervision of building services work where the coordination of building services trades was customary practice with the larger contractors. This is no longer the case for most projects, and even larger, more complicated projects may not always include suitably experienced engineering services supervisors. This can result in issues with coordination of works and a reduction in quality of installation.

c. Substitution of Plant and Systems

Cost and time factors have introduced a push for substitution of specified plants, equipment, materials and systems, with alternatives offered by the construction contractor during the construction works.

It is widespread practice for engineering consultants to specify several preferred makes of equipment or systems. This provides a benchmark for the level of quality required for the particular item whilst still allowing competitive pricing from the nominated suppliers. Alternatives outside of the specified preferred items may be offered, but would need to demonstrate significant advantages over the specified units (i.e. reduced cost to client, savings program critical path, higher level of performance or quality) to justify their acceptance. Services engineers are constantly challenged regarding their specified products, and in most cases, it is to reduce the cost to the installation contractor, with little if any benefit to the end client. Acceptance of alternatives outside of the specified units also increases the level of risk to the consultant who is reviewing the alternative as they may be criticized for approval of an ultimately inferior product. In some cases, particularly with D&C projects, the ability to reject alternatives may be severely restricted as the head design and construction contractor ultimately decides how the project is delivered and what level of risk they are willing to take.

There have been several significant project failures attributed to substitution of specified materials, plant and systems including façade failures, failure of mechanical pipe joints/couplings, failure of plastic domestic water piping, and more recently, the highly publicised non-complying fire indices of building cladding material.

Attributing responsibility in many of these cases has focused on those with the deepest pockets, rather than the broader environment which is focused on driving costs down at the expense of quality.

d. Reduced consultant on-site attendance

This is generally one of the first areas in which engineering and architectural services are reduced. The reduced site time does not allow progress to be monitored closely and ensure that the level of quality and design intent has been implemented as envisioned.

Compounding the issue of reduced on-site attendance is the fact that at the construction phase most of the project budget is spent and it is not uncommon to be beyond initial timelines.

Whilst the contractor can normally claim extension of time costs, the architect and engineer find it difficult to have the same accepted by the client unless the delay becomes significant. As a result, there is significant financial pressure on engineers and architects to limit time spent on site and to undertake traditional construction phase services.

The result of reduced on-site attendance is that the construction works are much more reliant on the competency and ethics of the installation contractors. This may be one reason that building handover occurs with a number of defects which need to be addressed and rectified during the defects liability period.

e. Improving regulatory oversight and education of roles and responsibilities

Improved regulatory oversight by the building regulator. The building regulatory and building certifiers should collaborate on measures to improve regulatory oversight. This could include broader powers to audits building works and take effective compliance and enforcement action. Whilst increased regulatory controls are not generally a preferred option, as it often leads to addition costs to business, it may in this instance drive the cultural change required across the entire supply chain to increase building standards and quality.

Ensure that there is a clear understanding of the role of the building certifier and who can engage them. Appointment of the building certifier in other jurisdictions has led to perceived issues of conflicts of interest and corruption. A code of conduct for certifiers with a legislative status, like that of the Building Professional Board accreditation scheme in NSW, could contribute to formalising this role and providing a basis for professional standards that are subject to disciplinary actions under legislation.

Consistency in the role and requirements of the building certifier (or building professional with responsibility to certify the building plans) across states and territories not only cause frustrations for these professionals it also creates inconsistency in expectations in their role in ensuring the quality of the built environment. For example:

- In several states, private surveyors can manage the entire certification process with minimal if any involvement from a local government authority. In South Australia, Western Australia and Tasmania, however, private surveyors must provide documentation to councils in order to obtain building permits and final certification at the end of building work.
- In New South Wales, inspections are mandated at either three or seven specified stages depending on building class, whilst in Victoria, inspections are mandatory following the stages of foundation and footings, steel reinforcement, framing and completion. In Western Australia inspections are voluntary.
- In NSW or Victoria, surveyors cannot be appointed by the builder. This is to avoid a conflict of interest associated with the surveyor being appointed by the builder on whose work they are signing off. In South Australia, however, a builder can appoint a private certifier themselves (with written consent from the owners).³

³ Australia Needs Better Regulation for Building Certifiers, Andrew Heaton, 21 March 2018
Inquiry into building quality in the ACT