Building (General) Regulation 2008

SL 2008-3

Regulatory Impact Statement

Prepared in accordance with the
***Legislation Act 2001,* section 34**

Building (General) Regulation 2008

Subordinate Law SL2008-3

Regulatory Impact Statement

1 The authorising law

1.1 The Building Act 2004

The authorising law under which the *Building (General) Regulation 2008* ("the regulation" or the "2008 regulation") can be made is the *Building Act 2004* ("the Building Act"), section 152, (Regulation-making power), which provides that the executive may make regulations for the Building Act, and that the regulations may make provision in relation to—

- the approval of building work in relation to particular buildings; and
- anything else in relation to the approval of building work on particular buildings; and
- making provision about a matter by applying, adopting or incorporating (with or without change) a standard, or a provision of a standard, as in force from time to time; and;
- prescribing offences for contraventions of the regulations and prescribe maximum penalties of not more than 10 penalty units for offences against the regulations.

1.2 Background—current and foreshadowed laws

The Building Act repealed and replaced the former *Building Act 1972*, but the *Building Act 2004* did not revise many of the 1972 Act's provisions. The 2004 Act is essentially a rewrite of the 1972 Act, but with modernised language and format and taking account of changes needed as a consequence of the HIH Insurance Ltd provisional liquidation in 2002, a licensing regulatory reform project in 2004 and reforms arising from the work of the asbestos task force in 2006.

The *Building Regulation 2004* (the "2004 regulation") was made under the Building Act, and replaced the former *Building Regulation 1972*. As with the Building Act, the 2004 regulation did not revise many of the 1972 regulation's provisions—the 2004 regulation is essentially a rewrite of the 1972 regulation, but with modernised language and format, and also taking account of changes needed as a consequence of the HIH Insurance Ltd provisional liquidation in 2002, a licensing regulatory reform project in 2004 and reforms arising from the work of the asbestos task force in 2006.

In combination with the *Building Regulation 2004,* the Building Act provides a mandatory statutory building approval ("BA") process required for carrying out building work on buildings and structures, including their erection, alteration and demolition.

The *Land (Planning and Environment) Act 1991* provides a mandatory statutory development approval ("DA") process for undertaking development, also for carrying out building work on buildings and structures, including their erection, alteration and demolition.

An extensive regulatory reform agenda, the planning system reform project, lead to the ACT Legislative Assembly passing the *Planning and Development Act 2007* (the "P & D Act") and the *Building Legislation Amendment Act 2007* on 23 August 2007. Both of those Acts provide for their full commencement on 31 March 2008.

When fully commenced the P & D Act will repeal and replace the *Land (Planning and Environment) Act 1991* and provide a new simpler, faster and more effective DA regulatory regime.

When fully commenced the *Building Legislation Amendment Act 2007* will amend the Building Act to make the consequential amendments necessary to take account of the commencement of the P & D Act, as well as providing for complimentary reforms to the BA regulatory regime. Those reforms are also part of the planning system reform project and are intended to make the undertaking of building work simpler, fast and more effective.

The *Building (General) Regulation 2008* will repeal and replace the 2004 regulation, taking account of changes needed for the Planning System Reform Project, but also making some minor enhancements to several provisions. It will not reflect a comprehensive review of the all of the policies or provisions covered in the regulation.

The ACT's current statutory planning and BA process starts with a proponent's intention to undertake development, such as to erect a building. Before development can be undertaken, the proponent must obtain a DA from the ACT Planning and Land Authority, unless the development is of a kind that is exempt from requiring a DA.

The process for determining a DA application might involve referring the application to other entities for their input on matters of interest to the entity, such as heritage implications, utility service infrastructure protection, environmental protection, or municipal service interests. Objectives of the DA process include achieving good urban planning outcomes such as protecting the character of an area and protecting the community's interests, particularly in mitigating potential for adverse impacts on neighbours, and to mitigate the potential for adverse effects on the community, infrastructure and the natural and built environments.

Before building work can be undertaken a BA is required under the Building Act, unless the development is of a kind that is exempt from requiring a BA. If the building work that requires a BA also requires a DA, the Building Act stipulates that a respective DA must be issued an in force before the BA can be issued.

The ACT's BA assessing and building certification service is provided by the private sector and not by Government. Prior to 1999, the ACT Government was the sole provider of the building regulatory approval process, but in 1999 that function was privatised with an objective of reducing time and costs to entities purchasing BA services.

To obtain a BA the relevant land's lessee must appoint an eligible ACT-licensed building surveyor to be building certifier for the development, and apply to that certifier for the BA. The certifier provides a privatised regulator function. The process for determining a BA application might involve the certifier referring the application to other entities for their input on matters of interest to the entity, such as utility service infrastructure protection, and building fire protection and fire-fighting interests, if required under the Building Act.

Objectives of the BA process include ensuring the construction of buildings results in buildings that comply with the Building Code of Australia, are built by appropriately licensed entities, and thereby ought to be structurally sound, stable, safe, accessible and energy efficient—the key goals of the building code.

After obtaining the BA, certifier inspection and certification of the building work during, and at the completion of, construction is mandatory under the Building Act to help ensure the building meets the building code and other statutory requirements. Ultimately Government issues the required *certificate of occupancy and use* for the building or structure.

1.3 Delayed commencement

A policy objective is for the regulation to commence on the commencement of the *Building Legislation Amendment Act 2007*.

The regulation is to support and supplement the Building Act as amended by the *Building Legislation Amendment Act 2007*, therefore both the regulation and *Building Legislation Amendment Act 2007* must commence simultaneously. That Act provides in effect that it will fully commence upon the full commencement of the P & D Act, which in turn provides for 31 March 2008 commencement, if not fully commenced sooner (it also provides that the Minister may commence it in whole or in part).

The 31st of March 2008 is the earliest time that the necessary legal and administrative systems can be developed to support the implementation of the planning system reform project.

2 Brief statements about specific policies given effect under the regulation

2.1 Policy—asbestos regulating—Act, s 6(2)

2.1.1 Brief statement of the policy objectives and the reasons for them

2.1.1.1 Policy objective—asbestos regulating policy

The policy objective is for the regulation to add to the Building Act's definition of the term ***building work,*** the concept that work on buildings in relation to handling or disturbing asbestos-containing building materials is also ***building work***. An intended outcome is to thereby apply the Act's relevant provisions, which regulate building work to that asbestos work.

This is not a new policy. The policy is reflected in the 2004 regulation.

2.1.1.2 Reasons for policy objective—asbestos regulating policy

Reasons for policy objective are as follows.

The regulation will repeal and replace the 2004 regulation, which has the same policy objective as that mentioned above in relation to asbestos. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

Including such asbestos work in the concept of ***building work***, in effect applies the BA and inspection processes of the Building Act to the handling or disturbance of asbestos-containing building materials that forms or formed part of a building. That is in recognition of the risks of diseases such as asbestosis inherent in exposure to asbestos fibre inhalation.

The regulation will also provide for the exemption of small amounts of asbestos related building work from the application of certain provisions of the Building Act, consistent with the recommendations of the August 2005 report by the ACT Asbestos Task Force and the 2004 regulation.

That report is entitled *Asbestos Management in the ACT* and is at—

http://www.asbestos.act.gov.au/resources/pdfs/guide_management.pdf.

2.1.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—asbestos regulating policy

The relevant asbestos regulating policy objective will be achieved in law in substantively the same way that they are achieved in the Building Act and the 2004 regulation, by adding to the Act's definition of the term ***building work*** as discussed further above.

It is reasonable and appropriate to achieve the outcome that way as historically from the mid 1980s that is how asbestos work has been regulated in the ACT, other than the partial deregulation that was implemented in 2006 from the recommendations of the above-mentioned report entitled *Asbestos Management in the ACT.*

Prior to the 2006 reform, the asbestos task force found that the regulation of building work involving only small amounts of asbestos was not effective due to the excessive cost. The law was more often ignored than complied with. The 2006 reform therefore partially deregulated that small end of the asbestos handling industry, with appropriate but low-cost-impact safeguards. That reform is also reflected in the regulation (see mentions of provisions relating to handling up to $10m^2$ of bonded asbestos elsewhere in this statement).

2.1.3 Brief assessment of the benefits and costs of implementing the proposed law—asbestos regulating provisions

2.1.3.1 Quantification of the benefits and costs

2.1.3.1.1 Costs—asbestos regulating provisions

Cost of implementing this aspect of the regulation will be the same as under the 2004 regulation. Including asbestos related work in the statutory approval system for building work necessitates the appointment of a building certifier, the issue of a BA, certifier inspections, the use of a licensed asbestos remover, and relevant certifications. Together those requirements can add typically at least around $1000 ($500 for the certifier and $500 for the licensed removalist) to the cost of doing asbestos related work where no other building work on the site is to done under a BA, if the asbestos work is only in respect of a moderate amount of asbestos cement sheet.

However, that is the exceptional case, as often asbestos-related work is done incidentally to renovations, alterations, demolitions or extensions of buildings. In those cases where a BA is required, there is little increased cost from including the asbestos work in the BA. In that case including the asbestos work in the statutory approval system typically adds less than $1000 to a project involving moderate amounts of bonded asbestos cement sheet.

Certifiers' cost are not regulated, and vary for larger projects involving asbestos, but typically are less than $10 000 for a very large asbestos removal job that involves multiple site inspections.

Current rates of asbestos related work in the ACT that are the subject of relevant asbestos regulation are estimated at less than 500 projects per year, with a total value of the asbestos work, including regulatory costs and labour costs etc of between $1M to $2M per year.

2.1.3.1.2 Benefits—asbestos regulating provisions

The main benefits expected to be derived from this aspect of the regulation is the reduction of exposure of asbestos workers, building occupants and building neighbours, to asbestos fibres that are likely to be released during the handling or removal of asbestos-containing materials from buildings.

Flow-on benefits include reduction in incidents of asbestos related disease amongst those people, particularly those in high-risk occupations such as asbestos removers and building renovators and demolishers. Compensation for such disease can be substantial per individual affected, and correlate to the financial benefits the policy can help achieve in terms of avoiding the cause of the compensation claims. For example—

> according to—
>
> http://www.abc.net.au/news/newsitems/200612/s1817781.htm—
>
> > in December 23, 2006, law firm Slater and Gordon welcomed the payouts awarded to two Perth men who contracted asbestos diseases after being exposed to the product in their backyards. The men, aged 64 and 79, will be paid a total of more than $762,000. The Supreme Court in Perth has ordered building products company James Hardie to pay more than $500,000 compensation to 64-year-old David Hannell. Dennis Moss, 79, has been awarded $225,000; and
>
> according to the following 18 September 2004 article—
>
> http://www.smh.com.au/articles/2004/09/17/1095394008348.html—
>
> > CSR said that it had reached a $41 million settlement with a number of underwriters at Lloyd's of London in relation to policies issued between 1978 and 1989 offering the sugar, aluminium and building products conglomerate indemnity from asbestos claims. … CSR, which used to manufacture asbestos products, sued Lloyd's, along with two other groups of insurers, in New Jersey in 1995 over the policies…
> >
> > Shares in James Hardie and asbestos-affected companies in the US rose on Friday after a breakthrough was reported on the legislation before the US Congress to limit a trust fund for asbestos victims to $US140 billion ($200 billion).
> >
> > The plan which, under the proposal, would exclude some pending lawsuits, would end the rash of asbestos litigation which has led to the bankruptcy of more than 70 companies in the US alone.

The overall financial magnitude of potential, actual and latent asbestos disease in Australia is quantified somewhat in the extract below from the 7 February 2007 company statement made by James Hardie Industries NV (ARBN 097 829 895), incorporated in the Netherlands, and available at—

http://www.ir.jameshardie.com.au/jh/news/asbestos_compensation_proposal_approved.jsp—

> James Hardie security holders overwhelmingly voted to approve the long-term compensation funding arrangements for asbestos-related personal-injury claims

against certain former group subsidiaries at an Extraordinary General Meeting held in Amsterdam, the company announced today.

The initial payment of A$184.3 million is expected to be transferred to the Asbestos Injuries Compensation Fund (AICF) within five working days. KPMG Actuaries' central estimate of the net present value of the liabilities over the life of the fund as at 30 September 2006 was A$1,555 million.

Assuming the ACT has a population of 330 000 and Australia's population is 20,500,000, the ACT's population is around 1.61% of Australia's. On that basis, the ACT community could represent around 1.61% of the above-mentioned $1,555 million of liabilities, which is around $25 million.

2.2 Policy—exemption of certain buildings and building work from all or parts of the Act—Act, s 15, s 65, s 83 and s 152 (1A)

2.2.1 Brief statement of the policy objectives and the reasons for them

2.2.1.1 Policy objective—exemptions policy

The policy objective is to further partially deregulate the small-scale end of the construction industry by exempting certain small-scale buildings and structures from the application of all or specified parts of the Building Act—in particular to exempt the application of all or parts of the statutory approval process and the provisions that regulate building occupancy. The small-scale end of the industry is already partially deregulated but the policy objective is to widen the scope of the kinds of small-scale building and structures that are already deregulated. The policy is to also align DA exemptions with BA exemptions where practical to do so, effectively fully deregulating relevant structures from planning and building related approval systems.

The widened exemptions represent new policy, but the other exemptions are reflected in the 2004 regulation and are not new policy.

2.2.1.2 Reasons for policy objective—exemptions policy

Reasons for policy objective are as follows.

Privatisation of the ACT's building regulatory approval and inspection function in 1999 was intended to reduce costs of purchasing those regulatory services. However, open-market forces have tended to attract the privatised regulators (building certifiers) to operate at the most lucrative end of the construction industry—commercial buildings and large volume new houses. That has resulted in some certifiers charging a premium for their services in the least lucrative end of the construction industry—small-scale buildings and structures such as fences, freestanding walls, pergolas, decks, carports, garages, retaining walls and swimming pools.

Pre-1999 government fees for providing the BA regulatory function for such a small-scale structure was generally less than $100 in total for plan approval, inspection of the work and final certification. Currently certifiers will generally not undertake any of that now-privatised regulatory work for less $400 to $500. Government levies increase that cost to the certifiers' clients, as does the statutory requirement for plans for the work to be drawn to technical standards to demonstrate that legislative compliance will result if the work is carried out in accordance with the plans. Therefore the regulatory costs associated with erecting small-scale buildings and structures now sometimes exceeds the cost of materials and labour required for the erection of relatively low cost buildings or structures.

The small-scale of such work produces small-size buildings and structures that are of low risk in terms of financial loss arising from substandard work and that are of low risk to human safety due to small structural and fire risks to

human safety. The low level of risk mitigation that statutory regulation provides therefore no longer justifies the cost of regulation of small-scale structures under the Building Act and its regulations.

2.2.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—exemptions policy

The relevant policy objective will be achieved by the regulation providing for the relevant exemptions. The regulation will prescribe the parameters, such as the maximum allowable dimensions of buildings, which must be complied with for the exemption to apply. The Act, sections 15, 65, 83 and 152 (1A) enable a regulation to prescribe details of exempt buildings and exempt work, the parts of the Act that do not apply, and the exemptions' terms.

It is reasonable and appropriate to achieve the policy objectives that way (deregulation) as half-measures of deregulating the construction industry, such as by only requiring a licensed builder, but no certifier or plans, are difficult to enforce as that fails to create a historical record of which license builder built what and when. Technology, building materials and systems and tools are such now that the high-level skills of a licensed builder are often not necessary to construct low complexity non-habitable structures to a safe standard. However, safety standards will be upheld by the terms of the proposed widened exemptions requiring the largest of the exempt structures and buildings to be constructed in accordance with the Building Code.

2.2.3 Brief assessment of the benefits and costs of implementing the proposed law—exemptions provisions

2.2.3.1 Quantification of the benefits and costs

2.2.3.1.1 Costs—exemptions provisions

Exempting the Act's statutory approval system from applying to buildings and building occupancy exposes the community to risks associated with unsafe or substandard buildings and structures. Flow-on costs arise from death, disease and injury and from rectification costs or increased maintenance costs of substandard buildings. Because of the comparatively low cost to build small-scale non-habitable buildings, it can sometimes cost more to repair significantly substandard work than the cost of the labour to originally build the building. For example, pergolas are often attached to the side of a house by fastening the pergola's roof beams to the roof fascia of the house. The labour cost of providing such a pergola is often less than $500.

However, roof fascias are generally not design to support the structural loads of a pergola, so rework is sometimes needed to reinforce the fascia and connect the pergola's beams so the load they impose on the fascia are transmitted to the house's roof trusses or beams. Labour costs to do so can exceed the $500 labour-cost to initially provide the pergola.

The exemptions only apply to non-habitable buildings and structures, thus minimizing the number of people likely to be using such buildings or structures, and minimizing the duration of such occupations. By definition non-habitable buildings and structures cannot be lived in, but rather are for brief use or occupation, such as would typically be the case with a garage, carport, pergola or deck. The exempted buildings and structures are also of comparatively small size and complexity compared with habitable buildings such as houses, offices and shopping centres, thus also minimizing human-safety risks.

Historically the ACT has not suffered from significantly substandard non-habitable buildings. Failures in those kinds of ACT buildings are usually limited to fit and finish matters rather than matters adversely effecting safety. Occasionally rotted timber in decks and pergolas causes structural failure but the failure mode is generally limited to the cracking of a rotted beam, and the like, and not a catastrophic failure mode that would cause instantaneous or progressive collapse of an entire building or structure. Isolated failures of individual rotted beams can serve to warn building users of the need for eventual rectification of the overall building.

Retaining walls rarely catastrophically fail in the ACT, but generally not without warning in the form of cracking and rotating out of their original alignment as loads from retained soil, rock or water rotate the wall, eventually causing it to fall over in part or in whole.

The cost of taking advantage of the exemptions is $0 in that the exemptions merely remove regulatory burden from building work.

2.2.3.1.2 Benefits—exemptions provisions

The main benefits expected to be derived from the exemptions policy are financial savings that flow from not having to comply with the Act's statutory approval process (the BA process) when erecting the kinds of non-habitable buildings included in the widened scoped of exemptions.

Approximate costs to provide typical size non-habitable buildings, prior to the exemption policy applying, are tabulated below and are derived from the relevant contemporary overall construction cost schedules published periodically by Reed Construction Data in their periodical entitled *Cordell Housing Building Cost Guide*, NSW edition, and the relevant determined fees for Government levies etc, and cost data held by ACT Planning and Land Authority. Application of the policy will approximately save the costs indicated if there is no other reason to prepare plans.

**Aligning BA exemptions with those of correlating DA exemptions provided under the P & D Act produce the benefit of requiring no plans or approvals for the building work. Where a DA is required under the P & D Act some of the design and drafting costs mentioned in the table below will apply because a DA requires basic construction plans. However in that case engineering designs and details are not required, but plans prepared by a draftsperson will

suffice. In that case the savings indicated in the below table's column entitled "design/engineering & BA plan drawing costs" would not be completely saved by BA exemption alone.

****Potential costs saved per building by the exemption**					
Building or structure description	**Design/ engineer-ing & BA plan drawing costs****	**Certifier fee**	**Govern-ment levies and fees**	**Land surveyor's fee, set out and certify construct-ion**	**Labour cost (*not saved by the exemption unless noted otherwise)**
Seasonally erecting and demounting a 600mm deep demountable plastic swimming pool each year	$100	$600 pa	$90 pa	n/a	$500 licensed builder's costs saved if erected by homeowner
2m high paling fence, 10m long	$100	$500	$90	n/a	$600* unlicensed labourer cost, which might be marginally cheaper than licensed builders' costs
Timber-framed pergola attached to house 6m x 6m	$300	$500	$90	n/a	$700* unlicensed carpenter cost, which might be marginally cheaper than licensed builders' costs
Prefabricated metal carport free-standing, 6m x 6m with concrete floor	$300	$500	$90	n/a	$3000* unlicensed labourer cost, which might be marginally cheaper than licensed builders' costs
Prefabricated metal double garage, free-standing, of 36m^2 net floor area, concrete floor	$300	$500	$90	n/a	$6000* unlicensed tradespeople costs, which might be marginally cheaper than licensed builders' costs
Weatherboard timber-framed double garage of 36m^2 net floor area, concrete floor, metal roof	$500	$600	$130	n/a	$16 000* unlicensed tradespeople costs, which might be marginally cheaper than licensed builders' costs
Brick garage attached to house, tile roof, plasterboard wall linings framed double garage of 36m^2 net floor area, concrete floor	$1000	$600	$150	$900	$20 000* unlicensed tradespeople costs, which might be marginally cheaper than licensed builders' costs

More than 1000 BAs are currently issued each year in the ACT for small scale nonhabitable buildings that will be captured by the proposed reform to exemptions. Currently obtaining those BAs costs around $1000 on average. So it is expected that the exemption will provide a BA-cost saving benefit in excess of 1000 BAs x $1000 per BA = $1 000 000 pa.

2.3 Policy—to prescribe mandatory criteria for appointment of a government certifier—Act s 20 (4)

2.3.1 Brief statement of the policy objectives and the reasons for them

3.3.1.1 Policy objective—government certifier appointment policy

The policy objective is to prescribe criteria that must be satisfied as a prerequisite to obtaining the services of a government certifier, in a way that only permits the use of a government certifier in a market-failure situation—when no other certifier will provide the service for the construction project.

This is not a new policy. The same policy is reflected in the 2004 regulation.

2.3.1.2 Reasons for policy objective—government certifier appointment policy

Reasons for the policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as that mentioned above in relation to the criteria. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal. There is a hypothetical but unlikely risk that certifiers may not embrace the addition of certain houses to the current list of DA exemptions, as provided for in the regulatory reforms of the planning system reform project. If consequently no ACT licensed building surveyor will accept the role of certifier for a DA-exempt house, then that constitutes the 'market failure' circumstance criteria for the use of a government certifier.

The criteria allow government certifiers to provide a safety net only in the case of market failure. The criteria also prevent government certifiers from competing for work with private sector certifiers. That is necessary as without a certifier it is unlawful to undertake relevant building work, and there are no provisions in place to help ensure government certifiers compete on an equal playing field with the private sector if competition was permitted.

2.3.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—government certifier appointment policy

The relevant policy objective will be achieved by the regulation prescribing criteria to the effect that an applicant who applies to the ACT construction occupations registrar for the appointment of a government certifier must satisfy the registrar that the applicant has been unable to obtain, from the private sector, certifier services for the relevant building work.

It is reasonable and appropriate to achieve the outcome that way as historically from around 2002 that is the way the provision of services of government certifies have been restricted to market failure conditions. The restriction appears to be at the optimum level of stricture in that occasionally land lessees have tried to access government certifier services when they have suffered refusals from several but not all certifiers; but when access to government certifier services has subsequently been refused because not all certifiers have been canvassed, the lessees have managed to obtain private sector certifier services. To-date government certifier services have never been accessed and there is no evidence at hand of a private sector market failure of that kind.

2.3.3 Brief assessment of the benefits and costs of implementing the proposed law—government certifier appointment provisions

2.3.3.1 Quantification of the benefits and costs

2.3.3.1.1 Costs—government certifier appointment provisions

Applicants trying to obtain the services of a government certifier may have to firstly reasonably try to appoint every ACT licensed building surveyor as certifier for the relevant building work, and then to have each attempt fail because each surveyor refuses the appointment. That establishes that the relevant market failure conditions exist. There are currently less than 40 such surveyors. Providing evidence that the market has failed may only cost the applicant's time and communication costs, (say $500 in lost time etc) but could also add a week or so of development holding costs.

Each week of holding costs on an average single residential land block valued at around $200 000, at a mortgage rate of 9% pa, could amount to around $350 per week. The same 9% rate could apply to developments of greater or lesser cost.

Ultimately, the building surveyor profession is like many other professions. Most practitioners are risk-adverse and will charge a premium to compensate for risky work, or refuse high-risk work. Often, the reason for refusing building certification work is over-commitment and therefore lack of resources. But occasionally work is refused if the building surveyor believes that the combination of a builder with a high-risk profile (eg has suffered licence disciplinary action), coupled with a building project that may have already been unlawfully started and therefore suffered compliance action (eg a "stop work" notice), adds up to a too high risk exposure. Ultimately though, either that surveyor, or another surveyor, might nevertheless take on the risky project with adequate compensation for the increased risk. That could be in the form of a doubling of the normal fee for example. For a house that might take the certifier's fee from around $1500 to $3000. For retrospective approval of a previously unapproved and substandard pool that might mean a $1000 fee instead of the usual $500 fee for an uncommenced pool.

The above-mentioned risks often arise from the certifier not being confident about the supervisory skills or ethics of the builder, which could cast doubt on the reliability of hidden things inside building work that are impractical to check for compliance. For example it is impractical for a certifier to verify that all of the nails used in timber framing for houses are of the right diameter, length and strength and have been inserted at the correct angle, with the required edge distance to the side of the timber. Cost of such verification would require either destructive testing (pulling the nails out or pulling frames apart, or specialized forensic investigation techniques using non-destructive nail detection equipment or test-loading of framework. In both cases, verifying all nailed connections in a house could cost more than $10 000, which is cost-prohibitive.

2.3.3.1.2 Benefits—government certifier appointment provisions

The main benefit derived from prescribing the government certifier appointment criteria is to prevent government from competing with the private sector. That produces benefits to the certification industry through preventing government from taking advantage of its size, structure and privileged position as regulator from unfairly disadvantaging private sector certifiers. In particular, government certifiers are not required to have professional indemnity ("PI") insurance whereas that is a mandatory pre-requisite to licensing private sectors certifiers. Indicative costs of required PI insurance for individual building certifiers are $5000 to $10 000 pa depending on risk-profile including work history, compliance history and volume and value of work.

Another benefit derived from being able to appoint a government certifier is in the form of a safety net in market failure conditions. Without such a safety net, landowners may be unable to have their building work approved and certified. In that case the work could not be lawfully carried out or uncertified buildings or structures could not be lawfully occupied or used. That would render the investment in the land and building assets of significantly less value than if they were duly approved and certified.

That might not necessarily reduce the value of land as it still may be able to have a different development built upon it, but an unusable building may have to be demolished and rebuilt in compliance with the law, or unlawful aspects altered to bring it into compliance. Demolition costs for an average sized house are around $\$50/m^2$ or $10 000 per average house, for example, and proportionally higher for commercial buildings.

Cost of provision of government certifier services are likely to be on a cost-recovery basis, and because the service is likely to be provided by government contracting-in the certifier from the private sector, and then adding a margin for general and contract administration and risk-exposure, it is likely that there will not be a net benefit produced in terms of a lower cost than the private sectors' costs.

2.4 Policy—mandatory criteria for BA applications—Act, s 9 to 14A and 17

2.4.1 Brief statement of the policy objectives and the reasons for them

2.4.1.1 Policy objective—criteria for BA applications policy

The Building Act stipulates the requirements of a BA, and one requirement is that the BA plans show the relevant prescribed information.

The policy objective is to prescribe requirements in relation to plans and other documents forming part of an application for BA so as plans contain a minimum level of required information for their intended function of showing how building work must be carried out.

This is not a new policy, but the regulation will reflect some new policy detail. The broad policy is reflected in the 2004 regulation except for the new policy detail which relates to requirements to show things in plans that were not required to be shown in plans under the 2004 regulation.

For example the new policy detail will require BA plans to show certain things traditionally assessed at DA stage, such as driveway locations and sheet metal roof colours, in stated circumstances. The new policy will also make it clear that stated critical components of certain buildings must be adequately described in plans to ensure the correct components are used in the correct manner, for example structural bolts and fire collars.

2.4.1.2 Reasons for policy objective—criteria for BA applications policy

Reasons for policy objective are as follows.

Requiring certain matters about the construction of buildings to be set out in plans prior to construction helps in documenting the aspirations of relevant stakeholders, protecting the interests of those stakeholders, and demonstrating that if work is carried out in accordance with the plan, the work will result in a lawfully constructed structure or building.

The regulation will repeal and replace the *Building Regulation 2004*, which has the same policy objective as that mentioned above in relation to the plan and building application requirements, other than as mentioned below. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

However, in addition to restating the relevant provisions of the 2004 regulation, the 2008 regulation also makes it clear that plans must show certain critical information to help building certifiers determine if the plans are likely to produce a building that complies with the Act. That recognises the expansion of the range of the current exemptions from the requirement for a

DA so as certain houses can be DA-exempt, as provided for by reforms under the planning system reform project. That reform will require the certifier to check that colours of sheet metal walls and roofs comply with the relevant colours permitted by the exemption, and that driveways are located within the applicable parameters of the exemption, for example. Under the 2004 regulation, colours and driveways did not need to be shown in plans for BA. The 2008 regulation will make it clear that plans will need to show that kind of information if the application is in respect of a house that appears it might be exempted from requiring a DA, in the absence of a relevant DA operating.

Those requirements impose additional regulatory burdens upon the certifier, compared to the current case, but remove the corresponding burden from the ACT Planning and Land Authority ("the Authority"). So in effect the burden is transferred through an indirect form of privatisation of the function. However, the certifier's are subject to more regulatory rigor than the Authority, in recognition that certifiers provide a privatised regulatory function within a competitive commercial market. For example the regulation will provide for an offence against certifiers for issuing a BA for a house in the absence of a required DA, whereas the Authority is not subject to such an offence. However, the relevant laws do not permit, and will not permit, the Authority to compete with the certifiers for building certification business.

2.4.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—criteria for BA applications policy

The policy objective will be achieved by the regulation prescribing requirements in relation to plans and other documents forming part of an application for BA so as the application addresses—

- the number of copies of plans
- general requirements of an application for BA
- requirements of an application for BA for building erection and alteration
- requirements of an application for removal or demolition of buildings
- requirements of an application for bonded asbestos removal
- requirements of an application for other asbestos removal
- general requirements for plans
- requirements for plans for alteration and erection of buildings
- requirements for plans for asbestos removal.

It is reasonable and appropriate to achieve the objective that way as historically that is how that kind of objective has been achieved nationally by relevant laws in all Australian jurisdictions. The policy also has a desirable side effect of producing plans that can provide an excellent level of

documentary evidence of many common breaches of relevant laws, such as wrong size or location of building elements.

2.4.3 Brief assessment of the benefits and costs of implementing the proposed law—criteria for BA applications provisions

2.4.3.1 Quantification of the benefits and costs

2.4.3.1.1 Costs—criteria for BA applications provisions

Indicative costs for preparing plans etc for a BA are tabulated below. In virtually all cases contractual and construction practices dictate that plans be prepared in the cases mentioned below, regardless of the legal requirements to do so. However the regulatory provisions require more information to be shown than would otherwise be the case, adding to the design and plan preparation costs as indicated below.

Project type	**Architect**	**Building Designer**	**Drafts-person**	**Land-scape architect**	**Engineer**	**Total ($)**	**Cost regulation adds**
50m^2 garage $40 000 cost	n/a	n/a	$50/hr, $400 lump sum	n/a	$160/hr, $300 lump sum	700	**$50 (1 hr design & drafting)**
House 50m^2 extension $50 000 cost	n/a	n/a	$50/hr, $650 lump sum	n/a	$160/hr, $300 lump sum	950	**$150 (3hrs design & drafting)**
House 200m^2 $200 000 cost	n/a	n/a	$50/hr, $1400 lump sum	n/a	$160/hr, $400 lump sum	1800	**$150 (3hrs design & drafting)**
House 300m^2 $300 000 cost	n/a	$120/hr, $6000 lump sum	n/a		$160/hr, $600 lump sum	6600	**$360 (3hrs design & drafting)**
House 300m^2 $400 000 cost	$10 000 lump sum	n/a	n/a	n/a	$160/hr, $1000 lump sum	11 000	**$500 (3hrs design & drafting)**
Commer-cial use building $1M cost	$40 000 lump sum	n/a	n/a	$130/hr, $2000 lump sum	$160/hr, $10 000 lump sum	52 000	**$520 (1% x total, for design & drafting)**
Commer-cial use building $10M cost	$0.8M lump sum	n/a	n/a	$10 000 lump sum	$0.1M lump sum	0.91M	**$9100 (1% x total, for design & drafting))**

It is impractical to accurately determine the total cost the regulation will add to all BAs, but that cost is likely to be on average less than 0.5% of the total plan preparation cost. Around 4500 BAs were issued in 2006 in the ACT.

Assuming most were for houses and small buildings, plan preparations costs might have totalled around $4.5 million, based on an average $1000 cost per plan. On that basis the cost of the regulation per year is likely to be in the order of $4.5M x 0.5% = $25 000.

The transfer to certifiers of the role of vetting dwellings for compliance with planning parameters will probably see certifiers charge additional fees to compensate for the additional regulatory burden. In practice undertaking that burden could add 2 hours to the assessment time for a BA, therefore adding less than $500 to the certifier's fee. However some certifiers may also charge a premium to compensate for the added risk they take in vetting plans for DA exemption. That could add more than a further $100 to their fees. However those additional costs are offset by the saving in not having to obtain a DA. DA fees for average houses are currently around $1000 per house.

2.4.3.1.2 Benefits—criteria for BA applications provisions

Illustrative examples of the benefits derived from the provisions are as follows.

The regulation will make it clear that BA application plans must show prescribed information including critical fire and structural safety information, so the certifier can ensure those matters will comply with the respective provisions of the Building Code of Australia. That is new policy detail. For example the plans must show sufficient information about the kind of fire collars proposed to be used and where they will be used in a building. Fire collars help stop the spread of building fires when plastic drainage and sewer pipes that pass through fire walls and fire rated floors etc melt away exposing a penetration through the floor or wall. The fire collars automatically help seal off that penetration to reduce the incidence of heat and flame penetrating the fire rated wall or floor.

The need to clarify that plans must show fire detection, control, alarm and suppression information in detail arose from a national problem with fire collars, which in 2006 almost brought the ACT's residential apartment construction industry to a stop. Allegedly the wrong fire collars had been cast into concrete floors, particularly in the floor drain of bathrooms and ensuites. Many of the buildings' certifiers consequently refused to approve more than 1000 new apartments and building work was interrupted on 100s of apartments under construction. The property industry was concerned that it would be unable to release 1000s of other already completed and occupied apartments from their defects liability period, as those buildings too allegedly had the wrong fire collars.

As each unit generally had 2 or more fire collars, cutting out the wrong collars and replacing them would involve such work on several 1000 drains. The estimated cost of that rectification was $250 per drain, not including the

developers' holding costs or liquidated damage costs arising from delayed hand over of completed buildings. It is estimated that each day the substandard collars delayed the ACT industry cost industry more than $10 000 in holding costs. The problem was not confined to the ACT, but had national affect as the validity of certain fire collar products was questioned.

The problem highlighted the vulnerability of the construction industry to wrong choices of critical building components. In the ACT alone, the fire collar matter had the potential to cost more than $1M per month in liquidated damages and holding costs where new multi-unit buildings could not be handed over and occupied within contractual deadlines. That kind of cost is the magnitude of benefit that the subject policy can realise in relation to just one small aspect of what the regulation will require to be shown on BA plans.

Similarly, the collapse of a jet hangar during its construction at RAAF Base Fairburn, adjacent to Canberra Airport, in May 2003 highlighted the vulnerability of structural bolts that outwardly appeared to meet certain strength standards but in fact may not have. The new policy will see the regulation indicate that the standards that structural bolts must meet must also be shown in the BA application plans, so the certifier can assess the bolts for compliance with the structural requirements of the Building Code of Australia. Collapse of such a structure can cost more than $1M to resolve, particularly where injuries result. That kind of cost is the magnitude of benefit that the subject policy can realise in relation to just one small aspect of what the regulation requires to be shown on BA plans.

For further information about the above-mentioned problems in the ACT with fire collars and bolts see the relevant article in the Australian Building Code Board's periodical—*Australian Building Regulation Bulletin*, page 12, at—

http://www.abcb.gov.au/index.cfm?objectid=689237C3-CF2B-F0CB-ADFF9362797EEAF1.

The new policy requirement for plans to show details of critical components like structural bolts, fire collars and other fire control devices is already a requirement of the 2004 Act and has been a legislative requirement for decades. However, the law has never been so specific on what level of detail needs to be shown in the plans, but the 2004 regulation implies such a level of detail is necessary. The regulation will require specific information such as the make and model of fire collars to be specified in order to avoid the wrong make or model being installed.

Plans have not always shown that level of detail, so although the requirement is not a new concept it highlights a historic failing of BA plans. Therefore the requirement will not in law impose a more burdensome regulatory requirement than is currently the case, but it will have that practical effect given the historic levels of non-compliance.

The new policy of requiring BA plans to show driveway locations and other information that is only relevant to determining if a dwelling is DA exempt is intended to help with establishing that no DA is required for the development.

Avoiding a DA can save around $1000 in DA fees for an average dwelling, offset by the certifier's increased costs for DA-exemption vetting as mentioned further above.

The existing policy of requiring the things prescribed in the 2004 regulation to also be shown in plans under the 2008 regulations contributes to ensuring buildings are properly constructed, thus avoiding the need for rectification work, and avoiding having to demolish substandard buildings. Indicative costs of such rectification or demolition are discussed elsewhere in this impact statement.

2.5 Policy—BA application referral to referral entities—regulation s 19 to 22 and Act s 27 (1) (b), s 30A (3) (b), and s 152

2.5.1 Brief statement of the policy objectives and the reasons for them

2.5.1.1 Policy objective—BA application referral to referral entities policy

The policy objective is to require certain applications for a BA to be referred to certain entities for approval, consultation, consent, or advice and to prescribe the parameters under which that advice must be given, and to require certain approvals to be given as a pre-requisite to issuing a BA.

Most of the policy is not new. It has been a policy objective of the regulation's predecessors, but some of the detail of prescribed information is different to that prescribed previously.

2.5.1.2 Reasons for policy objective—BA application referral to referral entities policy

Reasons for policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as that mentioned above in relation to referral of plans to entities for approval, consultation or consent. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

However, instead of restating the relevant provisions of the 2004 regulation in respect of certain consultations with ACTEW Corporation Ltd and ACT fire brigade, the 2008 regulation instead requires referral to actewAGL Distribution and ACT fire brigade under a new referral entity advice scheme. The change from prescribing ACTEW Corporation Ltd to actewAGL Distribution was made after consultation with both of those entities, and reflects that actewAGL Distribution is the more appropriate entity to refer relevant BA application plans.

2.5.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—BA application referral to referral entities policy

The framework for the new referral scheme is set out in the *Building Legislation Amendment Act 2007* with administrative detail to be prescribed in the regulation. The new scheme is intended to help protect building owners from prosecution in circumstances where an entity such as actewAGL Distribution provides advice to the effect that it approves of the construction of a building, but nevertheless the building is unwittingly constructed over a sewer main, for example, because the main's location was unknown to

actewAGL Distribution and the builder. Such construction might contravene utilities laws intended to protect utility assets such as sewer, water and electricity mains from the potential for damage, lack of access or interference from building work.

The new referral entity system, by necessity, effectively provides both the fire brigade and actewAGL Distribution with a veto power over the issue of a BA. That is necessary to help protect utility infrastructure and to help ensure fire safety of buildings.

To help ensure that veto power is only used appropriately, the regulation will also limit the exercise of that veto power to the area of legislative responsibility that the referral entity has. That is necessary to ensure that an entity like the fire brigade does not provide advice on matters outside its authority, such as a sewer connection, and so actewAGL Distribution cannot provide advice on matter beyond its authority, such as fire safety matters.

The veto power is an additional regulatory burden imposed upon applicants for a BA in that currently ACTEW Corporation Ltd and the fire brigade only need to be consulted as part of assessing a BA, and the BA can be issued despite a dissenting outcome from the consultation.

Although in law the regulation will have the effect of shifting the relevant regulatory burden from ACTEW Corporation Ltd to actewAGL Distribution, in practice, historically ACTEW Corporation Ltd has relied upon actewAGL Distribution to bare that burden.

The interrelationship between ACTEW Corporation Ltd and actewAGL Distribution is as follows—

> in the ACT virtually the entire water and sewerage network is owned by ACTEW Corporation Ltd, a Territory-owned corporation, which is the utility licensed under the *Utilities Act 2000* to provide water and sewerage services in the ACT.
>
> In October 2000, ACTEW Corporation Ltd and The Australian Gas Light Company (subsequently that name was changed to Alinta LGA Ltd) established a joint venture which contracted ActewAGL (the distribution arm of the joint venture, trading as “ActewAGL Distribution”) to manage the water and sewerage network assets. Under that contract, ActewAGL Distribution provides the full range of technical and administrative services needed to operate the network assets and deliver water and sewerage services to customers on ACTEW Corporation Ltd’s behalf. Those technical and administrative services include advising on how proposed building work will impact on the relevant utility networks that ACTEW Corporation Ltd owns.

Although other utility providers are licensed to operate in the ACT, they have no operational interests in the electricity, water or sewerage networks owned by ACTEW Corporation Ltd. Therefore in respect of referral of BA plans to

the relevant entity to provide advice on the network impacts of building work, the regulation only prescribes ActewAGL Distribution, who acts for ACTEW Corporation Ltd. No other entity owns any relevant utility networks in the ACT, other than some contemporary bulk electrical supply grid infrastructure and the like. Because that infrastructure is contemporary, unlike some of the buried pipe infrastructure in Canberra's oldest suburbs, the more-modern infrastructure's location is well recorded, and easily located.

In some cases the location of old buried pipe infrastructure inherited by ACTEW Corporation Ltd is unrecorded and unknown, and is not necessarily located in relevant reservations shown on plans. That is a key reason why plans need to be referred to actewAGL Distribution, and why a formal referral system to other utility operators in not needed as yet. However, if circumstances arise making it desirable to refer BA plans to other entities; the regulation can be relatively easily amended to cater.

It is reasonable and appropriate to achieve the relevant policy objectives in the way described above as that method is based on how the policy has been effectively achieved for more than a decade, except in relation to prescribing ActewAGL Distribution, instead of ACTEW Corporation Ltd, and prescribing to give effect to the above-mentioned new referral advice system and veto power to ActewAGL Distribution and the ACT fire brigade. That is the arrangement agreed to by both ACTEW Corporation Ltd and the fire brigade as part of the planning system reform project. There will be sufficient controls prescribed to ensure appropriate use of the BA veto power by those entities. For example, delay in responding to a referral beyond the allowed 15-day prescribed period deems consenting advice to have been given, rather than defaulting to not supporting the BA proposal. Also the relevant provisions limit use of the veto power to matters that the entity has legislated responsibility for only, and renders advice outside of authority to be void.

There are no specifically legislated rights of review for a decision to veto the BA. That is appropriate given the stricture of the parameters within which the advice must be given, as mentioned above, and the fact that a proponent can negotiate with the referral entity to resolve the reasons for exercising the veto power, and the historical performance of the referral entities. Historically both ActewAGL Distribution and the ACT fire brigade have had BA plans referred to them as a mandatory part of the BA process (although it was ACTEW Corporation Ltd that was prescribed, in practice ActewAGL Distribution acted for ACTEW Corporation Ltd). In the past neither had a formal veto power over the BAs referred to them, as they were only required to be referred on a consultative basis, rather than on an approval basis.

Historically, both entities have had a professional and proficient working relationship with the construction industry, and moving their input from being of a consultative nature to one with a limited veto power is not expected to change that historical performance. In any case the policy intent is to confine the basis of decisions made by ActewAGL Distribution in exercising its veto power to the authority vested in the entity it acts for (ACTEW Corporation Ltd) under the terms of ACTEW Corporation Ltd's utility licence under the *Utilities*

Act 2000, particularly the relevant provisions of the service and installation rules made under that Act. Those rules set out matters of relevance to the veto power such as clearances between powerlines or buried sewer or water pipes that must be maintained. Breaches of such matters can lead to prosecution action under the *Utilities Act 2000*.

ActewAGL Distribution has been providing the currently mandated consultation service for ACTEW Corporation Ltd for several years despite the current regulation requiring consultation with ACTEW Corporation Ltd rather than with ActewAGL Distribution. That service has been taken by certifiers, in virtually all cases, to be an informal veto power, despite that not being formally the case under the current system, in that where ActewAGL Distribution have advised they do not support a BA, the certifier has usually not issued the BA.

However, it is not unknown for civil actions and litigation to have taken place in relation to construction of buildings such as houses over buried utility network infrastructure, despite compliance with relevant DA and BA plans. That suggests that the current system of referral entity consultation, without a power to veto a BA, has on occasions failed to protect the public interest that lies in avoiding building over buried assets, in contravention of utilities legislation.

In *ACTEW corporation limited v john ivan mihaljevic and ors* [2004] ACTSC 59 (2 July 2004), at was held at paragraph 4 that—

> *The plaintiff claims damages from the first defendant for negligence and breach of statutory duty, the duty arising under ss 33A, 34 and 34A of the Building Act 1972. In summary, the negligence is said to consist in approving the plans without ensuring that the sewerage main would not be encroached upon, and permitting the work to be carried out notwithstanding notification by the plaintiff that it disapproved of the plans because of the encroachment. …*

The case was in relation to a house extension having been built over a sewer main. John Ivan Mihaljevic was the first defendant and certifier for the extension.

The veto power will provide the best mechanism for helping ensure buildings will not be built inadvertently over buried utilities assets, by prohibiting the issue of the BA in such cases, and thereby prohibiting construction. A fault with the current, non-veto system, is that consultation with the relevant utility operator and the fire brigade must take place prior to the BA being issued, but the outcomes of the consultation can be ignored. The BA can lawfully be issued taking no account of those outcomes.

Similarly, the fire brigade's veto power will help ensure buildings are not constructed in conflict with the brigade's advice in relation to providing the ACT with fire-fighting and rescue services. Under the 2004 regulation the brigade's consultation outcomes have usually been in the form either no adverse comments or in the form of a list of requirements the brigade wants

satisfied. Those matters are subject to interpretation, and are not enforceable under the BA process. If the brigade's advice under the current system is to the effect that the brigade approves of the work in the BA application subject to extra fire safety provisions being installed as specified by the brigade, for example, the certifier could approve the plans—

ignoring the brigade's advice; or

interpreting the advice to mean something different to what the brigade intended and therefore approving plans that do not adequately address the advice; or

interpreting the advice correctly and approving plans that correctly address the advice, despite the brigade wanting something above and beyond what is required by the Building Act.

Under the proposed veto power, the fire brigade would merely veto the BA in that case. That is all the certifier has to interpret, a "yes" or "no" result on exercising the veto. The certifier need not ever have to interpret what the fire brigade wants in order to lift the veto, as that is purely a matter for the brigade and the BA proponent. All the certifier has to determine is if or not the veto has been lifted.

Historically some certifiers have wrongly interpreted fire safety provisions of the building code. See elsewhere in this impact statement for discussion on the alleged use of substandard fire collars. During the construction of a multiunit residential complex in the ACT suburb of Bruce in 2000 to 2003, the ACT construction occupations registrar took disciplinary action in relation to the relevant certifier on grounds that no fire collars at all were installed where compliance with the code required fire collars. That illustrates how certifiers can make mistakes interpreting the code despite being rigorously trained in interpreting and applying the code. Requiring certifiers to also interpret other technical material, such as the aspirations of the brigade, adds to the likelihood of misinterpretation by certifiers, considering that the brigade is unlikely to draft its aspirations in the same style as the code.

The veto power will have the effect of ensuring certifiers only have to interpret technical fire safety requirements of the building code, and not have to interpret requirements of the fire brigade. It also ensures that the brigade cannot impose regulatory burdens beyond those of the Building Code as the regulation will provide to the effect that the veto cannot be exercised to require regulatory burdens beyond those of the building code.

Ultimately, proponents can consider litigation options if they are not satisfied with actions of ActewAGL Distribution in exercising the new veto power. Neither ACTEW Corporation Ltd or ActewAGL Distribution are entities who's decisions can be made the subject of review by the ACT Administrative Appeals Tribunal as they are not an administrative unit of Government.

The ACT fire brigade does not currently have a formal veto power over BAs, but in effect has an indirectly informal power that provides similar outcomes. Currently if ACT fire brigade decided it was not satisfied with the provisions shown in BA plans, for fire safety aspects of a proposed building, it could advise to that effect, but the advice has no effect—the BA can be issued nevertheless. However, if the building is built, the brigade has powers under its authorising legislation, the *Emergencies Act 2004*, to direct owners or occupies of the building to install certain extra fire-safety equipment that the brigade believes is necessary. That might be to provide additional portable hand fire extinguishers, for example.

Intent of veto power is to facilitate the fire brigade in authoritatively and unambiguously exercising it public safety function at the building design stage rather than have to use Emergencies Act powers after construction is complete.

If a BA proponent is not satisfied with the decision made by ACT fire brigade in exercising its BA veto power, the proponent could seek formal internal review, make formal complaints or use other resolution mechanisms such as referral of the matter to the ACT Ombudsman under the *Ombudsman ACT 1989* or to the ACT supreme Court under the *Administrative Decisions (Judicial Review) Act 1989* However, even if the veto decision is set aside the brigade could ultimately use its above-mentioned power under the Emergencies Act in relation to building fire safety nevertheless. Use of that power is however subject to rights of review by the ACT administrative Appeals Tribunal.

In all cases the use of the veto powers by any entity vested with the power can be undone by the entity reversing its decision, conditionally or unconditionally.

For the above-discussed reasons it is reasonable and appropriate to not provide formal review mechanisms for decisions made to exercise the above-mentioned veto powers to prevent the issue of a BA.

2.5.3 Brief assessment of the benefits and costs of implementing the proposed law—criteria for BA applications provisions

2.5.3.1 Quantification of the benefits and costs

2.5.3.1.1 Costs— BA application referral to referral entities provisions

The main costs arising from the policy arise from developer's or land lessee's holding costs caused by the delay that referral of plans can cause. Those periods are 10 or 15 days depending on the nature of the referral. Such costs could be in the order of 9% pa of land costs in the case of mortgaged land. For a block of around average value of $200 000, for example, that equates to less than $350 per week. Such costs are proportionate to the value of the real asset for which development is delayed.

2.5.3.1.2 Benefits—BA application referral to referral entities provisions

An example of the kind of benefits that can be realised from referring plans to referral entities is as follows.

The provisions give a utility service provider such as actewAGL Distribution the opportunity to assess the potential for impact upon its utility network assets, and thereby to protect its interest. Otherwise construction of a house over a buried sewer main for example, could result in having to partly demolish the house in order to repair, maintain, replace or upgrade the part of the main that is buried under the house. Such demolition and restoration could cost more than $100 000. Referral of plans to the utility assets owner for approval provides the benefit of protection against such costs.

Constructing over the main could also constitute an offence under utility law with a maximum penalty of 50 penalty units, imprisonment for 6 months or both. Those maximum penalties amount to $5000 for an individual and $25 000 for a corporation. Referral of plans to the utility assets owner for approval provides the benefit of protection against the cost of such a penalty.

Historically ACTEW Corporation Ltd has been prescribed as the referral entity for BA plans, but, as detailed above, through administrative arrangements put in place several years ago, ACTEW Corporation Ltd divested itself of resources and facilities need to vet referred plans. Instead it contracted actewAGL Distribution to provide that service on ACTEW Corporation Ltd's behalf. Under the current system time delays could result from plans being posted to ACTEW Corporation Ltd (as that is currently prescribed as the relevant entity to refer plans to for consultation), as the plans would then need to be forwarded to actewAGL Distribution to do ACTEW Corporation Ltd's work in relation to consultation on the plans. Each day of delay could give rise to development holding costs of $70 on a typical $200 000 residential block of land mortgaged at 9% pa.

Because the 2008 regulation prescribes actewAGL Distribution, instead of ACTEW Corporation Ltd, plans are less likely to be delayed, potentially saving the above-mentioned holding cost. Such costs are proportional to the value of the development.

2.6 Policy—certain pre-existing buildings to be upgraded to comply with the current Building Code—Act, s 29 (2)

2.6.1 Brief statement of the policy objectives and the reasons for them

2.6.1.1 Policy objective—certain pre-existing buildings to be upgraded to comply with the current Building Code

The policy objective is to, in combination with section 29 (2) of the Building Act, require pre-existing buildings to be brought into compliance with the current version of the Building Code of Australia when significant funds are to be expended in altering the building. The objective is to minimize the cost impacts of raising the level of code compliance in pre-existing building stock by only requiring upgrading where significant work is to be done on the building in any case. It is also intended to not require full code compliance for certain pre-existing buildings were it is impractical or not cost effective to do so.

The policy is not new, and reflects the policy objectives of current and previous laws that have been effective in achieving the policy intent for several decades. However, some of the prescribed material deals with new policy detail in relation to dispensations on application of the Building Code, and deals with prescribing a new system of measuring alterations to buildings to determine if the policy applies.

2.6.1.2 Reasons for policy objective—certain pre-existing buildings to be upgraded to comply with the current Building Code

Reasons for policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as that mentioned above in relation to prescribing the amount of alteration to a building that must be undertaken in order for the Act's provisions to apply in respect of requiring a pre-existing building to be brought up to current code compliance. It is necessary for the regulation to restate the relevant provisions so they continue to have effect after that repeal. The regulation will also prescribe some additional matters in relation to dispensations on code compliance that were not included in the 2004 regulation.

The code is a dynamic document, republished each year, thus making pervious editions redundant and superseded. Therefore buildings that complied with the code in the year in which the building was built, generally quickly fall behind the requirements of subsequent codes. Subsequent codes have historically provided for safer buildings than earlier codes and in recent years have also provided for energy efficiency and for greater accessibility and amenity for people with disabilities. Significant changes to the code since its inception in 1996 have included—

- increased sound attenuation requirements between residential units (partly recognizing increased use of deep-bass surround sound and home theatre systems);
- included bush fire resistant construction requirements for declared bushfire prone areas;
- expanded carparking requirements for people with disabilities (from 1996 onward);
- included Braille and tactile information requirements for certain signage (from 2002 onward);
- alignment of aged care provisions of the *Commonwealth Aged Care Act 1997* (from 2002 onward);
- wider application of pool safety provisions (from 2003 onward);
- revised provisions for fire hazard properties of materials and use of non-combustible materials and the protection of electrical switchboards which sustain electricity supply to emergency equipment (all from 2003 onward);
- revised provisions for safety of humans from impact on glazing (from 2004 onward);
- revised provisions for fire sprinkler locations (from 2005 onwards);
- revised provisions on wet area waterproofing (eg shower cubicles) (from 2005 onward);
- included energy efficiency requirements for houses (from 2003 onward);
- included energy efficiency requirements for residential buildings other than houses (eg apartments, motels, hotels, jails) (from 2005 onwards);
- included energy efficiency requirements for office buildings, shops, retail outlets for goods or services (including cafes, bars, market and sales rooms, show rooms and service stations), factories and processing buildings, public buildings including health-care buildings (eg hospitals and aged-care buildings), and assembly buildings (including schools) (from 2006 onwards);
- alignment of lift (elevator) provisions more closely with Occupational Health and Safety (OH&S) requirements (from 2006 onward).

Requiring pre-existing buildings to be brought into compliance with the contemporary code, when significant resources are going to be expended in extending or altering the building, confines the financial burden to the most cost-effective time-period in the life-cycle of buildings. Often when a building is extended or upgraded its value increases as too does its long-term rate of financial return on investment. Bringing the building into line with the current code can also make it more attractive to tenants or other occupants or users as it helps ensure old building don't fall too far behind the contemporary

standards for human safety, fire, structural sufficiency, disability access, and energy efficiency.

Code compliance might provide greater access to the building, because disability access provisions might be enhanced, making the building more accessible for people that have movement, sight or hearing impairments, for example.

Code compliance might also provide for lower running costs for heating and cooling building spaces and heating water supplies to buildings as the contemporary code has stringent relevant energy efficiency provisions. For example, it requires houses to achieve energy efficiency levels equivalent to at least a 5-star energy rating under the energy assessment protocol mentioned in the code, and for apartments to achieve an average of at least 4-star equivalence but not less than 3 stars for any unit. The code also sets parameters on the energy use in other kinds of buildings that addresses the energy efficiency of relevant aspects of buildings such as space heating, ventilation and air-conditioning (HVAC) systems, water heating, lighting, thermal insulation, sealing, space zoning and the thermal properties of glazing in windows and skylights.

2.6.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—certain pre-existing buildings to be upgraded to comply with the current Building Code

The Building Act currently requires BA plans for the substantial alteration of a building to show building work required to ensure the entire building complies with the current version of the code. The Act entitles the regulation to prescribe the parameters used to determine what constitutes a ***substantial alteration***, and to prescribe alternatives to full compliance with the code where it is applied to certain pre-existing buildings.

The relevant policy objective will be achieved by the regulation prescribing a criterion to determine if a proposed alteration to a pre-existing building is a ***substantial alteration***. The criterion is—if more than 50% of the floor area of the pre-existing building is to be altered, or alterations done over a 3-year period, when added to proposed alterations, in total amount to more than 50% of the floor area of the pre-existing building. Under the 2004 regulation that 50% measurement was in relation to the volume of the building rather than in relation to floor area.

The objective is to also prescribe alternative methods of compliance to cater for circumstances where it is not cost effective or practical to bring aspects of a pre-existing building into compliance with the current code.

In addition to restating the relevant provisions of the 2004 regulation, the 2008 regulation will prescribe some additional alternative ways of complying with certain energy efficiency provisions of the 2008 version of the code. Instead of having to make pre-existing floors and windows in houses comply with the

code's requirements for energy efficiency the regulation prescribes alternatives, which are intended to achieve energy efficiency performance levels approaching or equal to the respective building code requirement, through the use of bulk thermal insulation such as insulation bats, or the use of thermal control films applied to window glazing. However, the alternatives also allow for pre-existing floors to remain non-compliant if more than 10% of the floor would have to be removed to retrofit bulk thermal insulation. That is because if more than that 10% of flooring has to be removed, the costs of the retrofitting would not produce net benefits in terms of reducing heating and cooling costs, increased property value or reduction of greenhouse gas emissions resulting from use of manufactured energy to heat and cool.

It is reasonable and appropriate to achieve the policy objectives in the ways mentioned above, as that is similar to how the objectives have been achieved for several decades, other than in relation to energy efficiency provisions. Those provisions have been achieved in the above-described way since 2006, for buildings other than houses, and since around 2004 for houses, other than the dispensations on floor and window insulation.

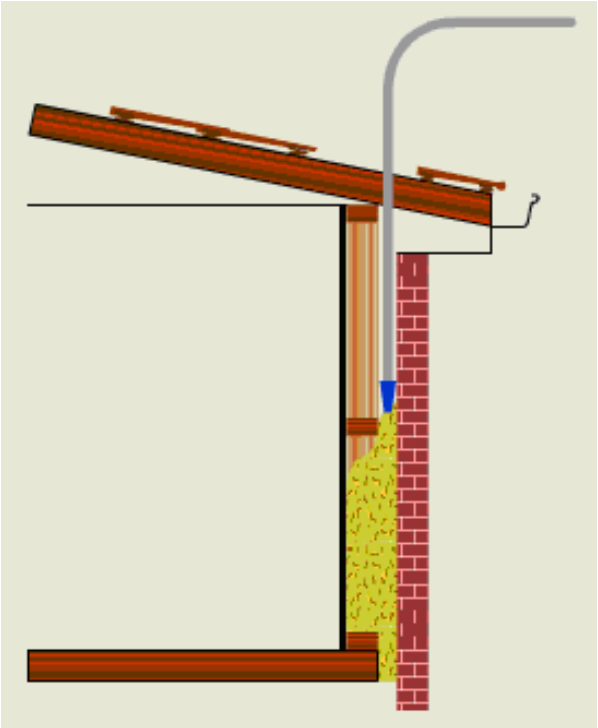
It is reasonable and appropriate to achieve the policy objectives in the above-described way in relation to window and floor insulation objectives as there is no other regulatory method that is likely to ensure the relevant regulatory burden is applied at a level that optimally achieves net benefits to society that out way the regulatory cost, without adding undue technical complication to the law's provisions or undue complexity to the way building work is to be done in order to bring pre-existing buildings into compliance with the building code.

The dispensations minimise the need for highly skilled labour, expensive materials and unreasonable levels of destructive installation techniques, while providing optimal thermal performance in relevant buildings.

Where cost, required skills and levels of destruction are higher than optimal, the dispensations provide that the work does not have to be done. Across Canberra's pre-existing housing stock, only pre-2006 built buildings will be subject to needing thermal insulation upgrading, and then only if more than 50% of their floor area is altered in a 3-year period, provided the dispensation does not apply. The dispensation is estimated to only apply to less than 10 Canberra's houses per year, as the vast majority of Canberra housing stock has roof spaces and wall cavities than are accessible without removing more than 10% of their linings.

For example most brick veneer houses, of which more than 80% of Canberra's relevant stock is estimated to be, bulk thermal insulation can be adequately pumped into wall cavities by gaining access through roofs or by drilling holes for pump nozzles through brickwork. Usually that requires removal of much less than 10% of roof or wall linings.

See the diagram below of a cross-section through the wall of a brick-veneer house showing a hose and nozzle inserted through the roof pumping bulk thermal insulation into the wall cavity—



There is concern that filling wall cavities with bulk insulation defeats the purpose of the wall cavity—to provide a gap between the external brickwork veneer and the internal structural wall to prevent moisture transfer through the wall materials from the outside to the inside of the building.

However, suppliers of certain kinds of relevant thermal insulation material claim that test results indicate that the materials are sufficiently resistant to hygroscopic conveyance of moisture across the wall cavities that the insulation bridges when the cavity is filled with the granulated insulation. Such materials include mineral wools which are approved by relevant approval authorities for use as wall insulation.

It is reasonable and appropriate to achieve the dispensation policy outcomes in the ways mentioned above, as that is how the objectives have been effectively achieved in current and previous laws for several decades, other than in respect of the new policy detail relating to dispensations for floor and window insulation and the change in the calculation method from volume measure to a floor area measure.

Without those new policies there are cases where it could be unreasonable and inappropriate—

- to require windows and floors to be brought into compliance with the code, because of cost, as discussed below ; and

- to unintentionally disadvantage buildings with small roof or headroom volumes (eg flat roofs or low ceilings) compared to buildings with large volume roofs or headroom (eg hipped or pitched roofs or high ceilings). That is to say that application of the >50% volume measure in the current law disadvantages small volume short buildings compared with tall buildings of the same or less floor area than the short building. For example a house with a flat roof and 2.4m high ceilings has a volume of say $100m^2$ floor area x 2.4m high = $240m^3$. An extension adding 50% to the house's volume has a volume of 50% x 240 m^3 = 120 m^3. Whereas that same $100m^2$ floor area in an office building with a 3m high ceiling gives a volume of $300m^3$, and a 50% volume extension of $150m^3$, being $30m^3$ more than the case for the 50% house extension, or 10 m^3 more floor area than the house. That $10m^3$ is large enough for an additional bedroom on the house.

2.6.3 Brief assessment of the benefits and costs of implementing the proposed law—certain pre-existing buildings to be upgraded to comply with the current Building Code

2.6.3.1 Quantification of the benefits and costs

2.6.3.1.1 Benefits and costs covered in previous regulatory impact statements of relevance

The Australian Building Codes Board published extensive regulatory impact statements in relation to including energy efficiency provisions into the building code. Those statements include details about cost and benefits of such regulatory provisions. It covers the net benefits that the regulatory provisions provide, which outweigh the costs of compliance.

The statements are available as follows—

> the Regulatory Impact Statement referenced below finalises the process of assessing the impact of regulatory changes to improve the energy efficiency of new houses and additions and alterations to existing houses. The measures are to be implemented as amendments to Volume Two of the Building Code of Australia (BCA), which is referenced by State and Territory building regulations. BCA Volume Two (Housing Provisions)—
>
> http://www.abcb.gov.au/index.cfm?objectid=DA8354CF-F9BB-7C30-1FA3BEA49C6AE5E1.

The Regulatory Impact Statement referenced below analyses the likely impact of proposed changes to the Building Code of Australia (BCA) that would impose energy efficiency requirements in respect of Class 2, 3 and 4 buildings. Class 2 and 3 buildings are apartments, hotels, motels and the like. Class 4 parts of a building are residential units contained within a building that is primarily used for another purpose—

http://www.abcb.gov.au/index.cfm?objectid=8CB3AC68-A553-65E1-D7C7428BB1CC6E14.

The Regulation Impact Statement referenced below analyses the likely impact of proposed changes to the Building Code of Australia (BCA) that would impose energy efficiency requirements in respect of Class 5 to 9 buildings. RIS 2005-01 - Draft Regulatory Impact Statement - Proposal to Amend the Building Code of Australia to include Energy Efficiency Requirements for Class 5 to 9 Buildings - March 2005—

http://www.abcb.gov.au/index.cfm?objectid=7E0551A0-EB9A-C68F-1EEF008EFC9FB8A8:

2.6.3.1.1 Benefits and costs not necessarily covered in previous regulatory impact statements of relevance

A discussion on indicative expected costs and benefits of aspects of the regulation not wholly covered by the above-mentioned RISs is as follows.

2.6.3.1.1.1 Indicative benefits and costs of upgrading wall insulation

Retrofitting wall, floor or roof thermal insulation to pre-existing building stock under the proposed regulation provisions covering substantial alterations to pre-existing buildings, as mentioned above, is approximately the same cost as installing in a new building if access is straightforward. That is the case for most pitched roofs, and floors that have high sub-floor space with an exposed underfloor. However, wall access is usually not readily available, and granular thermal insulation usually has to be pumped into walls through holes made in brickwork or down into wall cavities made accessible by lifting a few roofing tiles or sheets to exposed the top of wall cavities, in order to increase the thermal efficiency of the wall.

Where there is a lack of access, costs of bringing the external envelope of a house up to code standards for thermal efficiency can be high because of the costs needed to cut access ways and restore those access ways when the installation is complete. Generally roof tiles and roof sheeting are removable and replaceable by removing and replacing fasteners (roofing screws or nails, clips or tie-wire that fastens roof tiles). Removing plasterboard wall or ceiling linings however for example requires plasters and painters to restore the linings, and often the removed lining cannot be reused. Plasterboard wall linings are generally permanent fixtures and not intended to be removed without cutting, drilling or breaking the sheets.

Costs for making the above-mentioned access into permanent wall linings and restoring the access way can typically exceed $50 per m^2. A small 2-

bedroom house of 100m^2 floor area and standard 2.4m high ceilings has a relevant external wall area of around 50m^2, excluding windows and doors. In that case where the only feasible method of inserting bulk thermal insulation into wall cavities requires removal of wall linings (as opposed to drilling holes to pump granular bulk insulation into the cavity for example), removal and restoration of the linings could add $2500 on top of the $600 cost of supplying and installing glass fibre wall bats with an insulation value of R1.

That totals $3100, but costs escalate further where wall cavities are non-existent or too narrow for adequate insulation thickness, necessitating the use of specialised high-efficiency thermal insulation sheets.

Under the building code, in Canberra walls comply if they achieve a total R value of not less than R2.5. However a brick-veneer wall with a cavity and timber-framed plasterboard clad structure and fired-clay brick exterior veneer will achieve at least R2.5 with the addition of R1 bulk thermal insulation.

The same degree of cost escalation applies to floors with inadequate or no sub-floor space and roofs with inadequate or no roof space, such as vaulted roofs or roofs with a cathedral ceiling where the ceiling lining is suspended closely below the roof sheeting.

The building code does not require floor insulation in the case of a concrete slab on ground, except in certain cases of in-slab heating systems being used. Suspended floors do however have to have their thermal efficiency assessed.

The above-mentioned $3100 total cost of wall insulation alone could incur $280 pa of interest for the life of a typical 9% pa mortgage on the house. Net benefits to the occupants of the house are therefore unlikely to be realised from the investment in wall insulation in that case, as the wall insulation is unlikely to produce $280 pa of savings on house space heating and cooling costs even if the houses window, roof and floors are of high thermal insulation value.

That is because according to *Your Home Technical Manual* published by the Australian Greenhouse Office at—

http://www.greenhouse.gov.au/yourhome/technical/fs16a.htm—

internal heat that is lost by transmission out through a typical house's uninsulated external walls account for only 15% to 25% of the total heat loss for the house through standard construction elements that contain no bulk thermal insulation.

See diagram below.

A relevant extract from the above-mentioned *Your Home Technical Manual is copied* below—

Typical heating and cooling costs in Canberra for an uninsulated brick veneer tile roof house, with some, but sub-optimal, solar orientation of windows, heated to reasonable human comfort levels on all days where additional heat is required throughout a typical year are around $10m^2$ pa, or $1000 pa for a small $100m^2$ 2-bedroom house. That is based on typical gas-fired or electric resistance type space heaters of average efficiency. A 25% saving, the realistically-best reduction in heat loss likely to be achieved by retrofitting wall insulation, would therefore only save 25% x $1000 pa = $250 pa in a small $100m^2$ 2-bedroom house. That is less of a saving than the above-mentioned $280 pa cost of 9% interest on the up to $3100 cost of retrofitting the wall insulation where more than 10% of the wall lining needs to be removed to retrofit the insulation.

That case demonstrates no net financial benefits in a very small house scenario. Because rooms of houses generally need to include external windows, the ratio of external wall area to house volume tends to increase with increased house size. Small houses can often have a square footprint while achieving external windows for all rooms. But larger houses tend to need to have a long narrow footprint in order to ensure all rooms have exterior windows. Long narrow footprints have larger exterior wall areas for the same floor area of a square footprint house. The above-mentioned lack of net benefits would therefore be disproportionately reflected in larger houses, which have larger volumes of space to heat and larger perimeter wall areas than smaller houses, making the benefits of wall insulation proportionally less than for smaller, squarer houses.

The regulation will therefore provide dispensation in such cases of difficult access. In effect the dispensation provides that where more than 10% of floor or wall or roof linings need to be removed to bring any of their thermal resistance up to the total R value for the wall, floor or roof as specified in the code, then there is no need to comply with the code or to do anything to the respective wall or roof or floor when otherwise required to bring them into code compliance.

R-value means the thermal resistance (m^2K/W) of a component worked out by dividing its thickness by its thermal conductivity. ***Total R-value***, of walls or

a roof, means the total of the R-values of each component of the walls or roof. The code specifies higher R values for regions such as Canberra that have higher temperature extremes than is the case in more temperate climates.

In the above-mentioned example of a small house with around 50m^2 of external wall area, the dispensation provides that if more than 10% of external wall linings have to be removed; ie 10% x 50m^2 = 5m^2, then none of the walls have to be upgraded. In that case the cost of cutting into the wall, removing the lining to insert bulk thermal insulation into the wall, and then replacing the wall lining and restoring finishes etc would amount to more than $500. That cost is in addition to the $600 needed to supply and install the wall insulation.

2.6.3.1.1.2 Indicative benefits and costs of upgrading window thermal performance

The building code also requires window units in houses to be taken account of when determining the energy efficiency of houses. According to *Your Home Technical Manual* published by the Australian Greenhouse Office at—

http://www.greenhouse.gov.au/yourhome/technical/fs16a.htm—

heat flows out through typical house external windows account for only 11% to 20% of the total winter heat flow out of houses through standard construction elements that contain no bulk thermal insulation, and 25% to 35% of summer heat flow in (see diagram further above). That heat flow out is less than the above-mentioned heat flow range for external walls (15% to 25%), but the heat flow in is greater.

In Canberra the majority of relevant pre-2006 housing stock has metal framed window units, providing no thermal break between the inside and outside of the houses. Bringing such a window unit's thermal insulation performance into line with requirements of the building code would in many cases therefore require removal and replacement of the whole window unit. The cost of removing and replacing window units is prohibitive, being more than $1000 for a 2m^2 window unit. Upgrading all such windows to code-compliance in an average size house could therefore exceed $10 000. Thermal modelling of a few representative typical Canberra houses indicates that because of Canberra's predominance throughout the year of outside ambient day temperatures that are less than human comfort temperatures, it is not the summer inflow of heat that critically causes many windows to fail code-compliance, but rather it is the winter outflow of internal space heating that is the more critical parameter.

As mentioned above for wall insulation, when such costs exceed around $3000, net benefits fail to outweigh the cost of upgrading to code-compliance.

The regulation will therefore provide a dispensation on upgrading pre-existing window units. Where code-compliance would require the removal and replacement of a window unit, the dispensation instead requires only a specified thermal control film to be applied to relevant windows. The

regulation will specify the relevant thermal performance parameters that the film must cause the glazing in the window to achieve, in terms of a solar heat gain co-efficient (SHGC) and thermal conductance (a U-value). The SHGC and U values will be the same values provided in the building code for the translucent parts of skylights, and will require no lesser performance than a SHGC value of 0.25 and a total U-value of 5 or less. Because both of those values are measures related to heat transfer, lower values indicate a higher capacity to stop heat loss or heat gain. That is beneficial where the film is used to stop undesirable heat gain from unshaded windows in summer, and to help stop heat loss in winter.

The code does not specify SHGC or U-values for window glazing alone as it specifies those kinds of values for window units as a whole taking account of the thermal performance of window frames as well as the glazing. The SHGC value corresponds to the potential for solar heating as the sun shines through glazing. That is beneficial in winter, but detrimental in summer. So windows well orientated for winter solar heat gain might not need treatment to upgrade them in order to comply with the building code if they are adequately shaded to protect them from unwanted heat gain in summer. The U-value is an indication of rate that the glazing conducts heat and is the inverse of the R-value which is a measure of insulation.

The dispensation will deem the windows in the pre-existing part of a house to be code compliant if when all of the window units in the house's relevant storey are assessed against the code's relevant deemed-to-satisfy provisions, provided substandard windows are treated with the thermal film as per the above-mentioned dispensation parameters, and taking account of shading of the window etc as required by the code.

The cost of supplying and installing a film that complies at the highest level required by the dispensation is around $65 per m^2. For a worst-case scenario where all pre-existing windows need to be upgraded with that film, the total cost of supplying and installing the film to a typical number of typically sized windows would be as follows—

10 windows x 3m^2 average / window x $65 / m^2 = $2000 approx.

From the above discussion on wall insulation, net benefits will flow from that $2000 investment in terms of reduction in space heating costs. Further savings will flow in the case of windows from the use of window treatments such as blinds or curtains, and from reduced summer cooling costs because of the thermal film applied to the window glazing.

The dispensation will also deem windows in non-habitable rooms with less than of 2m^2 of window area to be code-compliant in terms of the energy efficiency of the windows regardless of there actual performance. That is because of the above-mentioned cost of otherwise removing and replacing them to bring them into code compliance, and the fact that the above-mentioned film does not adhere adequately to frosted glass (most non-habitable rooms such as bathrooms and toilets have frosted glass), and the

fact that such rooms are generally not specifically heated or cooled for long periods. The dispensation for those rooms will only apply if the relevant non-habitable rooms can be closed off by walls and doors from the habitable part of the house. That is to help reduce the impact of their lesser energy efficiency on the more energy-efficient habitable parts of the house. Most houses have bathrooms and toilets that have walls and doors that are able to be closed to separate them from the other parts of the house.

2.7 Policy—considerations about whether work is carried out in proper and skilful way

2.7.1 Brief statement of the policy objectives and the reasons for them

2.7.1.1 Policy objective—considerations about whether work is carried out in proper and skilful way

The Policy objective is for the regulation prescribe the considerations that must be considered in determining if building work has been carried out in a proper and skilful way, as the Act requires building work to be carried out in a proper and skilful way and entitles a regulation to prescribe considerations to be considered in determining if work has been carried out in a proper and skilful way.

The aspect of this policy that deals with standards of construction and materials is not new, and is reflected in the 2004 regulation. The aspect dealing with construction tolerances is new policy detail compared with the 2004 regulation.

2.7.1.2 Reasons for policy objective—considerations about whether work is carried out in proper and skilful way

Reasons for policy objective are as follows.

Courts have found it difficult to determine what the term “proper and skilful way” means, despite many legal instruments specifying such a requirement of various kinds of work. So the Act enables the regulation to prescribe considerations that must be considered in determining if building work has been carried out in a proper and skilful way.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as that mentioned above in relation to considerations that must be considered in determining if building work has been carried out in a proper and skilful way. It is necessary for the regulation to restate the provision in relation to carrying out work in a proper and skilful way so it continues to have effect after that repeal, as the Act requires building work to only be carried out in a proper and skilful way.

However, the 2008 regulation will not restate the provision from the 2004 regulation that lists considerations to be considered in determining acceptable quality of work-skill. Instead, the 2008 regulation will provide a new consideration based on whether the work has been carried out to meet or exceed the standards stated in the BA, or if the BA does not vary reasonable minimum industry standards—to meet or exceed reasonable minimum industry standards in relation to construction tolerances.

2.7.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—considerations about whether work is carried out in proper and skilful way

The regulation will define the notion of ***reasonable minimum industry standards*** to be a matter covered by a ***tolerances guide***, so as a matter meets ***reasonable minimum industry standards*** if the matter is not a defect under the guide, where the matter is dealt with by the guide. The ***tolerances guide*** is to be prescribed in the regulation, as the *Guide to Standards and Tolerances 2007* published by the Victorian Building Commission and available from—

http://www.buildingcommission.com.au/resources/documents/S+T_GUIDE_07.pdf

That guide was produced in collaboration with the Victorian Building Commission and the Office of Fair Trading NSW, the Tasmanian Government and the ACT Government with the assistance of representatives from the building industry, professional associations and consumer groups with an interest in building standards and resolving building disputes.

The regulation will provide that the requirement to notify the guide on the legislation register, under the Legislation Act, s 47 (5), is dissapplied. That is because the guide is freely available from the above-mentioned web site and is subject to copyright limitations.

The regulation will also prescribe criteria about standards of work and materials, including the following kinds of things—

- whether the work uses a product or system in accordance with any accessible instructions, directions, guidelines or suggestions of the maker or seller of the product or system;

- whether the work is in accordance with any relevant rules or guidelines published by Standards Australia;

- whether, as part of the work, a product or system is being, or has been, used in a way that a reasonable person would expect is contrary to the intended use of the product or system;

- whether, as part of the work, a product or system is being, or has been, used in a way that the maker has given written notice will void the maker's warranty;

- whether a reasonable person doing the work would know or suspect on reasonable grounds that the use of a product or system in a particular way would cause more instability, or affect the durability or soundness of the product or system or of the building work than if the product or system were used appropriately;

- how reasonable it is in all the circumstances for the user of a product or system to rely on the maker's statement that the product or system complies with a stated standard (for example a requirement of the Building Code as evidenced by a CodeMark logo on the product, (see description of the CodeMark system further below) or a product maker's claim that a product complies with a stated Australian Standard);

- whether the building work contravenes the Act or another territory law.

It is reasonable and appropriate to achieve the policy objectives in the above–described way as it represents the optimal method of protecting the public interest that lies in ensuring a minimum acceptable level of building work, whilst still allowing discretion in applying the considerations. That permits a higher standard of work to be expected to be applied to a prestige hotel development than the standard to be applied to a horse stable for example.

That also protects reputable builders from being underpriced by builders hoping to exploit their client's lack of knowledge of construction quality standards. A long-standing way that underpricing exploitation can be achieved in the absence of a mandatory quality standard is to price building work in a way that will provide a cheap, low-quality product at less than normal industry standards, and then if the client complains about poor quality, quote a premium price to vary the contract to add the extra work of bringing the low quality work up to a reasonable standard. An example is where the builder fails to exercise the necessary diligence to make internal walls vertical, straight and flat as discussed in 'costs' below. When the client sees that finished walls are not vertical and look warped and not straight, it can cost more than $3000 in labour and materials to remove the plasterboard wall linings, straighten and align the wall frames, and reline the walls.

2.7.3 Brief assessment of the benefits and costs of implementing the proposed law—considerations about whether work is carried out in proper and skilful way

2.7.3.1 Quantification of the benefits and costs

2.7.3.1.1 Costs—considerations about whether work is carried out in proper and skilful way

The main cost associated with the regulation prescribing the considerations that must be considered in determining if building work has been carried out in a proper and skilful way are as follows.

Initial construction costs related to the supply of building materials will be higher than if substandard materials are used. That is because substandard materials are generally less expensive to manufacture than higher standard materials. Higher standard materials may also cost more to supply as they often require a more onerous and therefore expensive quality controlling and testing regime than lower quality materials, and packaging, storage and

transport technique can be similarly more expensive but are necessary to maintain the product's higher quality.

Also, demonstrating the higher quality of products, such as through product evaluation and certification against requirements of the building code can add to a product's supply cost. The Australian Building Codes Board (ABCB) recognises such a certification scheme—known as the CodeMark scheme. The CodeMark scheme will compliment the regulation's provision about carrying out work in a proper and skilful way by assisting in identifying which products have been CodeMark certified and therefore satisfy the relevant requirements of the building code when the materials are used in accordance with the relevant terms of certification.

The ABCB and New Zealand's Department of Building and Housing (DBH) manage the CodeMark scheme in their respective countries. The Joint Accreditation System of Australia and New Zealand (JAS-ANZ) accredits certification bodies, who in turn evaluate and certify building products as CodeMark compliant. Relevant legislation in each relevant jurisdiction, including the ACT's Building Act, requires building control authorities to accept CodeMark certified products as being building-code-compliant, if the product's use is consistent with the relevant terms of the CodeMark certification for the product.

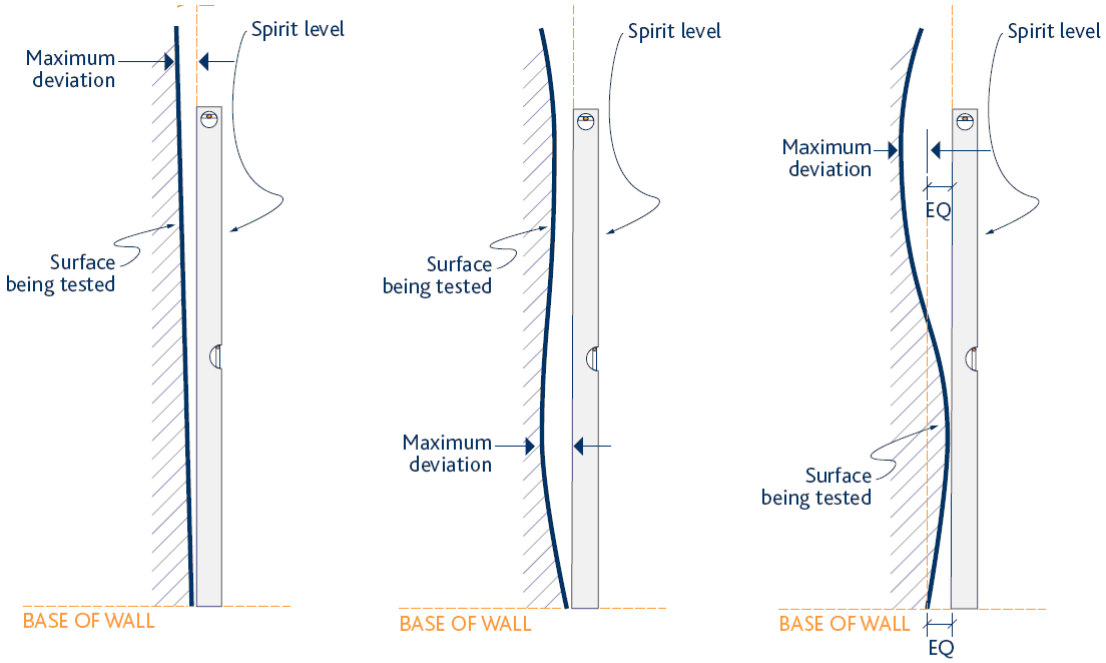
Costs in obtaining CodeMark certification (or certification of compliance with any nominated standard, code or the like) for a building product could range from $10 000 to more than $100 000 depending on the cost of testing and evaluating the product. However, once accredited that once-off cost can be recovered through market sales of the product. However, changes to the product as a result of ongoing design innovations could necessitate the recertification of the product if CodeMark accreditation is to be continued.

The regulation will not make such certification mandatory, but will prescribe to the effect that compliance with such a scheme's certification terms when doing building work is a relevant consideration when determining if the work has been done in a proper and skilful way.

Requiring building work to meet reasonable industry standards can also have labour cost impacts. An example of such costs is in wall frame erection for houses. The most common method of structurally framing houses in the ACT is to use pine wall frames, either fabricated onsite by hand, or by CAD-CAM in local framing factories. Regardless of the manufacturing technique, because pine is a natural wood product it is subject to warping, bowing and splitting, particularly if it has been poorly stored or moisture effected. In order to comply with reasonable industry standards, a builder will normally test every stud (vertical column) in every wall frame when erected to ensure it is sufficiently close to plumb (vertical) and straight (free of bow-in or bow-out). Substandard studs or frames are plumbed and areas of bow-out are planed flat, and bow-in areas a packed out. The builder's intent is to ensure wall linings are plumb and flat. Testing all studs of all frames on an average-sized house, and allowing for making more than half of them true can add 1 person-

day of labour costs to the construction of a house, at an indicative cost of $200. It also adds a day of development holding costs, which based on 9%pa interest paid on the cost of land an average residential block could be around an additional $70.

However, without the regulation prescribing the tolerance of building elements such as walls, building laws in the ACT would not require the substantial extra labour required to make walls true. The above-mentioned tolerances guide stipulates how far out of plumb and out of flatness walls can be before they are deemed as defective under the guide. **See example extract below from the guide, indicating how to measure a wall's alignment construction tolerance—**



iv) Measurement of deviation from vertical / plumb

v) Measurement of bow to be carried out as per diagram (ii)+(iii)

vi) Measurement of bow to be carried out as per diagram (ii)+(iii)

2.7.3.1.2 Benefits—considerations about whether work is carried out in proper and skilful way

See the discussion above for benefits arising from requiring details of structural bolts and fire collars to be shown on BA plans. That discussion provides indications of the magnitude of benefits derived from using bolts and fire collars that are not substandard, as opposed to the costs of building failures resulting from substandard collars and bolts. Those kinds of benefits arise from the regulation prescribing the considerations that must be considered in determining if building work is to be carried out in a proper and skilful way.

Further to the above example of the added cost of requiring wall frames to erected so as they are within acceptable tolerances, examples of benefits of

having plumb and straight walls, over out-of-plumb and bowed walls are as follows—

Where doors, fitout items such as kitchen cupboards, and wall tiling are to be installed against a defective wall, acceptable levels of finish can often not be achieved without either having to fix the defective wall or modify the fitout to make it fit with the wall' defects. Otherwise unsightly gaps will be visible or items like shelves will be out of level. That rework needed to make things fit can add more than $1000 in extra labour need to install doors and fitout in an average-sized house. Further the resale value of a finished house can be reduced by several thousand dollars if the fit and finish of internal construction such as walls and kitchen fitouts are obviously visually substandard. Benefits arising from requiring such matters to be built to acceptable tolerances equate to the saving achieved by averting the above-mentioned rework costs and resale devaluation.

2.8 Policy—prescribed stages of building work and approvals upon completion

2.8.1 Brief statement of the policy objectives and the reasons for them

2.8.1.1 Policy objective—prescribed stages of building work and approvals upon completion

The policy objective is to prescribe the stages of building work, which must be inspected and passed and certified by a building certifier before work can proceed past the stage, and the circumstances where a survey check is required on the location of certain building's footings before construction may proceed further. The Building Act, requires the inspection and certification and survey plan, but entitles a regulation to prescribe details of the stages.

A policy objective is to also prescribe approvals required to be obtained when building work has been completed, including certain approvals in relation to certain DA conditions, installation of fire appliances, and scaffolding and lift approvals.

The policy is not new, and reflects corresponding policy intent in the 2004 regulation, except that the 2008 regulation will require an extra inspection stage not prescribed in the 2004 regulation.

2.8.1.2 Reasons for policy objective—prescribed stages of building work and approvals upon completion

Reasons for policy objective are as follows.

Non compliance with the Building Act, a BA, or the Building Code of Australia can render a building—unsafe, unusable, unfit for purpose, high maintenance, inefficient in its energy use for heating and cooling, to have poor amenity, to be at risk of a disability discrimination claim in respect of poor access for people with disabilities, or to be in contraction of the relevant DA or other laws.

Construction of modern buildings involves the bringing together of many different components in precise ways. Human error, or deliberate corner cutting can have dire consequences on a building, including requiring a finished building to be demolished in the worst-case.

Prior to 1999 ACT building laws did not provide for building certifiers, and the main form of building certification was to require builder's to self-certify their own work. Government inspectors issued BAs and inspected work during construction, but the law did not provide for what inspectors must do in their pre-1999 regulatory function.

Since 1999 mandatory site inspections by building certifiers of critical stages of construction has provided a practical method of mitigating the risk of

adverse ramifications from substandard building work. Also requiring a land surveyor's certificate, fire brigade clearance and a check of compliance with relevant DA conditions helps mitigate the risks arising from constructing buildings in wrong locations, or risks from contravening fire safety requirements or DA laws.

2.8.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—prescribed stages of building work and approvals upon completion

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objectives as mentioned above in relation to mandatory inspection stages, but the 2008 allows for a greater level of inspection. The 2004 regulation allowed the building certifier to specify in the BA certain reinforced concrete members that required mandatory inspection, but was silent on the mandatory inspections required for steel frames. The 2008 regulation extends that power to certifiers also in respect of certain steel frames of buildings. Other mandatory inspections prescribed in the 2004 regulation are restated in the 2008 regulation.

That represents the potential for an increased burden on the construction industry, but codifies the informal inspection requirements historically informally imposed upon the industry by most certifiers.

The full number of inspections will be described in the regulation along the following lines—

- completion of excavation, placement of formwork and placement of steel reinforcing for the footings before any concrete for the footings is poured;
- for a class 1 or class 10 building (a house or garage for example)—
    - completion of the structural framework before the placement of any internal lining;
    - completion of placement of formwork, and placement of steel reinforcing, for any reinforced concrete member before any concrete for the member is poured;
- for a building other than a class 1 or class 10 building—
    - completion of any structural framework stated by the certifier in the relevant BA, before the placement of any internal lining [this inspection stage represents new policy detail not prescribed in the 2004 regulation];
    - completion of the placement of formwork and steel reinforcing for any reinforced concrete member stated by the certifier in the relevant BA, before any concrete for the member is poured;
- completion of the building work approved in the relevant BA.

The 2008 regulation also makes it clearer than in the 2004 regulation that if a DA for building work is subject to a condition that relates only to building work—approval is required from the chief planning executive to the way in which the condition has been satisfied. The need for that provision arises from the skills that may be needed to give such an approval in respect of complex planning matters that may be mentioned in a DA condition. Building certifiers may not be sufficiently skilled to make such an approval determination, and so it is necessary to require the chief planning executive's delegate to make that determination. Development holding costs mentioned elsewhere arise if the approval delays completion of development.

The 2008 regulation also restates the other clearances from entities required on completion of a building, such as ACT fire brigade clearance in relation to fire safety provision in certain large-scale buildings.

It is reasonable and appropriate to achieve the relevant policy intentions in the above discussed way as, apart from the new policy detail described above, that has historically been the optimal way of protecting the public interest that lays in ensuring buildings are constructed to acceptable standards. The new policy detail largely codifies current practice. The policies are broadly consistent with comparative policies in other Australian jurisdictions.

2.8.3 Brief assessment of the benefits and costs of implementing the proposed law—prescribed stages of building work and approvals upon completion

2.8.3.1 Quantification of the benefits and costs

2.8.3.1.1 Costs—prescribed stages of building work and approvals upon completion

Costs of the proposed law's provisions requiring mandatory inspection of prescribed stages of building work and approvals upon completion of work are as follows.

Under the Building Act the only entities entitled to perform the prescribed mandatory inspections of building work are ACT licensed building surveyors who, under that Act, have been duly appointed as certifier for the respective building work. Certifiers typically charge between $100 and $300 per hour for their inspection services, but generally not less than $400 for any project, to cover administration costs, travel costs, plan vetting costs, site inspection costs and other operational overheads and contingencies.

The least complex building work, a demountable swimming pool and its pool fencing, requires only an inspection upon completion of the work. Moving up the scale of complexity, a large carport (larger than 36m^2 floor area) will require an inspection of its footings before placing concrete, as well as a final inspection. A house will require inspection of footings, floor slab (if any), structural framing, any other structural concrete elements and a final. At the

upper end of the complexity scale a large multi-storey commercial office building can require several inspections per storey.

Certifier's on average charge for at least 1 hour for each inspection, to cover travel time and on site inspection time. Inspection costs therefore range from between $100 and more than $10 000 per building depending on complexity.

Inspections can delay construction, as the Building Act prohibits work from proceeding beyond a prescribed inspection stage without the certifier's inspection and permission. Where the inspections can be scheduled for periods when no building activity was to occur in any case, such as after hours or on weekends, the inspection does not add to development holding costs. However, where work has to be held up for the inspection to occur, that adds to development holding costs as quantified elsewhere in this impact statement.

Generally prolonged holding cost can accrue when the certifier is overcommitted or otherwise unavailable within a reasonable time period. However to address that, alternative certifiers can be appointed for the work.

Costs of obtaining fire brigade clearances etc on completion of buildings are similar to certifier costs. Except that inspections by the fire brigade etc can be carried out simultaneously with all other mandatory final inspections by other entities. In that case they do not increase development holding cost because development is not delayed (unless the building fails the fire inspection only and thereby requires rectification work, which delays construction).

However, if costs for such clearances do arise they are generally less than $500 excluding development holding costs (quantified herein elsewhere) that arise if the clearance is delayed, and excluding any costs of work needed to be done to obtain the clearance. Such cost might for example be to provide additional portable hand fire extinguishes, the provision of which indicatively costs less than $200 each. Generally only 1 or 2 extra are required in a building with unusual fire evacuation egress provisions.

The cost impacts of the additional steel-framing inspection stage to be prescribed in the 2008 regulation but not prescribed in the 2004 regulation are as follows. Because of the fact that certifiers have generally informally insisted on steel-framing inspections, despite that not being a codified requirement, the additional inspection stage will not in practice add to construction costs in that case. So although that cost impact will be $0 the actual cost of such an inspection stage could range between $100 for a simple building requiring only 1 inspection of its steel frame, to more than $5000 for a multistorey building requiring cyclical inspections as work progresses. If the inspection delays construction (construction must not proceed beyond inspection stages without the certifier having inspected and given permission), then development holding costs arise, which are quantified elsewhere in this statement.

2.8.3.1.2 Benefits—prescribed stages of building work and approvals upon completion

A pertinent example of benefits that can be attributed to building certification at the various key stages of construction is the former Silverton Centre multi-story office tower constructed for around $8m in 1985, in Moore Street, Canberra City.

In January 1989, a main tenant of the Silverton Centre, the Australian Audit Office, was required at very short notice to vacate the Silverton Centre following allegations that the building had serious construction defects. The newly constructed building was not re-tenanted, remaining vacant for many years before it was eventually demolished. The detail of the evacuation and some subsequent claims for compensation is to be found in *Commonwealth v Silverton Ltd* (1997) 130 ACTR 1 (Higgins J).

Although it is not certain if requiring building certifiers to inspect and certify the Silverton Centre during its critical stages of construction could have averted the need to demolish the newly finished building, the case illustrates the magnitude of benefits that arise from ensuring designs and construction demonstrably meet mandatory structural soundness standards.

In the case of a building like the Silverton Centre, ensuring the building will be structurally sound before, during and after construction can provide financial benefits in terms of averting demolition costs, loss of return on investment and holding costs. That benefit in the case of a building like the Silverton Centre can total more than $10M, and more for larger buildings.

Further, stigmatisation of a building can significantly reduce the building's potential rate of return on investment. For example it could be the case with a building like the Silverton Centre that minor design or construction defects caused unsightly cracking of concrete elements in the building. It could be the case that the cracking does not render the building unsound (ie the cracking is superficial and not structurally detrimental), and it might not be a significant cost to repair the cracking and prevent further cracking. However, once a building's occupants become concerned about such an anomaly in a building it can become difficult to continue to tenant such a building at full market rental rates, if at all. If the rate of rental return is sufficiently affected, the building might become a financial write-off, and in the extreme case that might only be able to be resolved by cutting losses and demolishing the building.

2.9 Policy—fundamentally noncompliant building work criteria

2.9.1. Brief statement of the policy objectives and the reasons for them

2.9.1.1 Policy objective—fundamentally noncompliant building work criteria policy

The policy objective is to prescribe criteria for building certifiers to consider in determining if building work is fundamentally noncompliant.

This is a new policy not provided for in the 2004 regulation.

2.9.1.2 Reasons for policy objective—fundamentally noncompliant building work criteria policy

Reasons for policy objective are as follows.

Building certifiers are privatised regulators but do not have enforceable powers to direct how building work is to be carried out or rectified. Their role is to certify rather than to direct work. However, Government does have powers to direct the rectification of substandard and unlawful building work.

The *Building Legislation Amendment Act 2007* therefore requires certifiers to tell Government when the certifier becomes aware of relevant building work having being carried out in a fundamentally noncompliant way. That helps inform Government of circumstances where Government may need to step in to prevent further unlawful work continuing, to thereby protect the public interest that lies in ensuring buildings and structures comply with the *Building Legislation Amendment Act 2007*. That Act entitles a regulation to prescribe the criteria for determining if work is fundamentally noncompliant or not, rather that allowing certifiers subjective discretion in making that determination.

The need for the policy arises from the need to help make the certifiers indirectly the eyes and ears of Government so as Government can better regulate unlawful building work, as historically certifiers have been relatively powerless and therefore sometimes ineffective in controlling delinquent builders.

2.9.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—fundamentally noncompliant building work criteria provision

The regulation will prescribe criteria that will quantify dimension and other parameters relating to substantial deviations from what may be lawfully constructed, including unlawfully doing any of the following—

- adding something to a building to change its type, such as adding walls to a carport to change the carport into a garage;

- locating a building or some masonry work substantially in the wrong location;

- producing floors levels substantially too high or producing floor areas substantially too big;

- producing a building that is substantially too big;

- producing a room that is substantially the wrong size or in the wrong location or producing too many rooms;

- producing a building that is substantially too high or that has too many storeys;

- producing too many buildings;

- converting useless space in a building so as it could be reasonably used for human occupation;

- constructing too many doors or windows or substantially wrongly locating a door or window;

- enclosing unenclosed spaces of substantial size.

It is appropriate and reasonable to achieve the relevant policy objectives in the above-described way as significant benefits arise, as discussed below, at negligible cost, and because the current regulatory regime has in some high-profile cases failed to provide an effective intervention mechanism to stop fundamentally noncompliant building work progressing.

2.9.3 Brief assessment of the benefits and costs of implementing the proposed law—fundamentally noncompliant building work criteria provisions

2.9.3.1 Quantification of the benefits and costs

2.9.3.1.1 Costs—fundamentally noncompliant building work criteria provisions

Ramifications of carrying out fundamentally noncompliant building work include exposing the building owner to the risk of substantial financial losses arising from the unlawful status of the building work, and the risk of being ordered to demolish the building or to bring it into compliance.

An example of the type of situation that the policy objective is aimed at mitigating the risks of reoccurrence of is the construction of a multiunit residential complex in the ACT suburb of Hall. Some roof spaces where

enlarged and converted to habitable attics and carports were constructed as enclosed garages, both allegedly in contravention of DA and BA requirements. The completed buildings remained unapprovable and therefore unusable for several years and were the subject of rectification orders requiring the buildings to be brought into compliance.

For further information on those buildings see—

http://www.abc.net.au/news/stories/2007/12/07/2112831.htm.

The cost of reporting fundamentally non-complaint work is expected to be confined to the cost of the certifier's time taken to determine if suspected work satisfies the prescribed criteria for determining fundamental noncompliance, and to email the ACT construction occupations registrar. In obvious cases that will take less than 15 minutes of the certifier's time and therefore would cost less than $100. In cases that require complex site measurement etc, the cost is unlikely to exceed $1000, but such incidents have been historically rare.

2.9.3.1.2 Benefits—fundamentally noncompliant building work criteria provisions

Benefits from the relevant provisions flow from reduced incidents of noncompliant building work progressing to completion.

For example, the estimated loss of potential income from a development like the above-mentioned multiunit residential complex in the suburb of Hall could be in the form of foregone developer's profit, which could typically range between 10% and 30% of development costs. That could amount to a cost of more than $300 000 in such a case. Other losses flow from lack of ongoing return on investment in the development and could in the Hall case cost around $250 net rent per week per unit x 10 units = $2500 per week = $125 000 net pa.

Additional benefits flow from averting the cost of rectification of the noncompliant work. The kind of rectification required in a situation similar to the above-mentioned Hall development, where roof lines need to be reduced, attic storeys removed and garages converted to carports could total more than $100 000.

2.10 Policy objective—residential buildings—statutory warranties, insurance and fidelity certificates

2.10.1 Brief statement of the policy objectives and the reasons for them

2.10.1.1 Policy objective—residential buildings—statutory warranties, insurance and fidelity certificates policy

The policy objective is to prescribe the relevant administrative detail required to support the Act's statutory warranties, insurance and fidelity certificates provisions at part 6 of the Act.

This is not a new policy. The policy objective is identical to that under the 2004 regulation, and does not represent any new policy or change to the 2004 regulation's respective policy.

2.10.1.2 Reasons for policy objective—residential buildings—statutory warranties, insurance and fidelity certificates policy

Reasons for policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as those mentioned above in relation to statutory warranties, insurance and fidelity certificates. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

The statutory warranties, insurance and fidelity certificates are intended to mitigate the risk that land lessees may be exposed to if they have paid a builder to provide building work services and building materials, and the building work is not finished, or is substandard, when the builder dies, becomes bankrupt or insolvent, or disappears. The statutory warranties are, by force of the Building Act, inserted into certain contracts for provision of building work, and provide that the builder warrants that the work has been carried out in accordance with relevant requirements of the Act.

2.10.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—residential buildings—statutory warranties, insurance and fidelity certificates provisions

The policy objective will be achieved by the regulation prescribing the following information—

- the kinds of building work that are subject to the Act's requirements in relation to statutory warranties and protections from risks arising for breaches of the statutory warranty provided by warranty insurance or fidelity certificate coverage—small to medium scale residential buildings;

- the duration of the operation of the statutory warranty—

    - for residential building work in relation to a structural element of a building—6 years after the completion day for the work;

    - for residential building work in relation to a non-structural element of a building—2 years after the completion day for the work;

- the minimum amount of warranty insurance required for residential building work—$85 000;

- the time period that warranty insurance for residential building work must provide cover for—5 years;

- the time period within which claims under a warranty insurance policy for residential building work must be made—90 days from discovery of suspected grounds for the claim;

- the financial amount needed to resolve a warranty insurance claim that a warranty insurer not liable for (ie the policy "excess")—$500;

- the maximum amount payable to the beneficiary of a warranty insurance policy in respect of a claim for loss of a deposit paid, if the builder defaults but the building work done is of a lesser value than the amount of the deposit—$10 000.

It is reasonable and appropriate to achieve the relevant policy objectives that way as that is consistent with how the policy has been achieved for several decades, although the quantum of some of the prescribed fiscal amounts has changed over time to take account of inflation. However the figures in the 2008 regulation are the same as the corresponding figures in the 2004 regulation. Further, nationally, other jurisdictions prescribe the same kinds of matters in the same kinds of ways for the same policy objectives, except that few jurisdictions have fidelity funds, and most jurisdictions have increased the maximum payment figure to $300 000, whereas the ACT is at $85 000 and South Australia is at $80 000.

For several years the insurance climate has not facilitated the ACT lifting the $85 000 limit, but the small size of the ACT jurisdiction has helped it avoid building construction "disasters" requiring more than $85 000 to rectify. The

introduction in 2004 of rectification orders under the ACT's *Construction Occupations (Licensing) Act 2004* has also helped avoid the need for warranty insurance payouts, in that when undertaking building work, builder's are apparently mindful that they can be ordered to rectify any unlawful and substandard work, and if they fail to comply with the order, the Government can arrange to have the rectification order work done by someone else and the cost of doing so is a dept to the delinquent builder. See the rectification order powers in the *Construction Occupations (Licensing) Act 2004.*

The relevant prescribed amounts have proven to reasonably and appropriately balance the financial operating needs of insurers and the levels of financial risk mitigation that homeowners need to protect what is for many their largest ever purchase, and one which may take most of their life to pay for under a mortgage.

2.10.3 Brief assessment of the benefits and costs of implementing the proposed law—residential buildings—statutory warranties, insurance and fidelity certificates provisions

2.10.3.1 Quantification of the benefits and costs

2.10.3.1.1 Costs—residential buildings—statutory warranties, insurance and fidelity certificates provisions

The Building Act only requires stated small to medium-scale residential buildings to be covered by a statutory warranty insurance policy or fidelity certificate. That Act only applies the statutory warranty to those buildings. Costs of the mandatory insurance or fidelity certificate coverage usually range between $1000 and $2000 for an average house depending on the risk profile of the builder and nature of the building work. Costs of the coverage are generally higher in proportion to the value of the work.

The cost that statutory warranties add to builder's operational overheads is estimated to add less than $200 to an average dwelling. That cost is generally a contingency amount notionally set aside to fix things that appear to be a breach of warranty. That cost would generally cover a labourer's costs to spend a few hours fixing minor defects like a jamming door or a cracked wall tile. Larger warranty breaches are generally not planned for and are therefore not recoverable from the builder's client, whereas the $200 contingency is often paid for by the client as part of the contracted cost to build a house. In more extreme cases of larger warranty breaches, such as needing to underpin a failed footing and repair subsequently cracked brickwork, the cost could be more than $10 000.

As discussed further above, there are costs associated with the regulation's requirement that work be done in a proper and skilful way. Generally, compliance with that requirement will produce a building unlikely to breach the relevant provisions of the statutory warranty, so apart from the $200 contingency, no extra costs arise from applying the statutory warranty unless a significant breach has to be fixed.

2.10.3.1.2 Benefits—residential buildings—statutory warranties, insurance and fidelity certificates provisions

The entity holding title to the relevant land is the beneficiary of the warranty insurance policy or fidelity fund certificate, including successors in title.

Payout criteria are that the beneficiary is at risk of financial loss because the builder has died, gone bankrupt, or has disappeared.

The regulation prescribes that $500 is the policy or certificate excess that all claims attract. The prescribed maximum amount of a policy or certificate pay-out is $85 000. That is sufficient to cover most breaches of warranty.

The regulation prescribes the maximum payout for a loss of deposit is $10 000. That is sufficient to cover most loss of deposit claims considering most 'standard' industry-provided contracts for building work set the deposit at 10% of the contract sum, and the deposit pays for initial work and materials prior to the first progress payment falling due.

2.11 Policy—application of building code to bushfire-prone areas

2.11.1 Brief statement of the policy objectives and the reasons for them

2.11.1.1 Policy objective—application of building code to bushfire-prone areas policy

The policy objective is to prescribe areas declared to be bushfire-prone, for the purposes of applying the provisions of the Building Code of Australia that relate to bushfire-resistant construction.

This is not a new policy, and does not represent any new policy or change to the 2004 regulation's respective policy.

2.11.1.2 Reasons for policy objective—application of building code to bushfire-prone areas policy

The reasons for the policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as those mentioned above in relation to bushfire prone areas. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

Generally, buildings are not constructed to withstand attack by bushfire and are constructed to allow building occupants to escape to safety outside of the building in the case of a building fire. In the case of bushfire and a building located close to bushland, there is often no safe place that building occupants can evacuate to outside of the building during rapid spread of a bushfire. The building code's provisions are based on the premise that in such situations the safest place for building occupants to stay during the passing of the fire front is inside the building if it is constructed to satisfy the code's bushfire resistant construction provisions. Occupants might then be able to evacuate the building onto the burnt ground if safe to do so. The policy is in line with that premise, and is necessary to provide that kind of safety.

2.11.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—application of building code to bushfire-prone areas provisions

The policy objectives will be achieved by declaring the geographic areas of the ACT that are bushfire prone for the purposes of applying the relevant bushfire resistant construction provisions of the building code. The areas will be described by reference to areas indicated in documents such as the ACT's territory plan made under the P & D Act.

It is reasonable and appropriate to achieve the policy objective that way as that is the way the objective has been achieved in the ACT since 2004, and is intended to ensure buildings at risk of bushfire attack are built to withstand the attack for long enough to provide the required human safety without placing undue costs on housing developments in urban areas.

The ACT construction market had failed to provide bushfire resistant housing until it was mandated in 2004, demonstrating that it is appropriate to redress the market failure through regulation.

2.11.3 Brief assessment of the benefits and costs of implementing the proposed law—application of building code to bushfire-prone areas provisions

2.11.3.1 Quantification of the benefits and costs

2.11.3.1.1 Costs—application of building code to bushfire-prone areas provisions

Relevant costs associated with applying the relevant provisions in the ACT can be deduced from the regulatory impact assessment document prepared for the Australian Building Code Board and available here—

http://www.abcb.gov.au/index.cfm?objectid=F78B6F9A-9DDA-1C0D-970FECB717EE0BD9

That statement was prepared in 1999, when it was proposed to amend the provisions in the Building Code relating to the construction of buildings in bushfire-prone areas. The main change in the amendment was the adoption of a revision of Australian Standard AS 3959—*Building in Bushfire-Prone Areas*.

A summary of the 1999 costs identified in the above mentioned RIS is tabulated below. Where it mentions the term ***level 1*** that relates to the level of fire resistant construction provided for in Australian Standard AS 3959—*Building in Bushfire-Prone Areas*. That is the level that the vast majority of houses to be built on ACT rural leases would be required to comply with under the building code. Most of the ACT's dense forests are unavailable for house construction as they are not subject to leases that permit residential use, so the need for higher levels of construction would be unusual in the ACT.

The tabulated costs below represent the cost necessary to achieve compliance with ***level 1*** construction, over and above normal construction costs.

Construction costs

The following costs are the additional construction costs necessary to comply with the Level 1 construction standard in the pre-publication draft Australian standard. The house is the SA HIA SAMPLE 1 house having a concrete slab, tiled roof, and a GFA of 206 square metres.

Level 1 construction

Clause	Description and comments	Unit	Rate	Cost $	Sub-total
3.4	**Flooring system**				
	Concrete slab specified No cost				
3.5	**Posts, columns, stumps, piers**				
	Nil				
3.6	**External walls**				
	Brick veneer complies				
3.7	**Windows**				
	Aluminium mesh screens to opening windows	11 m^2	45	495	
3.8	**External doors**				
	Weather strips or draft excluders	2 doors	50	100	280
	Aluminium wire screens	4	45	180	
3.9	**Vents and weepholes**				
	Aluminium mesh	1 m^2	8	8	132
	Cut and fit to weep holes	62	2	124	
3.10	**Roof**				
	Cement tile with flame retardant sarking specified				
	No skylights				
3.11	**Eaves**				
	Non-combustible lining specified				
3.12	**Verandahs and decks**				
	Nil				
3.13	**Service pipes**				
	Metal water and gas pipes				
3.14	**Fascias**				
	Metal fascia specified				
3.15	**Gutters and downpipes**				
	Leaf guards not specified				
	Total			907	

The number of houses expected to be constructed in the declared bushfire prone areas of the ACT are less than 20 pa. Adjusting the $907 total cost figure mentioned in the above table of 1999 costs for inflation over 9 years produces a 2008 figure of less than $1500, taking account of the fact that building costs may have increased at a slightly greater rate than broad-based inflation.

On average the cost of complying with the relevant requirements of the code in the ACT are therefore less than $1500 per house in addition to normal construction costs, or for 20 houses pa x $1500 per house = $30 000 pa.

The above-mentioned RIS further quantifies costs, in 1999 values.

2.11.3.1.2 Benefits—application of building code to bushfire-prone areas provisions

Benefits arising from compliance with the code's provisions for bushfire resistant construction include increased human safety for occupants unable to flea the passing of a bushfire front. In the case of preventing sever burns or death for 1 person the benefits can far exceed the above-mentioned $1500 cost per house. The above-mentioned RIS further quantifies benefits, in 1999 values.

2.12 Policy—exempt building code

2.12.1 Brief statement of the policy objectives and the reasons for them

2.12.1.1 Policy objective—exempt building code policy

The policy objective is to enable the relevant Minister to make an exempt building code to supplement certain BA exemptions, by setting out the construction design parameters that must be complied with in order for the exemption to apply.

This a new policy not reflected in previous or current legislation.

2.12.1.2 Reasons for policy objective— exempt building code policy

Reasons for policy objective are as follows.

The regulation will provide for a greater range for exemptions than the 2004 regulation provided for. That is to give effect to a planning system reform project policy objective of a simpler faster more effective planning system by widening the exemptions applicable to the low-cost, low-risk, low-complexity end of the construction industry.

The widened exemptions mainly apply to non-habitable buildings such as garages, carports, decks, pergolas, sheds, and retaining walls. However, the widened exemptions only apply where certain parameters are complied with, as prescribed in the regulation. In the case of the largest sizes of some of those exempted buildings or structures, a prescribed parameter will be that the building or structure must comply with the Building Code of Australia.

That code has provisions about the structural soundness and stability of buildings, but the provisions are technically complex, intended to also be applicable to buildings and structures of high complexity and size. The exempt building code will be able to take account of those complex provisions and present them in straightforward technical drawings designed for easy interpretation by lay people with little knowledge of construction or structural engineering terms and principles. Without such interpretive material lay people might have to procure technical assistance in order to help them comply with the relevant widened exemptions.

It is reasonable and appropriate to achieve the relevant policy objective in the way described above in that the code will provide substantial cost saving benefits to people wanting to take advantage of the relevant BA exemptions. Allowing the relevant Minister to make the code will allow it to be readily amended to take account of advances in building techniques, systems and materials.

The power is comparable to the Minister's power under the Building Act to make ACT appendices to the Building Code of Australia, which can vary or add to the code's provisions as they apply to the ACT.

2.12.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—exempt building code policy

The policy objective will be achieved by the regulation empowering the relevant Minister responsible for administering the Building Act, currently the Minister for Planning, to make the exempt building code. That will compliment exemptions proposed to be prescribed by the regulation, which will be conditional upon the exempt work being constructed so as the resultant building or structure complies with the exempt building code.

The regulation will also require the code to be notified on the ACT's legislation register, ensuring it is readily and freely available to the community.

2.12.3 Brief assessment of the benefits and costs of implementing the proposed law—exempt building code provisions

2.12.3.1 Quantification of the benefits and costs

2.12.3.1 Costs—exempt building code provisions

It is estimated that it will cost Government a once-off $30 000 contractual sum to buy engineer's services to develop designs and drawings for the code. Cost of accessing the code through the ACT legislation register will be $0.

Making the engineering designs in the exempt building code freely and widely available is likely to cut many engineers and other designers and plan drafters out of income derived from providing such design information to their clients. That may see such engineers lose $1000s pa in income. That could impact nationally, or internationally, denying millions of dollars of income pa.

2.12.3.1.2 Benefits—exempt building code provisions

It is beneficial that a code prescribe in plain English structural design and construction requirements for non-habitable buildings such as garages, carports, decks, pergolas, sheds, and retaining walls, etc to avoid lay people having to interpret the building code's technically complex engineering provisions. Other benefits will also arise from designers or builders not having to buy design engineer and drafting services for such low complexity buildings or structures.

The cost of buying those services range typically from $500 for the straightforward design and drafting of plans for a straightforward retaining wall, to around $2000 for a complex double garage that is fully engineered from the ground up.

Because the code will be freely available internationally on the internet, that kind of saving could be realised wherever in the world the code's designs are used as a basis for design as an alternative to employing engineering expertise. The amounts mentioned above in relation to denial of income equate to the financial benefits to people using the code instead of buying that expertise.

Consultation with representatives of relevant engineering profession indicated that making the exempt buildings code would remove from engineers the burden of having to divert their attention from more lucrative large engineering projects to less lucrative small-scale projects. The representatives were therefore supportive of the proposed reform policy.

2.13 Policy—occupations and qualifications—handling small amounts of bonded asbestos

2.13.1 Brief statement of the policy objectives and the reasons for them

2.13.1.1 Policy objective—occupations and qualifications—handling small amounts of bonded asbestos

The policy objective is to enable the construction occupations registrar to declare occupations and qualifications for the regulation's provisions providing exemptions from the application of parts of the Building Act to handling asbestos.

This is not a new policy. The same policy is reflected in the 2004 regulation.

2.13.1.2 Reasons for the policy objective—occupations and qualifications—handling small amounts of bonded asbestos

Reasons for policy objective are as follows.

The regulation will repeal and replace the *Building Regulation 2004*, which had the same policy objective as those mentioned above in relation to declaring occupations and qualifications for handling asbestos. It is necessary for the regulation to restate those provisions so they continue to have effect after that repeal.

The provisions arose from the 2006 recommendations of the ACT's asbestos task force. The relevant recommendation was to the effect that entities involved in building-related occupations ought to be exempted from having to comply with the statutory approval processes set out in the Building Act, which otherwise would apply to handling asbestos, provided certain parameters are complied with.

2.13.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—occupations and qualifications—handling small amounts of bonded asbestos

The above-mentioned parameters are that the asbestos-containing material is bonded (ie not friable asbestos), has an area of no more than $10m^2$, the handling is in accordance with the relevant prescribed safety code, and the work is incidental to non-asbestos work in a relevant occupation, and the person doing the handling has a relevant qualification.

That $10m^2$ exemption brought the ACT's exemption into line with most other Australian jurisdictions. The parameters are necessary to assist in mitigating the risks inherent in handling asbestos-containing materials. The $10m^2$ limit and limitation on the work being incidental to other work is to prevent people

who work outside of the asbestos removal industry from using the $10m^2$ exemption as a means of working primarily as an asbestos remover.

It is reasonable and appropriate to achieve the relevant policy objectives in the way mentioned above because that is how the policy has been effectively achieved in the 2004 regulation for more than 1 year. It supports the partial deregulation of the handling of asbestos-containing building materials, by allowing the declaration of the qualifications and types of occupations that are relevant to safely handling the materials.

2.13.3 Brief assessment of the benefits and costs of implementing the proposed law—occupations and qualifications—handling small amounts of bonded asbestos

2.13.3.1 Quantification of the benefits and costs

2.13.3.1.1 Costs—occupations and qualifications—handling small amounts of bonded asbestos

Completing the qualification declared under the 2004 regulation costs less than $2000. The qualification was developed for the asbestos task force in 2005, and is a short course for trades people, and is only of a few days duration. The currently declared qualification is as follows and it is expected that will continue to be the relevant qualification under the 2008 regulation—

- the *Course in Identification and Safe Handling of Asbestos* with national accreditation number '80803ACT'; or

- the *Course in Asbestos Removal and Supervision* with the national accreditation number '80804ACT'.

The course must also be—

- listed as an accredited course on the National Training Information Service's National register of information on courses at **www.ntis.gov.au**; and

- delivered by an organisation, registered as a training organisation (***RTO***) by an Australian State, Territory or Commonwealth Government, when the RTO was authorised by such a Government to deliver the course.

2.13.3.1.2 Benefits—occupations and qualifications—handling small amounts of bonded asbestos

The provision can allow relevant people employed in a declared occupation to undertake the exempt asbestos handling. Without possessing the qualification and without working in a relevant occupation a person wishing to undertake that work would have to buy the services of someone else who did have those things.

The cost of buying those services in relation to removing 10m^2 of bonded asbestos-containing wall sheeting, for example is less than $500, where the work is relatively straightforward. Having the declared qualification and working in a declared occupation can therefore save that $500 or so for each project involving that kind of asbestos work.

2.14 Policy—certifier issuing BA etc without DA—offences

2.14.1 Brief statement of the policy objectives and the reasons for them

2.14.1.1 Policy objective— certifier issuing BA etc without DA—offences

The policy objective is to create an offence that may lie against a building certifier if the certifier issues a BA in the absence of the operation of a required DA. The offence is to be suitable to be referenced in a law under the *Magistrates Court Act 1930*, to enable infringement notices to be issued in respect of the offence.

This is a new policy not reflected in previous laws or in the 2004 regulation.

2.14.1.2 Reasons for policy objective— certifier issuing BA etc without DA—offences

Reasons for policy objective are as follows.

The *Building Legislation Amendment Act 2007* provides for the same kind of offence as will be provided in the regulation. However one of the Act's offence grounds renders the Act's offence sub-optimal as an infringement notice grounds, due to the degree of subjectivity that determining material detriment permits.

The regulation therefore needs to be relied upon to provide alternative offence grounds, with reference to the relevant quantified and objective contraventions that establish the offence and thereby implicitly address the material detriment grounds in an objective way.

The offence is optimized for the application of infringement notices.

It is sometimes more efficient and effective to deal with certain offences with an on-the-spot-fine under an infringement notice scheme, than to prosecute a defendant in the magistrates court.

2.14.2 Brief statement of the way the policy objectives will be achieved by the proposed law and why this way of achieving them is reasonable and appropriate—certifier issuing BA etc without DA—offences

The relevant policy objective will be achieved by the regulation prescribing relevant offences that are optimized for the application of infringement notices. The offences will mirror the broad grounds of the corresponding offence in the Building Act but provide more objective and quantified detail about the relevant material detriment that must exist to establish the offence.

The offences will limit their respective grounds to contravention of the rules around DA exemptions for dwellings, as provided for in relevant codes under the territory plan made under the P & D Act. It is intended that the grounds list all of the relevant applicable rules, but failure to comply with any 1 of the applicable rules will give grounds for the offence.

It is reasonable and appropriate to achieve the policy objective that way as without the new offences benefits derived from the infringement notice system will be unavailable for the relevant offending behaviour.

2.14.3 Brief assessment of the benefits and costs of implementing the proposed law—certifier issuing BA etc without DA—offences

2.14.3.1 Quantification of the benefits and costs

2.14.3.1.1 Costs—certifier issuing BA etc without DA—offences

Without an offence that is suitable for infringement notices, the offender can only be punished as a result of a conviction in the ACT Magistrates Court. Licence disciplinary action is available too, but disciplinary action is intended to protect the public and to curb delinquent behaviour rather than to punish. Costs for a prosecution can include court costs, prosecutor's costs, witnesses' lost-time costs, legal representation costs, the defendant's lost-time costs and the financial cost of a resultant monetary penalty. Those sorts of costs often exceed $5000 for a comparatively minor case resulting in a relatively minor penalty, such as $250.

Flow on costs could also arise from the detriment to a certifier's or building surveyor's reputation that a conviction can cause. In the extreme example, such determinant could prevent a building surveyor from meeting mandatory eligibility criteria for licensing in the ACT. Without such a licence the surveyor would not be able to practice as a certifier under the Building Act in the ACT. That could produce costs from loss of income and costs arising from having to change career or retire from the work force. Such costs could amount to more than $100 000 pa for the certifier.

If the certifier has 100s of clients (some have more than 500 active clients at any given time), then sudden departure from the building surveyor profession stemming from a conviction can lead to increased development holding costs for hundreds of those clients, as they will not be able to proceed beyond prescribed inspection stages without having a certifier appointed. Holding costs are quantified elsewhere in this impact statement.

The loss of a certifier can however be addressed by the appointment of another eligible certifier. However, changing certifier part way through a building's construction can have cost penalties, particularly where the project has been tainted by association with a certifier who has suffered a conviction.

See elsewhere in this impact statement (in relation to Government certifier appointment criteria policy) for a description of how such circumstances could be perceived as posing an extraordinary risk to a certifier taking over a tainted project, and how the incoming certifier might therefore charge a premium for his or her services in that case to compensate for the increased risk exposure.

2.14.3.1.2 Benefits—certifier issuing BA etc without DA—offences

Benefits of having offences suitable for issuing infringement notices include avoiding the above-mentioned $5000 costs and loss-of-income costs, for example. But that $5000 saving is offset by the administrative costs incurred by the authority issuing the notice, typically less than $100 per notice, and the penalty notice amount payable by the receiver of the notice. In this case it is intended that the infringement notice amount will be $1000. The net benefit is therefore—

> $5000 - $100 - $1000 = $3900 in the above example case, excluding the benefit of not jeopardising the certifier's career.

Benefits realised from a certifier avoiding loss of income by avoiding a conviction by instead paying an infringement notice penalty can amount to more than $100 000 pa if the conviction would have had the outcome of preventing the certifier from practicing in the ACT licensed building surveyor profession.

If such a certifier has 100s of active clients, those clients could also benefit from not having to appoint a replacement certifier at a premium cost to compensate for taking over projects tainted with the stigma of association with a convicted certifier. That could amount to benefit of more than $100 per client, being 100 clients x $100 = $100 000.
