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May 2017

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| Regulatory impact statement  **Building Regulations 2017**  Part B: Design, construction, completion / use and other topics |

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**Acknowledgements**

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The Department of Environment, Land, Water and Planning acknowledges its responsibility for this regulatory impact statement (RIS) that sets out the proposed Building Regulations 2017 and the supporting argument for those Regulations.

The RIS has been prepared for the express purpose of supporting the proposed Building Regulations 2017 and other potential uses of the information contained in the RIS have not been a consideration in its development. The information contained in the RIS has not been subjected to an audit or any other form of independent verification.

**Author**

The information, statements, statistics and commentary contained in Part B have been substantially prepared by the department with supporting analysis provided by PricewaterhouseCoopers Australia from material provided by or through the department.

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# Acronyms and abbreviations

| **Acronym** | **Name** |
| --- | --- |
| ABCB | Australian Building Codes Board |
| ABS | Australian Bureau of Statistics |
| Act, the | *Building Act 1993* |
| BAB | Building Appeals Board |
| BAL | bushfire attack level |
| BCA | Building Code of Australia |
| BRAC | Building Regulations Advisory Committee |
| CFA | Country Fire Authority |
| CTCPER | Centre for Trauma Care, Prevention, Education and Research |
| current Regulations | Building Regulations 2006 |
| Department, the | Department of Environment, Land, Water and Planning |
| ESM | Essential safety measures |
| IGA | Intergovernmental agreement |
| MAV | Municipal Association of Victoria |
| MBS | Municipal building surveyor |
| MFB | Metropolitan Fire Brigade |
| NCC | National Construction Code |
| NPV | Net present value |
| OHS | Occupational health and safety |
| PBS | Private building surveyor |
| PCA | Plumbing Code of Australia |
| PoPE | Place of public entertainment |
| proposed Regulations | Building Regulations 2017 |
| RBS | Relevant building surveyor |
| RIS | Regulatory impact statement |
| VBA | Victorian Building Authority |
| VCAT | Victorian Civil & Administrative Tribunal |
| VISU | Victorian Injury Surveillance Unit |
| VMIA | Victorian Managed Insurance Agency |
| VPP | Victoria Planning Provisions |

###### Abbreviations for Acts and Regulations

| **Abbreviation** | **Name** |
| --- | --- |
| Clause(s) | Cl(s) |
| Division(s) | Div(s) |
| Part(s) | Pt(s) |
| Regulation(s) | Reg(s) |
| Schedule(s) | Sch(s) |
| Section(s) | S(s) |
| Subdivision(s) | Sub-div(s) |

# Summary

## Overview

Part B of the regulatory impact statement (RIS) is based on analysis prepared by PricewaterhouseCoopers Australia (PwC) for the Department of Environment, Land Water and Planning ('the department). It covers the design, construction and completion / use elements of the building regulatory framework, as well as other topics not subject to an in-depth cost-benefit analysis. In addition, RIS Part B includes a discussion of regulatory fees.

## Cost-benefit analysis summary

For the following two topics – swimming pool barriers and siting – a full cost-benefit analysis has been undertaken.

For ***swimming pool barriers***, the preferred option of specifying uniform fencing requirements results in net quantified costs of between $105.8–$210.8 million over the regulatory period, depending on the assumed cost of upgrading, the level of compliance and the number of avoided brain injuries associated with improved barriers. The department expects additional benefits to be realised that are not as readily quantifiable.

For ***siting***, the adoption of cl 54 of the Victoria Planning Provisions within the building system results in significant avoided costs for single-dwelling applicants. By considering siting and amenity issues through the proposed Building Regulations 2017, most new single dwellings and alterations and extensions to existing single dwellings will not require a planning permit. This results in net benefits of $170.6 million NPV (net present value) over 10 years.

For the majority of topics that have been quantitatively assessed in the RIS, a break-even analysis has been undertaken. This is due to the difficulty for most Regulations in establishing what would occur in their absence. The results of the break-even analysis for proposed Regulations are presented in below.

Table 1: Break-even analysis for proposed Regulations

| Topic | Costs ($ m NPV over 10 years) | Benefit required to justify the costs |
| --- | --- | --- |
| Building permit requirements | $175.4 m – $182.4 m | A timesaving accruing to applicants and building surveyors due to prescribed information of 8.3%–8.6% and 670 avoided building defects each year.  The department considers this break-even point is likely to be met given the relatively minor time saving required (less than 10%) and the required reduction in building defects represents 0.3% of total defects that currently occur. |
| Protection work | $100.6 m | Reduction in delay costs of $369 for each domestic building permit and $738 for each commercial building permit.  The department considers these break-even points are feasible and reasonable given the Regulations reduce delay costs by providing a clear process through which negotiations occur and allowing adjoining owners to agree to proposed protection work at the earliest possible opportunity. |

|  |  |  |
| --- | --- | --- |
| Requirements for inspections, directions, notices and orders | $743.2 m – $1,202.1 m | A reduction in building defects targeted by existing mandatory inspections of 7%–28%, with a further reduction in high-risk, high-cost defects targeted by additional mandatory notifications of 6%.  The department considers these break-even points are feasible because the Regulations ensure that inspections are undertaken, when they may be forgone in the interests of time and money, and reasonable based on stakeholder experience and emerging evidence gathered by the Victorian Building Authority as part of its recent research. |
| Occupancy permits and certificates of final inspection | $96.4 m | A timesaving accruing to applicants and building surveyors due to prescribed information of 16%.  The department considers this is likely to be achieved given the potential for significant additional time costs associated with requesting clarification and additional information in the absence of clearly defined requirements. |
| Places of public entertainment (PoPEs) | $10.9 m | One avoided building fire in a PoPE every 0.75 years, or one death avoided every 3.25 years.  Given the potential for a single incident (either building fire or crowd disaster) to result in multiple deaths in a PoPE (which would far exceed regulatory costs), the department considers the break-even point is likely to be met. |
| Essential safety measures | $301.8 m – $441.9 m | Reduction in cost of average building fire of $700,000 – $1.0 million and 4–6 avoided fire-related deaths a year.  The department considers that the break-even requirements are likely to be met, given available evidence relating to building fire severity and risks to life in the absence of appropriate safety measures. |

For three further topics, limited data availability has led to a more qualitative approach to assessment.

Benefits associated with satisfactory completion of building work (through prescribed time periods for building permits) result in costs of about $11.5 million NPV under the preferred option. While benefits are unable to be quantified, they are described qualitatively in the RIS.

Costs associated with reporting authority approvals are estimated at $134.3 million. The department considers the benefits associated with the Regulations (by way of increased flexibility that allows some buildings to be built that otherwise would be prohibited, and reduced risk through preventing high-risk designs or inappropriate designs in high-risk areas) are likely to outweigh the associated regulatory costs.

Costs and benefits associated with projections were not able to be substantively quantified but are described qualitatively in the RIS.

# B1 Design phase

The building permit process is controlled by requirements contained in both the *Building Act 1993* (the Act) and in the Building Regulations 2006 (the current Regulations). An explanation of the building permit system is set out in Chapter A1.1.3 Building permit system of this regulatory impact statement (RIS). The Act establishes when a building permit is required, the process for obtaining a building permit and the cost of the permit. The Regulations support the Act by creating administrative requirements in relation to applying for, issuing and demonstrating a building permit has been issued and is in force for building work by, for example, requiring reporting and the display or production of a building permit for inspection – see **Figure 1**.

This chapter assesses the following current Regulations:

* current regs 301–306, which prescribe information to be included in and to accompany an application for a building permit made to the relevant building surveyor (RBS) under the Act and a power for the RBS to exempt an application for a stage of building work from any of these requirements
* current regs 313–314, which impose administrative requirements on the RBS, to be complied with when issuing a building permit
* current regs 316–318, which impose administrative requirements on an applicant for a building permit, the person in charge of carrying out building work and the owner, once a building permit has been issued by the RBS

current regs 319–322, which impose certain requirements on the RBS once they have issued a building permit.

The Act requires that a building permit must be issued and in force before carrying out building work, and it sets penalties for failing to do so.[[1]](#footnote-2) The Regulations support the Act by addressing administrative matters such as:

* prescribing information which must be submitted to the RBS with a building permit application
* prescribing the form of the building permit and the information which must be included in the building permit

establishing administrative responsibilities to enable interested parties to assess if building work has been authorised and to ensure all records of building work are accessible to regulators or future owners of a building.



Figure : Building permit process

## B1.1 Building permit requirements

### B1.1.1 The nature and extent of the underlying problem

#### The underlying problem

An incomplete building permit application can result in:

* the RBS requiring the applicant to provide additional information or documents or to amend the application before it is dealt with further[[2]](#footnote-3)
* the building permit being refused by the RBS under the Act

the RBS approving the permit without all the required information.[[3]](#footnote-4)

As a result, an incomplete building permit application will lead to the applicant incurring additional delay and administrative costs associated with providing further information or compiling a new application.

##### Unauthorised building work because of lack of information to demonstrate particular scope of building work has been independently assessed and approved

Heavy penalties apply under the Act in respect of building work which is undertaken without a building permit being issued and in force; and in respect of building work, where a permit has been issued and is in force but the work is outside the scope of work authorised by a permit.

Before undertaking building work, the applicant needs to be provided with a copy of the permit, from the RBS, so they can be assured the building work proposed in the application has been approved. The person in charge of carrying out the building work (that is, the builder) will also want assurance that the proposed work is authorised under the Act and the Regulations, and that as a result they will not be in breach of the Act in carrying it out.

All records in relation to building work will be held privately by the landowner and also by the RBS. Without the Regulations, the administrative costs for the Victorian Building Authority (VBA) and other regulators to access building records will be high as there will not be a single and accessible point of record storage for building records in each municipality. This will result in the need to conduct more-complex searches for building records in relation to a particular building: that is, a separate search will need to be conducted on a permit-by-permit basis.

The search costs associated with monitoring building work while it is being carried out will be high if permits and documents are not available onsite. VBA will also have very limited information to assist it to carry out its statutory functions of monitoring and enforcing compliance with the Act and the Regulations and to monitor the system of collection of the building permit levy.

If building records are not held by council, people wishing to inquire into any aspect of a particular building (for example an aspect which may be discovered from building design plans and documentation currently available on a council file if a building permit has been issued) would be required to engage professionals (such as an architect, engineer or a building inspector) to provide expert advice.[[4]](#footnote-5) Depending on the particular building condition, these reports can cost up to $30,000.

These costs may deter consumers from verifying certain aspects of the current built form (for example applicable materials, systems, methods of building, procedures, specifications and other relevant requirements) which may impact on how an existing building is altered, extended and/or renovated. This may in turn result in the carrying-out of future building work which does not take these matters into account, potentially risking significant consumer detriment.

#### The case for regulatory control through the building Regulations

The key purpose of the building permit system is to regulate building work to ensure it meets minimum necessary building standards and safety requirements to achieve certain objectives of the Act, including to protect the safety and health of people who use buildings, to enhance the amenity of buildings and to facilitate the construction of environmentally and energy-efficient buildings.

The Act sets out the process for making an application for a building permit to a municipal building surveyor (MBS) or to appoint a private building surveyor (PBS) – who are then the RBS – and also the process the RBS must follow to decide an application. As a result, it is the Act that imposes the substantive compliance burden on the owner to make an application for a building permit. It is also the Act that imposes the substantive compliance burden on the RBS to make a decision once that application is received, by issuing or refusing a building permit.

The Regulations are in place to support these obligations, by defining the scope and costs of building permit requirements.

##### Insufficient information in building permit applications

Three key problems may arise as a result of the submission of an incomplete building permit application.

First, the building permit may be refused by the RBS under the Act if insufficient information is provided, or if the building permit application does not comply with the Act and Regulations or with the planning permit.[[5]](#footnote-6) This can lead to the applicant incurring additional delay and administrative costs associated with compiling a new application.

Second, the RBS under sch 2 cl 2 of the Act may require the applicant to provide additional information or documents or amend the application before it is dealt with further, leading to additional delay and administrative costs for both the applicant and the RBS. These costs will be similar to those incurred in relation to a refusal and resubmission of an application for a building permit.

Third, the building permit may be issued in the absence of sufficient information to demonstrate approved building work meets required building and safety standards in contravention of s 24 and/or s 24A of the Act, meaning that it is possible that the approved building work does not meet minimum necessary building standards and safety requirements. This is a practitioner compliance issue under the Act. In 2011, this issue was noted in the Victorian Auditor-General's review of building records;[[6]](#footnote-7) however, the department does not have sufficient information to determine why this problem occurs. While the department does not know the exact reasons for this practitioner noncompliance, it may be caused by practitioner error, poor record-keeping and record reporting compliance, practitioner incompetence; and be exacerbated by commercial pressures.

While the department does not have evidence about how frequently the first and second problems above occur and why, consultation with building surveyors has indicated that all permit applications still require the surveyor to follow up and request additional information from the applicant (see discussion at Option 1).

The owner is responsible for preparing the permit application but may have the assistance of their builder to do so. **Figure 1** above shows it is up to the applicant to submit the application to the surveyor. However, the builder usually acts as the agent for the applicant for a building permit. Recent changes to the Building Act prohibit a builder who has entered into a major domestic building contract for domestic building work from appointing a PBS on behalf of an owner of land.[[7]](#footnote-8) This change addresses concerns raised by the Victorian Auditor-General[[8]](#footnote-9) that where there is a commercial relationship between the builder and the building surveyor this has in some cases led to the building surveyor prioritising the commercial arrangement over their statutory responsibilities.

##### Lack of information to demonstrate building work independently assessed and approved

The current building permit form includes critical pieces of information to demonstrate compliance of approved building work with the Act and Regulations. It also maps out the path to future compliance of building work throughout construction to completion, for example by providing a means of communicating regulatory timeframes for construction (that is, due dates for commencement and completion of building work), mandatory notification stages for inspections of key stages of building work and other key pieces of information (such as whether or not an occupancy permit or a certificate of final inspection is required in respect of the work once complete or substantially complete).

In the absence of reg 314, there would be no positive obligation (independently to that in the contract) for the RBS to forward a building permit and related approved and endorsed plans and specifications to the applicant and owner (where the owner is not the applicant) of a building project. The requirements of this Regulation provide important information for owners which aims to address information asymmetry.

##### Lack of oversight in relation to building permits that are issued

There are some potential issues in relation to noncompliance of building work with the building permit issued for that work. These include issues of noncompliance with approved and endorsed plans and specifications and a lack of assurance that proposed building work has been independently reviewed and approved before construction (by the RBS, being the appropriate registered building practitioner with statutory authority).

Such issues would be exacerbated in the absence of current regs 316 and 317, which contain requirements for the provision and display of a building permit and related documents onsite. The provision of this information onsite can assist people to satisfy themselves that the building work being carried out complies with the approved building design and can assist regulators in the performance of their monitoring and enforcement duties.

In the absence of Regulation 322, there would be no requirement for building surveyors to report building permit activity to the VBA. This in turn would mean that VBA would have very limited information to assist it to carry out its statutory functions of monitoring and enforcing compliance with the Act, as it would not be aware of critical information contained in the building permit (such as the building permit number, location of building work or dollar value of building work which is subject to the permit). This would result in VBA not receiving the building permit levy which funds its regulatory activities and supports consumer dispute resolution, nor would VBA be able to monitor and enforce the Act and the Regulations.

### B1.1.2 Addressing the underlying problem

#### Option 1 – Remake current Regulations

The Regulations set out the prescribed information for building permit applications (contained in current form 1) as well as the form of the permit (current form 2).

An application a for permit to construct a building must be accompanied by:

* three copies of drawings (to specific requirements)
* three copies of specifications describing materials and methods to be used in the construction
* three copies of allotment plans
* a statement of the use or intended use of all buildings shown on allotment plans

a copy of any computations or reports necessary to demonstrate that the building will, if constructed in accordance with the computations and reports, comply with the Act and Regulations.

An application for a permit to alter an existing building must include copies of drawings and allotment plans that clearly differentiate between the existing building and the proposed building work for which a building permit is sought.

An application for a permit to demolish or remove a building must be accompanied by three copies of:

* an outline and a description of the building or part of the building to be demolished or removed
* an allotment plan
* information to show that the remainder of the building will comply with the Act
* information showing the position and description of hoardings, allotment boundaries, barricades, temporary crossings, protective awnings and outriggers
* a written description of the demolition or removal procedure
* evidence that the demolisher has the necessary knowledge, experience, equipment and storage facilities to properly conduct the demolition operations.

Building surveyor to provide copies of permit to council.

###### Costs

The major costs incurred by owners or their agents in complying with building permit Regulations include time costs associated with:

* transcribing the information required by current reg 301 to be included in a building permit application
* providing copies of building permit application documents to the RBS

providing the required documents in relation to the granting of the building permit to the builder.

The total cost associated with these tasks is estimated to be $21.1 million a year, or $177.9 million NPV over 10 years.

Building surveyors also incur administrative costs associated with providing information on a monthly basis to VBA in relation to building permit applications. The total cost of complying with this requirement is estimated to be $460,000 a year, or $3.9 million NPV over 10 years.

Total costs associated with remaking the Regulations are estimated to be $21.5 million a year or $181.8 million NPV over 10 years.

###### Benefits

The Regulations in regard to building permit requirements provide for a streamlined regulatory process. Prescribed forms, time limits and accompanying documentation streamline the permit requirements under the Act. Savings in time and money are likely to arise from practitioners conforming to standard requirements.

Consultation with building surveyors indicates that even with the current Regulations specifying prescribed information for building permit applications, all permit applications still require the surveyor to follow up and request additional information from the applicant. The benefit of the Regulations is that permit information is provided in the required form, reducing the time taken to follow up (by the surveyor) and provide additional information (by the applicant). Building surveyors also indicated that without the standard forms they would have to prepare their own forms which would add to their costs. Without prescribed forms, some less-experienced building surveyors may issue permits without the required information, leading to potential safety risks.

##### Evidence the scope of building work is authorised

The building permit contains critical pieces of information to demonstrate compliance of approved building work with the Act and Regulations. It also maps out the mandatory notification stages for inspections of key stages of building work and provides other key pieces of information (such as whether or not an occupancy permit or a certificate of final inspection is required).

##### Accessible records of building work

Should neighbours, other residents or the council have queries or want to raise issues in relation to the building project, the details are readily available (either onsite or through signage) as the building work progresses.

Once the work is completed, a record of that permitted work is retained by the council. The requirement to lodge records with the council ensures that all relevant building records can be retrieved for enforcement purposes, and it also enables an accurate record of the built form to be retained.

A break-even analysis was applied to quantify the time saving the Regulations would need to provide to building surveyors and applicants to request and provide additional information, compared to the base case of no Regulations. In order for the benefits to equate to costs, the time saving associated with the Regulations would need to be in the order of 8.8% (about a 45-minute saving for both the applicant and RBS) per application on average. The department considers this likely to be achieved, given the required reduction in time (less than 10% compared to the base case) is minor, particularly when considering the challenges likely to be faced in practice by applicants in submitting all relevant information to surveyors in the first instance without prescribed information.

### B1.1.3 Addressing issues with the design / implementation of the Regulations

A range of issues with the application of existing building permit Regulations have been identified through consultation with industry stakeholders and detailed review of the operation of the current Regulations. These issues and options to address them are set out below, together with analyses of the associated costs and benefits.

#### Option 1.1 – Increase administrative efficiencies

Early feedback from stakeholders suggested:

* information requirements for some building permit applications may be excessive

opportunities exist to improve the administrative efficiency of the Regulations by facilitating electronic lodgement of documents.

##### Requirement to provide and consider all prescribed information

**Issue:** An additional administrative burden is placed on both applicants and building surveyors due to the need to provide and consider information and documents (even when they are not required) to approve certain building work because of the nature of that particular building work.

**Option:** Require minimum documentation and enable the RBS to make a professional judgement about what documents they require to assess a particular permit application.

##### Submission of electronic copies of documents

**Issue:** An additional regulatory burden is placed on applicants wishing to submit documents electronically to the RBS: three hard copies are still required when submitting electronically.

**Option:** Reduce the number of hard copies required when submitting documents electronically. This option would facilitate the electronic lodgement of documents by reducing the number of hard copies required to be submitted in addition to the electronic lodgement from three to one: this would also apply to the number required to be forwarded by the surveyor to the applicant.

The requirement for lodgement of at least one hard copy of each required document has been retained. This allows for the situation where a building surveyor may not have the capacity to receive electronic copies: that is, they cannot print out large plans drawn to scale. However, this requirement is intended to be flexible. A new power is proposed to allow the RBS to exempt an applicant from the requirement to provide a hard copy if this is unnecessary. Conversely, a building surveyor may request, at their discretion, additional hard copies of any document they reasonably require.

###### Costs

##### Minimum documentation required

The risks associated with this option are that the RBS could issue a building permit in the absence of sufficient information to demonstrate that the proposed building work will meet required building and safety standards. This would increase the risk that the approved building work will not meet minimum necessary building standards and safety requirements. In these instances, this will be treated as a compliance issue under the Act because the RBS will be issuing a building permit in contravention of s 24 and/or s 24A of the Act.

However, this issue has been addressed in part by recent amendments to the Act which are targeted at making building surveyors more accountable for assessment decisions when issuing a building permit and at the high level of noncompliance by PBSs in relation to lodgement of required documents with councils. The requirement for a checklist has been introduced, together with a requirement for the RBS to certify that they have lodged the required documents.[[9]](#footnote-10)

In 2011, the Victorian Auditor-General's review of building records[[10]](#footnote-11) highlighted that building permits are being issued in the absence of sufficient information to demonstrate that the building work meets required building and safety standards (Box 1 below). This makes it possible that the building work being approved does not meet minimum building standards and safety requirements. The audit found that there was inadequate information on file for 96% of the 401 permits examined to assess compliance with these requirements.

However, despite the outcomes of the Victorian Auditor-General’s review, the VBA's audit (Box 2 below) demonstrated that in 95% of instances the RBS was able to demonstrate the lack of information had no impact on health and safety. This evidence, together with stakeholder feedback, indicates that in some instances a universal requirement for minimum mandatory documentation for all building work could be excessive.

Submissions received from stakeholders during preliminary consultations suggest that not all documents required for a building permit application are always relevant to the building work which is the subject of the application. For example, one stakeholder noted that reports and computations may not be necessary for relatively simple construction (such as verandahs and carports).

##### Reduction in number of hardcopies required

Costs associated with this option will be equal to those associated with Option 1 – Remaking the Regulations, less avoided costs associated with the reduction in the number of hardcopies required to be submitted (from three copies to one).

Consultation with MBSs suggests that there is significant variance in the proportion of building permit applications currently submitted electronically across councils. Typical estimates range from between 20%–50%. Data obtained regarding costs associated with the compilation and forwarding of information are not granular enough to separate general search / compilation costs and printing costs. By way of an illustrative estimate, it is assumed that printing and packaging of hard copies would take an applicant five minutes on average.[[11]](#footnote-12) Applying the ranges above regarding the number of documents already submitted electronically, the avoided time cost associated with printing applications is estimated to be between $60,000–$150,000 a year, or $500,000–$1.2 million NPV over 10 years.

**Consultation questions**

Submissions from stakeholders have focussed on the inefficiency of providing multiple hard copy documents, particularly where documents are also provided electronically. Should any hard copy submissions be required when an application is lodged electronically? Why or why not?

Are avoided cost estimates associated with no longer requiring hard copies to be printed and submitted reasonable?

Are there additional costs not captured above that can be readily quantified?

Box : Victorian Auditor-General's review of compliance with building permits

In December 2011, the Victorian Auditor-General released findings from his audit of the building permit system. The report noted the following.

*'The Act requires a building surveyor to determine if proposed works comply with all statutory requirements before issuing a permit. However, significant gaps exist in council records to demonstrate that surveyors have adequately discharged this statutory obligation, and that approved works meet requisite building and safety standards.*

*'Specifically, there was inadequate information on file for 96 per cent of the 401 permits examined to assess compliance with these requirements.*

*'However, 72 per cent of domestic permits and 76 per cent of commercial permits did not contain sufficient information to demonstrate compliance with five or more required building technical or safety standards. Similarly, about 12 per cent of domestic permits and 27 per cent of commercial permits failed to show compliance with respect to 10 or more requisite standards.*

*'In addition to these critical information gaps, there was also insufficient evidence in 89 per cent of the 80 permits subsequently selected for more detailed examination to determine whether building surveyors had thoroughly assessed all lodged information.*

*'Therefore, there is little systemic documentation that surveyors had sufficient information on which to form a reasonable view that proposed building works complied with the Act and Regulations before issuing the permits.'*

Box 2: VBA audit of the building permit process

From late 2012 to mid-2014,VBA undertook an audit to measure the compliance of practitioners during the building permit process. The audit specifically focused on material the RBS receives, considers, records and submits to council. The scope of this audit was documents contained in the building permit file and did not include the review of the physical building work.

The first phase consisted of auditing 1,000 building permit files at 20 councils, both metro and regional. The objective was to assess the level of compliance and identify issues in the building permit system. The permits were selected via random sampling, with controls to ensure proportions of domestic and commercial work reflected proportions of permits issued in the municipality and work undertaken by MBSs and PBSs was represented. The building permits audited were issued between January 2010 and December 2012 by a total of 212 registered building surveyors (about half of all registered building surveyors in Victoria).

A distinction was made between noncompliance – clear evidence based on the sighted documentation that the proposed work would not comply with the legislative requirements – and information missing – insufficient evidence on the file to make a determination in relation to compliance. Because the legislation in many instances provides the building surveyor with discretion as to what information may be required, a rating of information missing does not mean that the file is noncompliant: it simply means that compliance was not able to be determined. Of the permit files audited at council, on average 63% of the items assessed in each file were found to be compliant (documentation and technical content). There was not enough evidence to make a determination on compliance for 29% of items (information missing), and 8% of items were not compliant with the legislative framework. Compliance was greater for domestic building permit files (65%) than for commercial (60%).

The Building Audit Program team worked with the RBSs to address over 1,500 possible health and safety risks identified in the first audit with the following results:

* in 95% of instances the RBS was able to demonstrate that there was no impact to the health and safety of the public
* where issues were confirmed, the RBS was requested to undertake remedial action

where serious noncompliance was not remedied (less than 1%), the issue is being addressed through VBA’s compliance and enforcement processes, and appropriate action taken.

The increase in flexibility in terms of required documentation is expected to reduce the administrative burden on applicants to compile and supply documentation as part of a building permit application. This will result from no longer having to provide documentation that is not required by a building surveyor to make an informed assessment of the application. This discretion is similar to that granted to building surveyors in current reg 306 in relation to documentation to approve staged building work.

While this discretion will be available to the RBS for all projects, the benefits will be more commonly experienced for smaller building projects, as they will generally be less complex and require less documentation (for example, where a building permit has been obtained to relocate a smoke alarm or to install cabling). In order to quantify the expected reduction in costs compared to Option 1, building permits that relate to work valued at less than $5,000 is used as a proxy for building work considered to be minor in nature.[[12]](#footnote-13) Given the lesser complexity of smaller building projects, it is expected that the RBS would request fewer documents in order to issue the permit, compared to what occurs under the current Regulations.

A degree of uncertainty exists in relation to the time savings expected to be realised by applicants in compiling information for minor building work. In order to capture a potential magnitude of savings, an indicative range was applied that the documentation requested by building surveyors for minor building work would take 25%–75% as long for applicants to supply as would providing all documents currently required under the Regulations. This would result in a reduction in regulatory burden of between $370,000–$1.1 million a year, or $3.1–$9.3 million NPV over 10 years.

**Consultation question**

Is the range of time savings expected to be realised by applicants for minor building work considered to be reasonable?

Total costs of the option

Total costs associated with this option are estimated to be between $20.3–$21.1 million a year, or $171.2–$178.2 million NPV over 10 years.

###### Benefits

The amendments proposed under this option are not expected to be materially different from those realised by Option 1 in terms of time savings, providing evidence that the building work is authorised and forming an accessible record of building work.

Applying the same break-even analysis assumptions as for Option 1, the Regulations would need to provide time savings for RBSs and applicants of 8.3%–8.6% in order for the costs of the Regulations to equate with the benefits.

#### Option 1.2 – Strengthen reporting requirements

The objective of this option is to provide current and targeted information to VBA to allow it to quickly and easily identify fundamental compliance issues, as soon as possible, to better allow it to target its performance audit program and, as a result, carry out its monitoring and enforcement function.

This option seeks to keep building surveyors and other registered building practitioners accountable for building work for which they are responsible, and to cause improvements in record-keeping and decision-making through strengthened reporting obligations under the Regulations.

##### Level of information provided to VBA

**Issue:** Insufficient information is submitted to VBA by building surveyors to enable it to monitor and enforce compliance with the Act and Regulations.

**Option:** Reporting to VBA: require additional information to be reported by the RBS to VBA.[[13]](#footnote-14)

This additional information relates to timeframes for building work and to specific obligations relevant to the work being carried out including mandatory inspections (stages and dates of approved inspections), whether any exemption or consent to partial compliance with the Regulations has been granted, whether the work relates to a change of use of a building, whether the work triggers the requirement for protection work. As mentioned above, providing this information to VBA is designed to assist it to better carry out its oversight role with respect of building surveyors and building practitioners, to monitor and enforce compliance with the Act and Regulations.

##### Level of information included in building permit

**Issue:** Current information requirements for building permits do not adequately set out time limits for building work, details of approved alternative solutions and Building Appeals Board (BAB) determinations.

**Option:** Require additional information to be included by the RBS when issuing a permit.

This would include a clear statement in the building permit form (the current form 2) that describes when a building permit lapses and the consequences of the lapse. This is intended to improve compliance by owners and building practitioners with regulatory timeframes for construction projects and reduce the likelihood of a building permit lapsing inadvertently, which might give rise to the need to apply for a new building permit or building work continuing in the absence of a valid building permit and in breach of the Act.[[14]](#footnote-15)

It would also include more specific details of performance solutions, categorised in table form for ease of reference according to whether they relate to fire performance, bushfire performance or other matters. Details to be included relate to the method of approval, date of approval and details of applicable materials, systems, methods of building, procedures, specifications and other relevant requirements necessary to provide transparency and compliance in relation to the nature of the building solution that comprises the performance solution.

It would further include more specific and targeted details of BAB determinations relevant to the building work (for example, in relation to protection work) where these are made before a building permit is issued. As with the details provided for alternative solutions, the inclusion of such details will provide transparency that such a determination has been made and also the nature of the determination (for example, by identifying whether any building Regulations have been varied in relation to the building work).

###### Costs

##### Additional information provided to VBA

The major cost imposed by this option is the additional time cost incurred by building surveyors to forward information to VBA on a monthly basis. The scale of this impact will depend on how much additional time it will take to provide the 12 additional information items associated with the option, as well as the process employed by the building surveyor to forward information (that is, an automated or manual process).

For building surveyors with automated systems (estimated to be 60% of total RBSs),[[15]](#footnote-16) it is expected that the additional requirement would result in a moderate one-off cost being incurred to adjust existing systems to incorporate additional information (which should already be in the possession of the building surveyors). Based on consultation with PBSs, this one-off cost to adjust the automated process is expected to be minor in nature and thus has not been quantified.

For building surveyors that record information manually, the expected costs will be higher and incurred on an ongoing basis. The extent to which the time spent each month recording and forwarding information to VBA will increase under this option is uncertain. By way of an indicative estimate, an assumption is applied that increasing the number of information categories from 8 to 20 will be directly correlated with the increase in the time taken to record information (that is, a 150% increase). This would result in additional time costs of $500,000 a year, or $4.3 million NPV over 10 years.

**Consultation question**

Is the estimated increase in time taken to record and forward information to VBA for RBSs that enter this information manually considered to be reasonable?

##### Provide additional information in building permit

The requirement to provide additional information in a building permit may lead to additional time costs being incurred by the RBS when transcribing information to be included in a building permit. In aggregate, it is not expected that these costs will be significant, given the additional information required (namely, specific details regarding alternative solutions and more specific details of BAB determinations made before a permit is issued) will not be relevant to the majority of building permit applications.

Where this information is required to be transcribed, the building surveyor should have this information readily available and this should therefore not contribute to a significant additional time cost.

**Consultation question**

Is the assumption that RBSs will have additional information readily available to include in the building permit considered reasonable?

##### Total costs

Total costs associated with this option are estimated at $22.1 million a year, or $181.8 million NPV over 10 years.

###### Benefits

##### Additional information provided to VBA

The key benefit associated with providing additional information will be the improvement in VBA's ability to carry out its monitoring and compliance functions. This in turn will improve the effectiveness of the building permit framework due to higher compliance from participants.

Based on previous audits carried out by VBA and Victorian Auditor-General (referred to in the case study above), there appear to be significant information gaps in the building permit system which make it difficult for surveyors to demonstrate that they have adequately discharged their obligations under the Act and Regulations. It is noted in the VBA audit that in most cases the RBS was able to demonstrate there was no potential risk to the public. However, the lack of available public records reduces the efficiency of VBA's audit activities because there are additional transaction costs if further records must be requested directly from the RBS. Additional information collection by VBA will improve its ability to monitor the compliance levels of building surveyors and require remedial action to be taken where necessary.

This option provides similar benefits as Option 1 in terms of streamlining the regulatory process, by specifying the information required to be provided to building surveyors as part of the permit application. However, there are additional costs incurred by building surveyors associated with the requirement to provide additional information to VBA each month. The intent of this requirement is to improve the ability of VBA to monitor building surveyors' compliance with the Act and require remedial action to be taken where noncompliance is identified.

The intended outcome associated with introducing this requirement is that instances of noncompliant work will decrease. To carry out a break-even analysis, the number of instances of noncompliance (using residential defects as a proxy) that would need to be avoided was estimated. The average cost of a building defect is estimated at $751.[[16]](#footnote-17) In order for the costs of additional information requirements to equal benefits, an additional 670 defects would need to be avoided a year. The department considers this achievable given this figure is relatively small in the context of over 100,000 building permits issued on an annual basis. Similarly, in the context of an estimated 242,000 defects currently (discussed further in Chapter B2.3.2 Addressing the underlying problem), this requires a relatively minor reduction in defects.

**Consultation questions**

The department understands that it may take time for the building industry to update reporting systems to adjust to the new proposed requirements and anticipates that six months provides an appropriate lead-in time between the making of the Regulations and the requirement for compliance. In your view, is six months adequate? Why or why not?

##### Provide additional information in a building permit

By increasing the clarity with which the requirements of the building permit are conveyed to the owner and building practitioner, the department expects that the level of compliance with the Act and Regulations in terms of the building work carried out will increase, as obligations will be more effectively communicated and as a result understood and complied with. This in turn is likely to lead to a lower prevalence of defective or noncompliant work being carried out, as well as a reduction in the incidence of permits lapsing. Additionally, the efficiency and effectiveness of the monitoring and compliance activities of VBA are also expected to increase as the requirements of the building permit (particularly in relation to alternative solutions and previous BAB determinations) will be more easily identified on the permit.

#### Minor changes

The department is also proposing to make the following changes (in terms of expected costs and benefits) to improve the operation of the Regulations.

##### Building permit applications

The department proposes to mandate the use of current form 1 for the purpose of making an application for a building permit to a building surveyor. This amendment will promote building permit applications being submitted to the RBS in a standardised form. Currently, providing an application for a building permit can be done in any form so long as the prescribed information is submitted. The mandatory use of a standard application form should make the building surveyor's role of identifying key pieces of information necessary to demonstrate compliance more efficient, as well as making the identification of missing pieces of information more efficient. There will be costs associated with standardising the form (for example, search costs in terms of finding the form itself) and there is potential for reduced flexibility in making an application.

The department also proposes to add the requirement to provide the following information with a building permit application: planning permits and a list of essential safety measures (ESMs) for the proposed building work (where applicable). The department recognises that the RBS has responsibility for determining the ESMs for a building but notes that consideration of ESMs at the design stage may be useful, particularly for complex buildings.

**Consultation questions**

By requiring this information at the application stage for a building permit, do you consider that this will reduce delay costs for processing a building permit and determining compliance with other regulatory requirements?

In your experience, how does the determination of ESMs occur in practice? Would enabling the RBS to require such information at the permit application stage be of assistance to applicants and building surveyors? Why or why not?

##### Issuing building permits

The department proposes to make clear the explicit positive obligation on the RBS to adequately document their assessment decisions with respect to whether a proposed performance solution meets the relevant performance requirements of the National Construction Code (NCC). It is already a requirement of the NCC to document these decisions. However, by reproducing this requirement in the Regulations in relation to performance solutions it is anticipated this will increase rigour and accountability in relation to how performance solutions are assessed and approved, documented and recorded. A complementary requirement in the Regulations requires such a record to be lodged with a council with the balance of the relevant building permit documentation. As the assessment of compliance of a performance solution is not as straightforward as the assessment of compliance of a building solution with deemed-to-satisfy provisions of the NCC, and performance solutions can apply to any aspect of building work (for example, to building solutions to address fire risk and other safety risks), it is imperative the assessment basis for such a compliance decision is transparent, recorded and available for inspection as a building record, to help ensure only performance solutions which meet relevant performance requirements of the NCC are approved. VBA has published a practice note, *Alternative Solutions Procedures and Documentation*.

As this requirement to document assessment decisions already exists in the NCC, the department does not consider that this amendment will impose any additional costs. However, where building practitioners may not usually document those decisions, introducing an explicit requirement will impose some cost. The department notes the findings of VBA’s Building Permit Audit, the report of which was released in September 2014, which found that there was a lack of documentation relating to alternative solutions in building permit records.[[17]](#footnote-18) The benefits of improved awareness of the obligation to document all assessment decisions under the Building Code of Australia (BCA), and in turn improved transparency and accountability associated with decisions, should lead to improved compliance with minimum building standards The department considers the costs will not be significant because this type of record-keeping should have improved over the last two years as a result of VBA’s audit and actions to improve the record-keeping of documentation used to make a determination on an alternative solutions.

**Consultation question**

Do you consider that a positive obligation in the Regulations is required in order to ensure compliance with relevant legislation, or could this be better achieved through other means (such as a practice note)?

##### Demonstrating a building permit has been issued and is in force

The department proposes to revise offences in reg 317 to improve enforcement by removing the words ‘must take all reasonable steps’. This change would mean that a person in charge of carrying out building work will be required to actually provide, rather than take steps to provide, the relevant information onsite.

The words 'reasonable steps' have been removed to create a strict liability offence, so it is easier to enforce this requirement through infringements. It is not considered onerous to have these documents available onsite, either on an electronic device or in hard copy. If a regulator does find that a builder has not complied with this requirement and they accept the reason for noncompliance, they do have the discretion to issue a warning and not enforce the requirement.

##### Council record-keeping

Under the current Regulations, councils are required to keep records in relation to building and occupancy permits for a prescribed time and in a prescribed form.

Regs 324 and 1010 each require that building records are retained in their original form for not less than 10 years after the relevant event. After this period, documents may be retained in their original form or in any other manner specified by the Keeper of Public Records. The department proposes to amend Regulations to enable consistency with the *Electronic Transactions Act 2000*.

S 11(2) of the *Electronic Transactions Act 2000* overrides the requirement to retain documents in ‘original form’ and permits the retention of documents in electronic form provided certain conditions relating to the accurate digitisation of public records are satisfied.[[18]](#footnote-19)

Provided that documents retain their material and evidentiary integrity, and are kept in a form suitable for archival storage and later retrieval and use, there is no evident justification to require that documents be kept in original form.

##### Notification requirements

The department proposes to introduce explicit requirements for the RBS to forward a copy of a building permit to the builder, and for the builder to notify the RBS of changes in their details. These requirements facilitate administrative efficiencies to assist building surveyors and builders to carry out their obligations under the Act and Regulations.

#### Conclusion

These Regulations support the operation of the Act by facilitating the efficient administration of the building permit process. The current Regulations are straightforward and easy to understand. They impose administrative requirements associated with applying for and issuing of a building permit, demonstrating a building permit has been issued and is in force, and providing building records.

The objective of these Regulations is to reduce administrative and delay costs associated with incomplete applications and address information asymmetry for regulators, interested parties and future owners inquiring about past building work.

However, there are emerging issues found with these requirements, which are discussed in detail under Option 1.1 and Option 1.2.

The preferred option is the implementation of Option 1.1 (which reduces administrative burden) and Option 1.2 (which increases reporting obligations). This is because Option 1.2 offsets the risks identified in Option 1.1 (that the RBS will issue a building permit without adequate documentation to assess that the proposed works meet requisite building and safety standards).

Implementing both options results in total annual costs of between $20.8–$21.6 million a year, or between $175.4–$182.4 million NPV over 10 years.

The streamlining of Regulations (Option 1.1) will require a time saving of 8.3%–8.6% compared to a no-Regulations scenario in order for costs of the Regulations to equate with benefits. The additional costs imposed by requiring additional information to be provided to VBA by building surveyors (Option 1.2) would require 670 defects to be avoided each year. Given the relatively minor required time saving (less than 10%) and reduction in building defects (currently an estimated 242,000 defects each year), the department considers it likely that the required break-even point will be met.

## B1.2 Reporting authority approvals

'Reporting authority' refers to a body or person (other than a MBS or PBS to whom an application is made) that is required by the Act or Regulations or by any other Act or Regulations to report on or consent to an application for a permit (for example, Metropolitan Fire Brigade [MFB], Country Fire Authority [CFA], councils and water authorities).

### B1.2.1 The nature and extent of the underlying problem

#### The underlying problem

Report and consent requirements generally address two broad problems related to building work:

* a lack of flexibility in prescriptive legislation and Regulations

providing additional expert oversight for building work related to high-risk matters, occurring in a high-risk area or creating significant externalities.

##### Lack of flexibility in legislation and Regulations

In some instances, building legislation and Regulations are inflexible in nature, either allowing or prohibiting particular building work or building designs based on a set of prescriptive requirements. This may lead to instances where particular proposals that are relatively low-risk in nature would ordinarily be disallowed without a compelling risk-based reason for doing so.

The inclusion of the report and consent requirement allows a reporting authority to consider and potentially agree that building work be allowed (possibly subject to conditions).

This approach provides greater flexibility where an applicant believes an alternative design should be allowed. It also ensures the appropriate decision-maker and expertise informs that decision.

##### Adequately assessing work related to high-risk matters or building work in high-risk areas

Building work that relates to matters posing potentially significant risks to owners and occupiers, or the infrastructure of third parties and design measures, may require assessment by technical experts.[[19]](#footnote-20)

The environment in which a building is proposed to be built may also increase risks to owners, occupants and third parties. Examples include building in bushfire-prone or flood-prone areas. Expert assessment in this instance would ensure building designs will perform adequately in the event of a natural hazard or other event deemed more likely to occur within a given area.

Additionally, building work often creates externalities that may impact third parties not involved in contracting or carrying out the work. For example, a building owner may not consider the impact a particular stormwater drainage design may have on adjoining properties and council infrastructure. In this instance, a reporting authority (the council) acts as a check point to ensure these impacts are properly overseen.

The Regulations contain the substantive requirement to engage with reporting authorities, either in instances where building work or designs would ordinarily be prohibited, or where additional risks or externalities are deemed to require expert oversight. In the absence of report and consent Regulations, the matters for which report and consent of reporting authorities are required would not be specified, nor would the reporting authorities from which report and consent is required to be obtained.

This would lead to reduced flexibility in the Act and Regulations where any work deemed noncompliant would be disallowed, without the option of seeking consent from a reporting authority where there may be justification for allowing the work to occur.

Additionally, building work related to matters that pose additional risks would not receive additional oversight through a report and consent process, potentially increasing the prevalence of building work that is of an inappropriate standard in relation to perceived risks. If decisions require expert knowledge, the risks would be especially higher without third-party oversight. In these situations it is assumed there would be a greater chance the building design or materials used for construction may not be appropriate for reducing risks associated with the physical environment or the type of use of the building, putting occupants in greater danger.

#### The case for regulatory control through the building Regulations

The report and consent process attaches to each of the key areas that are discussed in the other sections of this chapter. As such, please refer to these chapters for the case for regulatory control in each area.

#### The potential size of the problem

There are an estimated 37,000 applications for report and consent a year, comprised of an estimated:

* 20,600 applications to councils[[20]](#footnote-21)
* 2,100 applications to fire authorities[[21]](#footnote-22)

14,300 applications to service authorities.[[22]](#footnote-23)

### B1.2.2 Addressing the underlying problem

#### Option 2 – Remake current Regulations

Report and consent matters that are currently prescribed in the Regulations are summarised briefly below under the two primary categories for which report and consent typically occurs.

##### Increasing flexibility of legislation and Regulations:

Bushfire safety matters (supports exemption under the *Planning and Environment Act 1987* by ensuring matters that would normally be determined when obtaining a planning permit are considered in relation to the building permit): permit applications related to buildings destroyed between 1 January 2009 and 31 March 2009 where the design does not comply with requirements relating to water supply for firefighting purposes and emergency vehicle access may apply to the relevant council for an exemption to these requirements.

Building over easements (enables building work to be permitted that would be ordinarily prohibited): a building permit that relates to building over an easement may apply to the reporting authority in which the easement is vested for consent to do so.

Siting (enables building work to be permitted that would be ordinarily prohibited): the building Regulations regulate siting matters for single-dwelling buildings (Class 1 and associated Class 10a structures) where a planning permit is not required. If proposed designs do not comply with the siting Regulations, an owner can apply to the relevant council for an exemption through a report and consent process.

Projections (enables building work to be permitted that would be ordinarily prohibited): projection Regulations specify instances in which buildings may project beyond the street alignment. If a building permit includes a projection that does not comply with these Regulations, an owner may request a report and consent from the relevant council for the projection.

Precaution work beyond the street alignment: where required precaution work (relating to protection of the public) will extend beyond the street alignment, the report and consent of the council must be obtained, unless this is otherwise allowed by local laws.

##### Providing additional oversight:

Fire safety (manages risks by ensuring appropriate expertise is applied to the discretionary decision-making): where an alternative solution to a fire safety matter is proposed that does not meet the deemed-to-satisfy provision of the NCC, the report and consent of the Chief Fire Officer must first be obtained.

Stormwater drainage (manages risks by ensuring that consideration is given to the impacts the building work will have on adjoining properties and that the load on council infrastructure is monitored and managed): any building work that includes a stormwater drainage system must seek a report from the council indicating the location of the point of discharge from an allotment.

Septic tanks (this Regulation is designed to ensure oversight of septic tanks that are not authorised under or regulated by the *Environment Protection Act 1970*): a building permit requiring installation or alteration of a septic tank system or building over an existing system must obtain report and consent from the relevant council.

Flood areas (manages risks by ensuring that the building work is appropriate in relation to the flood risk): if a building permit relates to a site liable to flooding, the report and consent of the relevant council must be obtained, unless a planning permit is required or the building height related to flood matters is specified in the planning scheme.

Designated land or work (manages risks associated with the impacts of building work on third-party infrastructure by acting as a check point): the report and consent of the relevant council must be obtained for an application for a building permit for the construction of a building on designated land or works (declared under the *Water Act 1989*).This Regulation requires a council to ensure that approval is obtained from the relevant authorities if building works affect existing drainage lines or if building works are proposed within 20 m of a waterway.

###### Costs

The following direct costs are imposed by Regulations relating to report and consent matters.

Owners seeking report and consent incur costs in preparing and submitting an application to the reporting authority, with the majority of report and consent applications made to councils. The cost incurred by applicants in preparing and submitting report and consent applications (assuming a professional is engaged to prepare the report) is estimated to be $15.9 million a year or $134.3 million NPV over 10 years.

Reporting authorities (currently councils, the chief officers of CFA and MFB and electricity supply authorities) are required to assess applications, which involves administrative costs. The fees topic outlines the costs to councils of performing this function. Consultations with fire authorities indicates that chief officer costs for report and consent requests are $605 on average (5 hours at $121 per hour).

The report and consent process does not necessarily add time costs as the process runs concurrently to a building permit application and statutory timeframes of 10–15 days apply.

###### Benefits

The report and consent process:

* provides increased flexibility by allowing for appropriate building designs that would otherwise be prohibited from proceeding

prevents the construction of high-risk designs or inappropriate designs in high-risk areas (and so, by implication, prevents costs associated with such designs).

Given the wide variance in types of reports and consents that exist in the Regulations and the parties to which benefits accrue, quantifying benefits associated with the process has not been undertaken.

#### Other changes for future consideration

Some stakeholders submitted that the matters that require a report and consent should be revised, particularly in relation to matters that require report and consent from MFB or CFA and in relation to projections. These options were not explored because there was not enough evidence to assess whether there would be any adverse impacts modifying legacy requirements.

In relation to alternative solutions that require a report and consent from a chief officer, submissions advocating changes to these provisions differed between MFB and CFA. These differences in positions need to be reconciled before more substantial changes could be considered. In addition, the approaches recommended in the submissions required further research and data collection to develop a policy recommendation than the current timeframes allowed. It is proposed that this further work and targeted consultation with MFB and CFA continue as part of the implementation and evaluation plan.

The department is also considering the removal of certain requirements that stakeholders submitted are either duplication of existing processes or that are regularly approved by reporting authorities and are thus considered unnecessary in the Regulations. However, as submissions on these matters differed between industry stakeholders and council stakeholders, further analysis and council support is considered necessary before these matters are put forward for amendment. This was particularly relevant to projections, septic tanks, demolition (which would require legislative amendment) and some siting matters in pt 4 of the current Regulations.

In addition, there is an option to remove the requirement to have the design of an existing stormwater drainage system approved by the RBS (current reg 610). An early submission from a peak industry body stated that it had received reports from members who have been required by a RBS to replace an entire stormwater drainage system to satisfy this Regulation, where replacement was not considered warranted.

The current Regulation requires every stormwater system to the point of discharge be approved by the RBS. This does not acknowledge alteration of stormwater drains which is common in building alteration. This proposed change would reduce the scope of reg 610. It would be redrafted to only apply to new stormwater systems connected to the legal point of discharge, not where a new system is connected to an existing stormwater drain.

The department consider this to be a viable option although further advice from councils on the impacts of this working in practice needs to be explored further. This reduced scope may affect the capacity of stormwater drainage infrastructure, creating more issues, especially if the existing system results in an increased discharge from the site. For example, building work may result in a larger stormwater catchment area as a result of a much larger roof area collecting rainwater.

#### Conclusion

Remaking the Regulations unchanged has quantified costs of $134.3 million NPV over 10 years. The department considers that the benefits associated with the Regulations (by way of increased flexibility that allows some buildings to be built that otherwise would be prohibited, and reduced risk through preventing high-risk designs or inappropriate designs in high-risk areas) are likely to outweigh the associated regulatory costs. This is considered reasonable because reporting authority approvals are applied for regularly in relation to building permit applications, and a large part of Victoria is considered to be flood-prone and/or bushfire-prone.

## B1.3 Siting and amenity controls

### B1.3.1 The nature and extent of the underlying problem

#### The underlying problem

Siting provisions primarily address issues of amenity and neighbourhood character. A citizen's primary concern is that a domestic construction meets their needs. While there are incentives for them to take into account the negative impact their building may have on adjoining properties or the immediate neighbourhood (for example, on behavioural norms or community character), these vary and can be difficult to predict.

As such, unregulated residential construction may negatively impact neighbourhood character and amenity by way of poor siting and design. Amenity issues include overshadowing, overlooking, excessive visual bulk, solar access and streetscape considerations. It is difficult however to put a value on reduced amenity: see Box 3 for a case study about this issue.

A Standing Advisory Committee was appointed in 1998 by the then Minister for Planning and Local Government to review how planning controls were working in relation to overlooking, overshadowing and building on or near boundaries. An issues and options paper prepared by the committee in August 1999 revealed:

* new houses did not respect neighbourhood character and stood out from its neighbours; characteristics of this were projection of buildings into a consistent front setback, high solid front fences, lack of visible vegetation and excessive visual bulk
* there was a lack of development controls to address overshadowing and overlooking of existing properties when a single dwelling was being constructed next door; this was causing issues because housing styles were changing in favour of two-storey houses: except in the inner suburbs, Melbourne had not traditionally had many two-storey dwellings

one of the strongest messages to emerge from the committee's final report was the need for judgement when considering new residential development, particularly in infill locations: the worst outcomes in terms of site responsiveness and impact on amenity and neighbourhood character resulted from a mechanistic application of rules and standards[[23]](#footnote-24): Box B4 has two examples of siting issues addressed in the report.

#### The case for regulatory control through building Regulations

Siting and amenity controls for residential development in Victoria are contained in the planning system, namely cls 54 and 55 of the Victoria Planning Provisions (VPP). Since 2001, the building Regulations have replicated these controls[[24]](#footnote-25) (contained in pt 4 of the current Regulations) to ensure that siting and amenity controls apply to developments that do not require a planning permit.

The approach was implemented in Victoria to reduce regulatory burden by reducing instances where both a building and planning permit is required. By considering siting and amenity issues through pt 4 of the building Regulations, most new single dwellings and alterations and extensions to existing single dwellings do not require a planning permit.

Box : Quantifying the value of amenity

Quantifying the value of amenity is not straightforward. This is illustrated by the Victorian Government Solicitor’s Office Planning and Environment Law newsletter *What is Amenity?*[[25]](#footnote-26), which states that while amenity is an elusive concept, it has a usual meaning of pleasantness.[[26]](#footnote-27) A wider ambit is attributed to the term and it also has a physical or tangible component including the character and appearance of buildings, quality infrastructure and the absence of noise, ugliness or offensive odours, as well as a psychological or social component.

The court in Macedon Ranges Shire Council[[27]](#footnote-28)held that the amenity of a place includes a resident’s subjective perceptions of the place and involves subjective judgements for which it would be difficult to offer a ‘rational concrete foundation’. This judgement in particular recognises the crux of the issue, which is that while general notions of amenity are quite consistent throughout planning law, the subjectivity of the term makes it difficult to define with certainty.

The difficulty in defining amenity is compounded by its evolving nature: what amenity may have meant 100 years ago is different to what it means today.

The U.K. Law Commission considered the value of ‘rights to light’ – the equivalent of overshadowing provisions in the Regulations – of adjoining owners and noted:

* the amenity of light differs between property owners (for example, the impact of poor light on a café) and its trade would be vastly different from that of a warehouse and therefore there is no one-size-fits-all approach to quantifying the benefit that accrues to the adjoining owner
* the types of benefits resulting from access to light can vary considerably (for example, office workers may realise health benefits and improved productivity due to effects on morale; properties that benefit from strong natural light may be more attractive to buyers and tenants and therefore realise higher prices; and greater access to natural light may have positive environmental impacts through reduced electricity usage and costs); this variance makes quantification difficult

for residential properties, the importance of light will vary from room to room and from resident to resident, depending on their needs; due to the significant number of variables involved, the financial benefit of light cannot be easily assessed.

Noting these limitations, the magnitude of the benefit of a light easement may be inferred to some degree by examining cases where courts have awarded damages to owners whose rights have been infringed. The Law Commission noted two cases where equitable damages were awarded, based on what was deemed to be the fair outcome of a hypothetical negotiation to compensate for losses resulting from lower property values and other losses. These damages equated to £50,000 (about $104,000 AUD) and £225,000 (about $470,000 AUD) in each case, equivalent to 28% and 16% respectively of the profits that the developers were expected to make from the relevant part of the building infringing the right to light. [[28]](#footnote-29), [[29]](#footnote-30)

Box : Examples of residential construction siting issues

|  |
| --- |
| **Example 1: Two-storey house built in May 1996 illustrating issues with bulk and scale of new developments on existing buildings**  **Example 2: Existing property affected by two new dwellings constructed in 1998, one to the rear and one next door** |

##### Application of pt 4 to single dwellings

Building work relating to a single dwelling still requires a building permit to be issued, even where a planning permit is not required.

Currently, pt 4 applies to:

* single Class 1 buildings (for example, houses) and associated Class 10 buildings (for example, nonhabitable structures such as sheds or fences) (div 2 only)
* siting of Class 10a buildings (for example, a garage, carport or shed) (div 3 only)

Class 10b buildings (for example, fences) (div 4 only).

Pt 4 of the current Regulations does not apply to an allotment where a planning permit is required or where a planning scheme regulates the same matter as a siting Regulation. This approach also prevents any inconsistency between the *Planning and Environment Act 1987* and the building Regulations.

New South Wales, Western Australia and New Zealand monitor and control the siting and amenity of residential development through their planning departments. The approach in Queensland is very similar to Victoria. The siting requirements in the building regime are also mirrored in their planning regime.

##### Planning schemes and sch 5 of the building Regulations

The current Regulations are integrated with the planning scheme through sch 5 of the Regulations. Where a planning scheme varies a height or siting requirement in a zone or a schedule to a zone of a planning scheme, the building Regulations adopt that variation to provide for consistency between the building and planning systems.[[30]](#footnote-31) Current regs 303, 409(1), 410(1), 411(1), 412(1), 414(1), 415(2), 421(1) and 424(1) all refer to variations set out in schedules to the planning schemes.[[31]](#footnote-32)

The building Regulations currently achieve this integration by identifying in sch 5 to the Regulations the zone and the planning scheme that provides for the varied height or siting requirement.

Without specific building Regulations (that is, under the base case), a planning response would be triggered because the risks associated with inappropriate residential development, in the absence of siting and amenity controls, are considered to be unacceptably high.

Under current Regulations, a single dwelling is not required to obtain a planning permit. The residential development provisions contained in cl 54 will only apply if a planning permit is required. Currently, cl 54 applies to all single dwellings (including alterations and extensions) where the land is within one of five residential zones – Residential Growth Zone, General Residential Zone, Neighbourhood Residential Zone, Mixed Use Zone or Township Zone and a planning permit is required because one of the following apply:[[32]](#footnote-33)

* the lot size is less than 300 m2 or 500 m2 if specified in a schedule to a residential zone

a Neighbourhood Character Overlay applies to the lot.

The Victorian Government is committed to ensuring that the siting and amenity controls in the VPP are complied with for residential development,[[33]](#footnote-34) which is why a planning response would be triggered under the base case, creating a more costly process.

The likely impact of the base case would be an increase in costs because the requirement for single dwellings to obtain a planning permit will be reinstated. The associated cost of obtaining the planning permit together with payment of the relevant fee will be the additional costs that would be incurred. In addition, delay costs are likely to increase because the planning process allows third parties to be involved in the decision, which can also add further delays. In addition, there is no specified timeframe within which the council must respond and the applicant may wait up to 60 days for a response. In the event the council does not respond within the 60 days and the applicant seeks a determination from the Victorian Civil & Administrative Tribunal (VCAT), the delay costs further increase.

##### Planning and building demarcation

Pt 4 of the current Regulations ensure consistency with cl 54 of the VPP, where relevant. There may be slight differences between the VPP requirements and what is in pt 4 because those matters may not be relevant to:

* planning, which is principally concerned with regulating where development is located

building, which is principally concerned with the design and construction of a building (it does not regulate where that construction can be located).

For example, neighbourhood character and vegetation is regulated in cl 54 but it is not regulated under pt 4. This is because these requirements are not relevant to the 'bricks and mortar'. In addition, the following Regulations do not have an equivalent provision in the planning scheme because they are not relevant to the use of the land that is allowed under planning: reg 408 (maximum street setback), reg 422 (siting of Class 10a buildings), reg 427 (fences on street alignments) and reg 431 (masts, poles etc.). These are matters that relate specifically to the construction of the building and are not relevant to how the land is used.

In addition, a Regulation in pt 4 may be drafted with some paraphrasing of the VPP clause that it is designed to replicate. This is because the building Regulations are written in relation to the actual building itself and its relationship with its surrounding environment (for example, with adjoining properties and street alignment).

The planning requirements are drafted with decision-making guidelines as they are more performance-based and do not need to be as specific as building Regulation. By way of an example, in the decision guidelines of cl 54.04-4 (which Regulation 417 replicates) the responsible authority must consider existing sunlight to the north-facing habitable room window of the existing dwelling.

A proposed exemption to be inserted into Regulation 417 (and 429) does the exact same thing, but in explicit terms. The proposed exemption recognises that existing daylight to windows on the second floor of an existing dwelling when a single-storey dwelling is built next door cannot have any impacts on that second storey window and so in effect is consistent with the decision-making guideline in the VPP in relation to that clause.

#### The potential size of the problem

RIS Chapter A1.4.3 Complaints and investigations provides an overview of complaints received by VBA, based on an analysis of about 10% of complaints received between July 2010 and June 2015. Of all complaints reviewed, about 20% related to siting issues.

Available data are not granular enough to determine the percentage of complaints related to siting issues that were upheld by VBA. However, across all complaints and investigations assessed it was found that 57% of cases were substantiated.

### B1.3.2 Addressing the underlying problem

#### Option 3 – Remake current Regulations

Pt 4 of the current Regulations can be described as the prescriptive measures of the performance statements in cl 54 of the VPP, intending to reflect the performance standards set by the VPP for single dwellings.[[34]](#footnote-35)

The intent of this approach was to create certainty in single-dwelling development, where a planning permit is not required. This approach reduces the burden of the planning system by ensuring that a consistent development standard applies between the building and planning systems for residential development. Currently, pt 4 matters also regulated through cl 54 of the VPP are consistent.

The Regulations set out minimum requirements aimed at reducing visual bulk on boundaries, protecting the sunlight and private space of existing residential dwellings and providing new dwellings with the same level of minimum amenity.

Siting requirements in the building Regulations do not apply if:

* a planning permit is required for the construction of the building

the relevant planning scheme regulates the same matter as that Regulation in relation to the siting of that building.

###### Costs

The current siting Regulations act to reduce regulatory costs imposed on building permit holders for single dwellings by reducing the need to obtain a planning approval.

In 2014–15, an estimated 32,823 private sector houses were approved for building[[35]](#footnote-36) (which was used as a proxy for new single-dwelling developments). In the same year, an estimated 4,070 single dwellings required planning approval.[[36]](#footnote-37) This means an estimated 28,750 dwellings did not require planning approval. This reflects one year of data only. This proportion may vary from year to year. In addition, siting requirements in the proposed Regulations may still apply when a planning permit is required for a single dwelling because, despite current reg 401, not all planning applications are required to undergo a siting assessment.[[37]](#footnote-38)

As an illustrative estimate, a conservative assumption is made that in the absence of Regulations, 10% of single dwellings currently not requiring planning approval would require planning permission due to siting requirements under cl 54 of the VPP.[[38]](#footnote-39) Based on previous analysis by The Allen Consulting Group,[[39]](#footnote-40) as well as the estimated cost of a planning permit,[[40]](#footnote-41) it is estimated that a cost of $7,000 is avoided per building permit including administrative, compliance and delay costs, as well as the cost of applying for a planning permit.

Based on this analysis, avoided costs due to siting Regulations could be $20.2 million a year, or $170.6 million NPV over 10 years.

###### Benefits

VBA data confirms that siting issues have a significant impact on adjoining owners with 20% of total complaints received by VBA (and 51% of complaints originating from adjoining owners) between 2010–15 relating to siting issues.[[41]](#footnote-42) Without Regulations that account for impacts on adjoining owners and provide a consistent means by which decisions are made, it is likely that significantly more complaints would occur because the primary concern of those constructing a domestic dwelling is that it meets their needs. In the absence of the Regulations there is little incentive to consider the negative impact their building may have on adjoining properties, as illustrated in Box 5.

Pt 4 of the Regulations reduces the regulatory burden relative to a situation in which there were no building Regulations. As a result of inclusion of the standard residential requirements of cl 54 of the planning scheme into the current Regulations, single dwellings are largely unregulated by the planning system. In other words, most new single dwellings and alterations and extensions to existing single dwellings will not require a planning permit. The Municipal Association of Victoria (MAV) and the Victorian Municipal Building Surveyors Group have recognised this as a significant achievement in Victoria.

It is important to emphasise that these provisions are, and must, be consistent with the VPP. The department considers the siting Regulations produce net benefits to stakeholders, given they afford building permit applicants an avenue by which to avoid a planning permit assessment while providing adjoining owners benefits by ensuring amenity issues are taken into consideration. The Regulations allow for dwellings to be constructed to meet neighbourhood character and amenity objectives without requiring a planning permit. This reduces the cost of the building process by reducing the number of approvals required to build a single dwelling.

### B1.3.3 Addressing issues with the design / implementation of the Regulations

The current Regulations have been in place since 2006. While pt 4 has been effective at achieving deregulation of single dwellings under the planning scheme, stakeholders and councils have indicated there are improvements that can be made to pt 4 to address emerging issues.

Where a proposed amendment to the current pt 4 has been suggested by a stakeholder, particularly where the current Regulations created unnecessary burden(s), solutions to address these issues within the building regime have been assessed as shown below. The department has also identified opportunities to better target regulatory requirements by making small changes to the design of the Regulations while retaining consistency, with the intent of keeping the building and planning requirements consistent.

In relation to potential changes to the VPP, these are currently outside the scope for amendment and enactment via the building Regulations. It is the department’s view that such changes can best be initiated via changes to the planning system. To support proposed changes, stakeholders are invited to submit data and evidence of the problem and the impacts of that problem. Potential changes to the VPP are discussed further below.

#### Option 3.1 – Better target regulatory requirements by expanding exemptions

##### Single sheds (current Regulation 422)

**Issue:** Current Regulation 422 has the effect of prohibiting landholders with hobby farms or otherwise undeveloped land from keeping a shed to store tools and equipment necessary for land and bushfire management, unless they obtain a report and consent from the relevant council.

**Option:** To facilitate the storage of land management equipment on undeveloped land, the prohibition on Class 10a buildings would be retained, but the Regulation would be amended so that it does not apply to a single Class 10a building with a floor area not exceeding 10 m2.

Furthermore, the existing exemption in sch 8 would be expanded to remove the need for a Class 10a building of a floor area less than 10 m2 to be appurtenant to another building class. Therefore, it would allow the construction without a building permit of a single freestanding Class 10a building subject to siting conditions with a floor area not exceeding 10 m2. This would remove the requirement to obtain a report and consent for some freestanding single sheds and would expand building permit exemptions.

The rationale for introducing this change is to reduce the burden and extend an existing exemption relating to sheds of this size on developed land.[[42]](#footnote-43) The department does not consider there are any risks that warrant sheds on undeveloped land being treated differently and which warrant the costs of obtaining a building permit. 10 m2 has been deemed appropriate because it aligns the building Regulations with the planning scheme, which regulates Class 10a sheds larger than 10 m2.

**Consultation questions**

Should an exemption be introduced to allow the construction of a single Class 10a building (such as a shed) on vacant land, provided it does not exceed 10 m2 in floor area?

Are there any other exceptions that should be specifically recognised that will not undermine the objectives of the siting and amenity provisions?

###### Costs

An estimated 90 applications are made under Regulation 422 (Class 10a buildings on an otherwise vacant lot) each year. Depending on the proportion of these applications that relate to structures less than 10 m2 in area (this was unable to be ascertained from available data), the reduction in applications would reduce regulatory burden by up to $540,000 NPV over 10 years. This reduction in costs is associated with the time taken to prepare the application and the avoided lodgement fee. To the extent that a proportion of applications relate to structures larger than 10 m2, the estimated benefits would be lower.

###### Benefits

Allowing a single Class 10a building to be constructed (with a floor area less than 10 m2) on an otherwise vacant allotment would enable landholders to store tools and equipment necessary for land and bushfire management.

All benefits associated with remaking the Regulations are expected to be retained under this option, as it will not affect the majority of siting applications. Due to the small size of the shed, the exemption will not result in an increase of the number of these sheds being constructed and then later illegally occupied as a place of residence.

##### Solar access to north-facing windows (regs 317 & 429)

**Issue:** A report and consent is required where an existing north-facing window is above the eaves of the adjoining property (where the proposed building work will occur). This is an unnecessary burden as north-facing windows on a second floor will not be affected by the proposed residential building, where it is a single-storey building.

**Option:** To introducean exemption from the setback requirements for proposed buildings where the eaves would be situated below an existing north-facing window on an adjoining allotment.

###### Costs

This option will result in the same costs as those associated with remaking the Regulations, less the number of applications currently made in relation to building work where eaves are below an existing north-facing window on an adjoining allotment. The report and consent data obtained from councils to assist the analysis is not detailed enough to identify specific instances of applications under Regulation 417 and 429 that relate to this matter, and as such the reduction in costs cannot be quantified with certainty. Based on an analysis of report and consent data from eight councils between 2009–13, there are an estimated 600 applications made in relation to Regulation 417 a year (which equates to 3% of all estimated applications to councils). Only a proportion of these applications would be avoided due to this exemption.

###### Benefits

All benefits associated with remaking the Regulations are expected to be retained under this option as it will not affect the majority of siting applications. There are no risks to the amenity of the window of the existing dwelling due to the lower height of the new dwelling.

#### Minor changes

##### Side and rear setbacks

Current Regulation 414(4)(e) has been amended to clarify the current wording, to say that eaves, fascias and gutters may encroach into the relevant setback by not more than 600 mm. The actual depth of the eaves, fascia and gutter system does not matter provided the encroachment into the setback does not exceed 600 mm.

##### The use of dwarf walls (current Regulation 415)

**Issue:** The height of a garage wall can be used in a manner that causes detriment to the adjoining owner, as a dwarf wall[[43]](#footnote-44) for a garage can be used to reduce average height.

**Option:** The method for calculating the average height of a wall on a boundary will be altered. It is expected that this type of amendment will deliver amenity benefits by reducing the bulk of built form along boundaries.

The amendment will provide that any part of the fence that is below 2 m cannot be used to calculate the average height. This height was selected because it is the height to which a fence can be built without triggering the requirement to obtain a planning permit (and building permit).

##### Clarification in relation to fences on farming allotments

Minor changes have been made to current Regulation 427 to clarify that the Regulation does not apply to a right of way or laneway and allows for barbed wire fencing to be used for agricultural purposes.

#### Other changes for future consideration

##### Expand allowable encroachments (current reg 409)

This Regulation is intended to reflect cl 54.03-1 of the VPP. The intent is to ensure that the setbacks of buildings from a street – how far away the face of the building is from the street – is consistent with the preferred neighbourhood character and makes efficient use of the site.

##### Balconies and carports

**Issue:** The front street setback requirements generate the greatest volume of applications for variation and those variations are routinely granted in relation to carports and balconies because they are similar to a porch or a veranda, which is an allowable encroachment.[[44]](#footnote-45) Variations to allow a carport or a balcony to encroach into setbacks represent the greatest volume of applications and approvals for reports and consent. Porches, verandas, pergolas, decks and shade sails are all permitted to encroach into the setback by up to 2.5 metres. Consultations with councils have demonstrated that allowing carports and balconies as allowable encroachments will significantly decrease the number of applications for report and consent.

**Option:** Permit balconies and carports as allowable encroachments into the front and side street setbacks; make technical drafting changes to exclude certain Class 10a buildings and Class 10b structures from assessment under pt 4 and exclude these buildings from being used in the calculation of the setback.[[45]](#footnote-46)

**Consultation questions**

Should balconies and carports be permitted as allowable encroachments into setbacks in the same ways as pergolas, porches and verandahs? If so why?

For this amendment to be adopted at sunset, the department will require sufficient evidence from councils to determine:

* how many reports and consents relate to these matters that are approved as a matter of course

that the granting of these reports and consents is not resulting in increased complaints, disputes or negative externalities.

###### Costs

Complaints raised about the current Regulations relate to the time and cost associated with obtaining a report and consent for matters that are routinely approved. The proposed amendments if adopted are expected to decrease the number of report and consent applications relative to remaking the Regulations. Avoided administrative costs will accrue to owners that under current Regulations are required to apply for a report and consent.

Based on analysis of report and consent data from eight councils between 2009–13, it is estimated that about 4,500 report and consent applications are made each year with respect to Regulation 409. Of these, it is estimated that 20% relate to minimum setbacks for carports and balconies. Assuming that a report and consent application costs an applicant $430 (discussed in Chapter B4.2 Nature and extent of the problem) and that applications relating to setbacks for carports and balconies would no longer be required, it is estimated that the regulatory burden would decrease by $380,000 per year or $3.2 million NPV over 10 years relative to remaking the Regulations.

###### Benefits

The benefits realised by Option 3 in terms of protecting adjoining owners from undue loss of amenity are expected to be retained under Option 3.2.

Consultations with councils indicate that variations in relation to front street setback requirements are routinely granted following review by MBSs, and thus it is not expected that removing the requirement to report and gain consent will result in a greater risk of noncompliant or unsafe building work.

##### Attached garages (current Regulation 415)

Data collected from councils indicate that the majority of report and consent applications under Regulation 415(3)(a) relate to a garage wall on the boundary. One option is to exempt a garage from obtaining a report and consent if it is built to a height of up to 3.3 m provided the garage wall does not exceed 7.5 m in length. These dimensions, based on technical advice from VBA, are suggested to manage risks associated with the proposed exemption resulting in visual bulk on the boundary. However, they will need to be further considered. It is expected that this type of amendment will reduce the number of report and consent applications received by councils each year.

Further data is required from councils to allow the department to determine whether they routinely approve this type of application.

##### Buildings below ground (current Regulation 409 & 414)

Buildings below ground level will neither negatively affect the streetscape nor the neighbourhood character. The department considers that buildings below ground level do not have an impact on the streetscape or neighbourhood character and therefore should not require report and consent from the council with respect to siting Regulations.

It is expected that this type of amendment will reduce the number of report and consent applications received by councils each year.

However, there is a risk that encroaching a setback below ground could have an impact on infrastructure and soil stability above ground. Further consideration is required as to how the excavation process can manage this risk before such an amendment can be introduced.

Further data is required from councils to assess the number of applications made with respect to building work below ground. Given this data limitation, the extent of this issue and the benefits associated with reduced applications to councils from these proposed changes cannot be quantified.

#### Changes outside the scope of the RIS

Stakeholders have submitted proposed regulatory amendments that would require concurrent amendment of the VPP. These proposals are out of scope for consideration within the context of this review. Any amendments to the building Regulations must be consistent with the planning scheme, to avoid an increase in burden.

##### Review the default lot size

A review of the lot size provision when matters default to the planning system has been requested by stakeholders. This is generally 300 m2 but in some instances has been increased to 500 m2.

This is a planning issue and is out of scope for consideration within the context of this review. It is also noted that councils, as planning authorities, have the capacity to vary the 300 m² trigger through a schedule to the zone.

Councils and industry are encouraged to provide evidence or data to the department about the volume of building projects on properties between 300–500 m2 which are defaulting to the planning system. This information will be used by the department to determine whether there are a significant number of applications that could be dealt with more simply under the building and planning system.

#### Conclusion

Remaking the Regulations creates certainty in single-dwelling development, where a planning permit is not required. This approach reduces the burden of the planning system by removing the requirement to obtain a planning permit because there is a consistent development standard applying through the building Regulations.

By avoiding the need for building permit holders to also gain approval through the planning system, the Regulations are conservatively estimated to reduce costs by $20.2 million a year, or $170.6 million NPV over 10 years. This is the department’s preferred option.

## B1.4 Projections

### B1.4.1 The nature and extent of the underlying problem

#### The underlying problem

Virtually all building projects have an impact, positive or negative, on the surrounding environment. Projections from buildings onto the street can reduce public space and have the potential to be dangerous to passers-by.

Projections over street alignment are controlled in the building regulatory framework to ensure they are designed and constructed in terms of minimum horizontal and vertical clearances for the safety of passers-by and the public in general.

Footpaths will necessarily experience a significant range of pedestrian traffic from general foot traffic to people with mobility needs, children, young families and people making deliveries. Where there is no footpath a nature strip, car parking or a road may be present on the street alignment.

Roads on or near an allotment boundary will also be subject to a variety of traffic, including motor vehicles, trucks and motorbikes.

#### The case for regulatory control through building Regulations

In the absence of current Regulations, there would be no clear building controls for the design and construction of projections over the street alignment, specifically, in terms of acceptable clearances for the safety of passers-by. Without these Regulations there may be increased safety risks due to dangerous protrusions from buildings, in addition to the prevention of use or loss of public space due to street obstructions which may also lead to increased liability risks for council and ratepayers.

Further, there would be no consistent central design standards for projections. The Regulations are a universally acceptable design standard to ensure that projections are not detrimental to public safety and give certainty across Victoria’s 79 local government areas as to acceptable design and construction clearances for proposed projections.

Controls on projections would still be imposed through planning schemes, local laws and licence agreements, and through the enforcement of property-based tort law (trespass to land).

For example, a development that proposes a projection over street alignment may require a planning permit in addition to a building permit. A planning scheme will indicate when a planning permit is required. Planning permit applications will be assessed by the responsible authority (which in most cases will be the council) against the policies and controls in their planning scheme and any other relevant controls the council may have. For example, the City of Melbourne assesses planning permit applications for developments that propose projections over street alignment against the Melbourne Planning Scheme and the management principles set out in cls 7, 8 and 9 of its *Road Encroachment Operational Guidelines*.

These controls will vary by municipality and on a case-by-case basis and also on the technical knowledge and expertise of the negotiating parties to ensure a projection is constructed at a safe height and horizontal distance over street alignment. While the department expects some of the benefits of the projection Regulations would be retained through these alternative legal controls, it anticipates that in the absence of the relevant building Regulations the process of requesting and obtaining consent to a particular projection may become less streamlined and involve more delay because each council may have a different standard for projections (increasing search costs) and different ways of administering and charging for the process of giving consent. There is a risk that without central and consistent design standards, as many as 79 different design standards (which may not reflect best practice for public safety) could apply across Victoria’s 79 local government areas. This type of variation will create inconsistency and additional search costs for industry and building permit applicants when they are required to identify what design standards would apply and with which they need to comply.

#### The potential size of the problem

Based on a sample of data from eight councils it is estimated that 0.3% of report and consents relate to projections and 0.08% of all building permits have a projection-related report and consent.[[46]](#footnote-47)

### B1.4.2 Addressing the underlying problem

#### Option 4 – Remake current Regulations

The current Regulations specify:

* an overarching prohibition on a building projecting beyond street alignment (*r* 504)

exceptions to this prohibition with respect to architectural features (505), windows and balconies (506), verandahs (507), sun blinds and awnings (508), service pipes and rainwater heads (509), window shutters (510), signs (511), service cabinet doors (512) and footings (514).

###### Costs

Building owners may incur costs resulting from the limitation of projections over the street alignment. Similar to siting Regulations, the key costs incurred are opportunity costs associated with the loss of amenity from precluded designs (intangible). In the absence of these Regulations, there would be no controls on projections in the building regulatory framework. However, controls on projections could still be imposed through a range of other regulatory instruments including planning schemes and local laws, and through enforcement of property rights through licence agreements.

Consultations with councils indicated that in most instances building projects involving projections over street alignment will require a planning permit and are therefore not subject to the building Regulations. Additionally, there are a range of additional laws that must be adhered to with respect to projections (for example, the *Road Management Act 2004* and local laws). Detailed report and consent data collected by the department from eight councils support this assessment. Between 2009–13, the eight councils assessed 12,532 report and consent applications. Of these, 34 related to projections (0.27% of total applications).

###### Benefits

The control of projections in the current Regulations aims to protect the health and safety of pedestrians and vehicle traffic on streets (which includes footpaths) by reason of pedestrian or vehicle traffic impacting a projection. This is the key benefit of Option 4.

Additionally, the Regulations prescribe types and dimension of projections where the report and consent of the reporting authority (the council) is not required, thereby reducing the number of instances where owners need to go through this process (acting to reduce costs on building owners). Any proposed projections that do not adhere to the Regulations can still be considered by the reporting authority (the council) through the report and consent process, allowing councils to ensure that projections will not impose long-term safety risks on the public. Costs associated with reporting authority approvals are considered in Chapter B3.2 Addressing the underlying problem.

Another benefit that will flow from modernising the Regulations and making them clearer is that they will be easier to read and understand.

### B1.4.3 Addressing issues with the design / implementation of the Regulations

A range of issues with the application of the current Regulations have been identified through consultations with industry stakeholders and detailed review of the operation of the current Regulations. These issues and options to address them are set out below, together with analysis of the associated costs and benefits.

#### Option 4.1 – Revising vertical clearances for certain projections

**Issue:** Projections can pose a risk to larger vehicle traffic (such as trucks). Where the Regulations provide a permitted horizontal clearance over the street alignment that is sufficiently long to mean that a truck or other larger vehicle could pass near or under the projection, the minimum height clearance for the projection is proposed to be raised from 2.7 m to 5 m. Amending to 5 m brings Victoria’s standard in line with what local governments in other jurisdictions allow. This increased clearance is to account for large vehicles.

**Option:** Revise vertical clearances for certain projections: this option would require one vertical clearance for a projection in the vicinity of pedestrian traffic to remain unchanged at 2.7 m (for example, over a footpath) and a second, higher, minimum acceptable vertical clearance for a projection proposed in the vicinity of vehicle traffic to be introduced at 5 m (for example, over a road).

###### Costs

There are two primary costs associated with Option 4.1 in addition to remaking the Regulations:

* additional costs incurred by building owners who previously did not require the report and consent of council but will need to go through this process in order for a building permit application to be approved (that is, for projections between 2.7–5 m above a street where a vehicle is likely to pass under or near the projection)

building owners that previously did not require a report and consent who will select a less-optimal design that complies with the new Regulations rather than go through a report and consent process; this may result in higher design and construction costs and a reduction in amenity for building owners.

The number of projects that currently comply with Regulations but will be considered noncompliant (that is, require a report and consent) following an increase in the minimum height clearance is difficult to estimate. Report and consent data from eight councils indicates that between 2009–13 there were no applications received in relation to projects that will be subject to an increase in the minimum vertical height (that is, currently regs 505, 506 and 508). While this indicates applications with respect to these Regulations are few, it should be noted that this does not include data for the City of Melbourne (where projections are likely to be more common) and does not capture building projects where projections are currently compliant (and therefore do not require report and consent), but will no longer be under this option.

###### Benefits

The department expects that the main benefit associated with this option will be a reduction in the incidence of vehicles impacting on projections. While there is not specific data available as to the frequency or severity of incidences related to projections being struck by vehicles, the City of Melbourne’s *Road Encroachment Operational Guidelines* provide examples of where architectural features, balconies and awnings have been struck by vehicles.

The reduction in frequency of these incidents is expected to reduce safety risks to the public.

#### Minor changes

The department is also implementing other, less-significant changes to improve the operation of the Regulations in relation to projections by:

* revising current regs 504–514 with amendments to improve the clarity and operation of building controls for projections over street alignment (for example, by separating distinct design standards by street width when this is a relevant design consideration, for example in relation to architectural features and generally by improving the wording of the Regulations to improve their readability)

providing new and improved guidance material for the benefit of building practitioners, developers and councils to facilitate the successful implementation of design standards in relation to projections over street alignment.

#### Conclusion

Remaking the current Regulations unchanged imposes opportunity costs associated with the loss of amenity from precluded designs. The associated benefits mainly relate to protecting the health and safety of pedestrians and vehicle traffic on streets.

Revising vertical clearances for certain projections will mean that some owners will need to go through the report and consent process, and there may be higher design and construction costs. The main benefit will be a reduction in the incidence of vehicles impacting on projections.

# B2 Construction phase

## B2.1 Satisfactory completion of building work

This chapter assesses regs 315 (commencement and completion of work) and 323 (guarantees and bonds) of the Building Regulations 2006. These Regulations are part of a suite of tools designed to ensure the satisfactory completion of building work. These tools include:

* the imposition of regulatory time limits for the commencement and completion of building work and the automatic lapsing of a permit when these time limits are not met
* a power for the RBS to require the completion of certain work to be secured by a bond or guarantee
* the requirement for mandatory inspections (by or on behalf of the RBS), to track the progress and quality of building work

the issue of a certificate of final inspection or an occupancy permit to identify the completion (or practical completion) of building work authorised by a building permit.

Inspections and occupancy permits are not considered here. These matters are dealt with in Chapter B2.3 Requirements for inspections, directions, notices and orders and Chapter B3.1 Occupancy permits and certificates of final inspection – form and information for an application.

### B2.1.1 The nature and extent of the underlying problem

#### The underlying problem

Incomplete building work[[47]](#footnote-48) has an adverse impact on a building project’s success in terms of time, cost, quality and safety. To the owner, incomplete building work means delays and cost overruns and/or loss of revenue. For example, revenue may be lost if a new building is to be relied on for production (such as a factory) or as rentable space. Cost overruns may necessarily include an increased dependence on temporary accommodation (for example, on a rental home pending the construction of a new home).

For builders, failure to complete building work or failure to complete building work on time may mean that they do not receive full payment under their building contracts, suffer reputational risk or become open to legal action from owners. Generally speaking, it is therefore assumed that both owners and builders will be motivated to ensure building work is completed, and on time.

However, it is possible that one or both parties may lose the incentive to complete building work. For example, a builder who is willing and able to complete building work but cannot because of the existence of a dispute or because the owner is unable to make progress payments may suffer financial hardship and reputational risk.

Incomplete building work can also pose a risk of harm to public safety and wellbeing in and around a building site.

This risk arises where the status of building work, including the completion of any protection work, is uncertain. Examples of where such a risk could arise include where incomplete building work is left in an unsound state for an undefined period of time, and where building work is abandoned and left to fall into disrepair. Incomplete work, particularly work that spans several years, may also reduce the amenity of a neighbourhood.

Insurance may also provide owners with a means for completing building work but may not always be available. Note that provisions dealing with insurance are set out in the Act and are beyond the scope of this review.

#### The case for regulatory control through building Regulations

##### Time limits

While the *Building Act 1993* establishes the building permit system, the regulatory time limits for building work are determined by the RBS in accordance with the Regulations. The Act does not require time limits to be set on building work and s 31 of the *Domestic Building Contracts Act 1995* only requires that start and end dates for building work are included in major domestic building contracts. Therefore, in the absence of the building Regulations, there would be no time limits for commencement and completion of building work in a building permit.[[48]](#footnote-49) Without timeframes, pending construction would remain 'approved' for an undefined and potentially indefinite period of time.

The department concludes that this can lead to uncertainty in relation to the progression and completion of building work. If building permits can be left open for long periods of time, this can also reduce the ability of building consumers to predict what building standards apply to the completed building, which they might otherwise be able to do based on the building’s age.

While timeframes for the commencement and completion of building work may be determined on a contractual basis, this will only provide certainty for those who are party to that contract. Those who are not party to the contract will not have this information. Further, in the absence of Regulations requiring timeframes to be set for a permit, regulators may be hindered in performing their monitoring and enforcement functions (for example, without ready evidence of expected timeframes for building work, it may be harder for VBA to take disciplinary action against a practitioner who unnecessarily delays completing building work).

##### Bonds and guarantees

In the absence of building Regulations, there would be no bond or guarantee requirements for demolition, removal or re-erection of building work. Without current reg 323, s 22 would not operate. S 22 allows a building surveyor to require the payment of a bond or guarantee to secure the completion of certain building work. It is unclear what the impact of repealing current reg 323 would be as stakeholders have indicated bonds and guarantees are rarely used. If this is the case, it is unlikely to have any impact on reducing the ability of VBA councils to ensure the completion of building work.

#### The potential size of the problem

The nature of the building work that is incomplete, its degree of incompleteness and the length of time it is left incomplete will determine the nature and degree of risks of loss or damage or harm the incomplete work may pose to a building owner, the builder or others.

Preliminary data from VBA’s case file review of complaints received from July 2010 to July 2015 indicates that about 1.4% of all complaints relate to incomplete building work.

### B2.1.2 Addressing the underlying problem

#### Option 5 – Remake current Regulations

##### Time limits

Regulatory time limits comprise two distinct deadlines: one for commencing building work and one for completing building work. These time limits are described in **Table 2** below.

Table 2: Commencement and completion of building work under a building permit

| Type of work | | Required commencement date | Required completion date |
| --- | --- | --- | --- |
|  |  | |  |
| Building work relating to houses and outbuildings | Within 12 months of the date of issue of the building permit | | Within 24 months of the date of issue of the building permit |
| Building work relating to swimming pools and associated barriers or fences | Within 12 months of the date of issue of the building permit | | Within six months of commencement of the work or if other work requiring a permit is being conducted concurrently on the same allotment then the end date can be aligned with the date of the other permit |
| Building work relating to the re-erection of houses and outbuildings | Within six months of the date of issue of the building permit | | Completed within 12 months of the date of issue of the building permit |
| All other building work | Within 12 months of the date of issue of the building permit | | Within 36 months of the date of issue of the building permit |

The required commencement is set at 12 months for most building projects as this is considered to be the length of time that will go by without any changes to building standards. Recent changes to the NCC mean that the NCC will be updated on a three-year cycle rather than annually.

The timeframes differ based on the complexity of the building work. Smaller building projects (such as erecting a small shed or swimming pool barriers) will take less time than more-complex building projects. The more complex the building project, the longer the time limit.

These time frames are intended to provide a reasonable time for the prompt and predictable completion of building work. While stakeholder feedback to this review highlighted the issue of lapsed permits and the importance of finalising building work, there were generally no suggestions to change the current time limits for building work, suggesting that the current time frames are adequate.[[49]](#footnote-50) For this reason, the department does not propose to extend time limits; rather, as discussed below, the department proposes to introduce a mechanism of notification as regards lapsed permits.

**Consultation questions**

Are the current time limits for the completion of building work appropriate? Should they be extended? If yes, what would be the appropriate time limit and what costs would this impose? Note the recent changes to the NCC that result in an update cycle of three years rather than one year.

If these time limits are not met, a building permit will lapse.[[50]](#footnote-51) It is an offence under the Act to carry out building work in respect of which a building permit is not in force (that is, has lapsed).

The Act also requires building work to be carried out in accordance with a building permit.[[51]](#footnote-52) This means building work must comply with regulatory time limits contained in the permit. Penalties apply for a failure to meet these deadlines.[[52]](#footnote-53) To add flexibility to the process, the Regulations empower the RBS to extend the commencement and/or completion dates for work set in a building permit, before the expiry of these dates.[[53]](#footnote-54)

If this power is exercised by the RBS, the granted extension prevents the lapsing of a building permit,[[54]](#footnote-55) which in turn avoids the delay and duplication of costs that would otherwise be incurred by an owner to obtain a new building permit to commence or complete building work.

##### Bonds and guarantees

The Regulations support the Act by prescribing the circumstances in which a bond or undertaking and guarantee may be required as a condition of a building permit.[[55]](#footnote-56) These circumstances are for the demolition of a building, the removal of a building or the re-erection of a building.

For demolition or removal of a building, the amount of bond or guarantee must not exceed the lesser of:

* the estimated cost of carrying out the work authorised by the building permit

$100 for every square metre of floor area of the building.[[56]](#footnote-57)

For re-erection of a building, the amount of bond or guarantee must not exceed the lesser of:

* the estimated cost of carrying out the work authorised by the building permit

$5,000.[[57]](#footnote-58)

The guarantee and bond scheme enables a council or VBA to enforce the security to carry out any work necessary to finish a demolition, removal or re-erection of a building where the applicant has not completed the building work satisfactorily.[[58]](#footnote-59)

###### Costs

If a building permit lapses, an owner will have to apply for a new building permit to commence or complete building work. Application for a new building permit will necessarily involve delay and duplication of costs incurred by the owner.

Based on assumptions made following consultations with building surveyors, it is estimated that about 8,500 building permits lapse each year. This equates to a cost of $1.7 million a year, or $14.2 million NPV over 10 years to reapply for permits (assuming all lapsed permit holders reapply).

In theory, costs are incurred to secure bonds/guarantees for demolition/removal or re-erection of existing buildings. However, consultations with building surveyors, councils and VBA indicate bonds are rarely required by surveyors in practice and thus the cost associated with this Regulation is assumed to be negligible. Were these Regulations to be applied, the major costs imposed on applicants would be the financial costs associated with the bond (either interest costs to borrow the value of the bond or forgone interest revenue from using savings). The annual cost is estimated to be between $60–$500 per applicant per year for a standard domestic building project.[[59]](#footnote-60) Time costs would also be expected to be incurred in order to obtain the required funds.

##### Benefits

The regulatory time limits provide certainty (outside the terms of a building contract) in respect of when building work authorised by a building permit must commence and by when it must be completed. If these time limits are not met, a building permit will lapse.[[60]](#footnote-61) It is an offence under the Act to carry out building work in respect of which a building permit is not in force (that is, has lapsed).

A building permit would not lapse if no limit were set in the Regulations. However, ensuring that building approvals are only valid for a certain period of time enables building consumers to predict what building standards apply to a completed building, which they might not otherwise be able to do based on when the building was completed (the building’s age).

There would also be benefits from the reduction in disamenity and potential safety concerns from building work that would have otherwise extended for a longer period without Regulations imposing time limits. Due to the variable natures of these benefits from case to case and the difficultly quantifying them in monetary terms, the magnitude of this benefit is not quantified.

### B2.1.3 Addressing issues with the design / implementation of the Regulations

#### Option 5.1 – Address issues surrounding lapsing building permits

Despite the fact that the Regulations prescribe time limits, there are still issues with the current requirements.

Stakeholders have raised issues about the timing inconsistency between building permit commencement and completion periods for classes 1 and 10 buildings and pool or spas construction. This issue has been addressed by a recent change in the Regulations to allow alignment with the permit timeframe for other work on the same allotment.

**Issue:** Building permits may lapse despite the construction site being active. The Act and Regulations do not explicitly set up an application process for owners to apply to the RBS for an extension to the commencement or completion date for building work as specified in a building permit. As the Regulations currently stand, the power to grant an extension is unilaterally exercised by the RBS at their discretion before the building permit lapses.

If a building permit lapses, this could result in incomplete building work and an offence may be committed. If work is continuing to be undertaken after the permit has lapsed, then an offence is committed under the Act. It is an offence under the Act to carry out building work in respect of which a building permit is not in force (that is, has lapsed).

The Act also requires building work to be carried out in accordance with a building permit.[[61]](#footnote-62) This means building work must comply with regulatory time limits contained in the permit. Penalties apply for a failure to meet these deadlines.[[62]](#footnote-63)

There is no specific data on lapsed permits per se, but data on open permits provides some relevant information. VBA classifies a permit as an open permit if VBA has not been notified by the RBS that a certificate of final inspection or an occupancy permit certificate have been issued. Building permits for Class 1 and Class 10 (residential-type buildings) have a duration of two years for building work to be completed, while building permits for Class 2–9 have a duration of three years for building work to be completed. During this timeframe the RBS has VBA to extend a permit. Therefore VBA open permit data contains a mix of lapsed permits, abandoned permits and permits within either the two- or three-year timeframe, as well as extended or closed permits where VBA hasn't been notified.

The proportion of all open permits by financial year was 2010–11 (19%); 2011–12 (20%): 2012–13 (24%); 2013–14 (32%); and 2014–15 (57%).

The increasing proportion of open permits over time may be an indication that the prevalence of lapsed permits is increasing though as noted above there are other factors that contribute to open permit estimates.

Most open permits are for Class 1, 10 A and 10C (73%), followed by Class 2–9 (19%), 10B (8%), and Class 1, 10A and 10C – re-erection (1%).

For houses and outbuildings (all building work, except re-erection), the proportion of open permits by the duration since the permit date was: less than 2 years (58%); 2–3 years (14%); 3–5 years (25%); and 5–8 years (2%). For houses and outbuildings (re-erection) it was: less than one year (22%); less than two years (18%); 2–3 years (20%); 3–5 years (37%); and 5–8 years (2%).

As noted above, stakeholder submissions generally raised the issue of lapsed permits rather than time for completion of building work. This suggests that the problem of lapsed permits relates to the finalisation of building work rather than the ability to carry out building work within the prescribed times.

Time limits are intended to ensure timely completion of building works consistent with the most up-to-date building standards (although there is inevitably some lag as building permits issued just before a BCA update will comply with the building standards in place at the time the permit is granted). The regular update of the BCA now occurs every three years rather than annually as previously occurred so one-year limits are no longer needed to align with the update cycle.

In many cases, the proposed time limits may be consistent with private incentives for owners and builders to complete building work in a timely way. But in other cases, various circumstances (such as short-term financial difficulties or relationship break-ups) may mean that building work takes longer than the proposed timeframes.

Where this is the case, owners will need to apply to a RBS to extend a building permit and incur additional costs. In some cases, this will be largely a formality as there have been no material changes to building standards. In these circumstances, increasing the maximum time limit could avoid administrative and financial costs for building owners and a RBS without compromising outcomes.

Increasing the time limit for building permits is unlikely to affect a large number of building works that are already completed in a timely way. Issues could arise in limited circumstances (for example, where a RBS becomes insolvent and is no longer able to ensure compliance with a building permit that they have granted), but this is no different than if an RBS extends a building permit.

**Consultation questions**

To what extent do building surveyors proactively address the issue of lapsed permits? In your experience, what is the most common cause of lapsed permits and when do lapsed permits cause a problem?

**Option:** Require notice of imminent lapse of building permit: clarify when a building permit lapses and introduce a new requirement that a RBS be required to send the owner and builder a notice of the imminent lapse of building permit in certain circumstances. The proposed Regulations impose an obligation on a RBS to issue a notice to an owner of the potential for a building permit to lapse three months before the required commencement or completion dates. The department considers three months to be a sufficient time period, because it allows the owner to make a judgement about whether or not building work will commence or be completed within that time. It triggers a risk assessment for the owner to consider if the building permit needs to be extended to avoid it lapsing.

A copy of this notice must also be sent to VBA and the relevant council. Currently, the sending of a notice to an owner is a best-practice voluntary step undertaken by some building surveyors. This option also includes a Regulation explicitly allowing an applicant to apply in writing to the building surveyor for an extension to prevent a permit lapsing. This enables the building applicant to take control of the process in the event that a RBS has not realised the building permit is about to lapse or has failed to consider if it is warranted that the building permit be extended.

###### Costs

The primary cost imposed by this option is an additional time cost incurred by building surveyors to produce and forward a notice of imminent lapse where this is not already being done. Consultations undertaken with MBSs and PBSs indicate that about 15% of building permits are not completed three months before expiring. At present, some building surveyors issue a notice of imminent lapse to permit holders at around this period. Assuming this becomes a mandatory requirement, the department expects the number of notices issued to increase by about 8,000 with costs incurred by surveyors of $100,000 a year or $834,000 NPV over 10 years.

The mandatory issuing of a notice of imminent lapse is expected to reduce the prevalence of building permits lapsing, thus reducing costs for permit holders to reapply for a permit. The total cost reduction realised by permit holders (through avoided costs) relative to remaking the Regulations is estimated to be $420,000 a year or $3.6 million NPV over 10 years. Therefore, costs associated with lapsed permits are estimated to be $1.3 million a year or $10.7 million NPV over 10 years.

###### Benefits

The regulatory time limits provide certainty (outside the terms of a building contract) in respect of when building work authorised by a building permit must commence and also by when this building work must be completed.

There would be benefits from the reduction in uncertainty, disamenity and potential safety concerns from building work that would have otherwise extended for a longer period without Regulations imposing time limits. Due to the variable natures of these benefits from case to case and the difficult in quantifying them in monetary terms, the magnitude of this benefit is not quantified.

#### Minor changes

##### Bonds and guarantees

Clarifying when a guarantee or bond can be released will result in benefits from reduced uncertainty for surveyors and permit holders. The requirement for bonds in relation to re-erections will also provide a more substantial financial incentive for work to be undertaken in compliance with the Regulations, and the increase in the bond value to $10,000 will allow a greater ability to fund any work required to finish incomplete projects. This will potentially produce aesthetic benefits as well as fewer instances of incomplete work. Given the intangible nature of these benefits, they are not quantified.

The department’s consultations with building surveyors, councils and VBA indicate that guarantees and bonds are not being used to achieve the objective of ensuring the completion of certain types of building work.

Therefore, the revocation of current reg 323 could reduce red tape for the industry, VBA and councils in circumstances where building permits are issued with bond conditions or where bonds are considered in the building permit process. In the absence of stronger evidence to support the revocation of the bonds provision, the department’s view is that current reg 323 should be retained in some form, which will allow building surveyors to continue to use this provision at their discretion.

The use of bonds is a matter that still needs to be properly considered by councils and VBA. This is because it is an enforcement tool that is available to regulators to address noncompliance, which can be fixed through rectification works.

Due to this, the department's preferred option is to retain the status quo with an increased amount to $10,000 to cover the costs of rectification works. VBA has advised that $5,000 is too low and has remained unchanged since it was set in 2006. VBA has advised that the costs of rectification works are usually a lot higher than $5,000 and that re-erections is where the unfinished work appears to reside. The department will work closely with VBA as part of the midterm evaluation to monitor how bonds and guarantees are used in practice, and whether the increase of the amount means that bonds and guarantees are more likely to be used or enforced.

During this period, councils and VBA will have an adequate opportunity to confirm whether and how they want to use this enforcement tool in the future, as it is proposed that the decision to retain current reg 323 will be made on how bonds are used in practice. This will be enabled by the proposed evidence improvement project.

**Consultation questions**

How often have you been required to pay a bond under s 22 of the Act by a RBS?

How much does it generally cost to do rectification works, when they are required?

#### Conclusion

Remaking the Regulations results in costs associated with lapsed building permits of $1.7 million a year, or $14.2 million NPV over 10 years.

By requiring building surveyors to issue a notice of imminent lapse, total costs associated with lapsing building permits are estimated at $1.4 million a year or $11.5 million NPV over 10 years.

The department considers that both options provide comparable benefits in terms of reduced disamenity and safety concerns associated with incomplete building work. Option 5.1 is expected to result in a reduction in costs associated with re-applying for permits (as a result of the mandatory notice of imminent lapse) and as such is the preferred option.

The department acknowledges that another option under Option 5.1 would be to extend the time limits of building permits to align with the three-yearly update of the NCC. This option has been discussed qualitatively as another approach that could be considered under Option 5.1. However, to consider what benefits this option would deliver, further evidence is required to understand the cause of lapsed permits and whether there is a case for extending timeframes. If building work is:

* routinely completed within a specified time that extends the current time limits (for example, within three years) or

if building permits are routinely extended ( and on average, how many years or months are building permits usually extended for),

then there may be a case to extend the time period. The intent of extending any time limits will be to reduce the administrative costs of applying for the building permit to be extended, where there would be no adverse consequences (for example, it would be an adverse impact if buildings are being constructed, which due to time past are not in line with current building standards).

## B2.2 Protection work (building site)

Carrying out building work, in particular excavation and demolition work, has the potential to cause damage to neighbouring buildings and structures.

The BCA imposes the following performance requirement:

‘A building or structure, during construction and use, with appropriate degrees of reliability, must… avoid causing damage to other properties… by resisting the actions (including ground movement from site works and construction activity action ) to which it may reasonably expect to be subjected’.

This performance requirement is contained in Part B1 of the BCA Volume One, which sets minimum standards for the structural stability of a building and its required level of resistance (during construction and use) to certain environmental actions (such as flooding, earthquakes and snow) and construction activities (such as the use of equipment, including cranes and trucks).

As a result, the BCA requires that a building or structure is designed to resist the most critical effect resulting from different combinations of actions, so as not to cause damage to other properties. What the BCA does not impose is a general requirement that construction itself (that is, as opposed to the effect of construction on the building to which it relates) must not cause damage to other nearby property.

In some cases, the only way to avoid damage to other property, other than by forgoing construction, is by carrying out specific additional work to that adjoining property to protect the property from damage during construction (known as protection work). This additional work increases the costs of any building project.

The additional costs this work can potentially impose on building work are those costs associated with underpinning, provision of vertical and/or lateral support, protection against variation in earth pressures, provision of ground anchors and shoring up of or overhead protection for adjoining property.[[63]](#footnote-64)

### B2.2.1 The nature and extent of the underlying problem

#### The underlying problem

In the absence of government intervention, difficulties can arise between developers and adjoining landowners where protection work poses a risk to or requires access and/or modification of nearby property.

There is an incentive for adjoining landowners to provide access if it means protecting their properties. That said, they may not actually give consent if they are opposed to the proposed building work or design, or if they have a perception that their interests would not be appropriately considered.[[64]](#footnote-65)

Without consent to access adjoining land to carry out protection work on nearby property, the developer has no right of entry onto an adjoining property (not owned by the developer) or a right to carry out protection work to that property. As a result, they may have to forgo construction (because they cannot avoid damage to nearby property), or continue with construction and face civil action from neighbours whose rights are infringed as a result of construction.[[65]](#footnote-66)

#### The case for regulatory control through building Regulations

Under the base case (in the absence of Regulations), there would be no clear trigger for the operation under pt 7 of the Act and a general lack of clarity as to what information should be included in the notices required in pt 7. Without the Regulations, the requirements in the Act would not be triggered and would not apply.

In particular, there would be:

* no requirement to take out insurance in favour of the adjoining property

no requirement to prepare a condition report, which would form the basis of claim against the insurance policy.

The Act seeks to provide a means to balance the developer’s interests with neighbours' rights by providing a framework (that does not require court intervention) to facilitate agreement and determination of the nature and scope of protection work required to prevent damage to adjoining property during construction and how this work should be carried out.

The Act also provides various forms of protection in favour of an adjoining landowner, such as preparing a condition report of adjoining property before protection work and other building work is carried out, requiring the developer to obtain insurance to mitigate the costs to the adjoining landowner if damage is caused by proposed protection work, and also to guard against any liabilities likely to be incurred to adjoining occupiers and members of the public during the carrying-out of the building work and for a period of 12 months after that building work is completed.[[66]](#footnote-67)

A mechanism for the resolution of disputes about protection work is also provided for in the Act, which also provides a right to an adjoining owner to recoup compensation for inconvenience, loss or damage suffered by the adjoining owner in connection with the carrying-out of protection work.

However, under the base case protection work may still be carried out due to requirements under other legislation:

* under the BCA, building practitioners are required to ensure that the building work is designed and carried out in a manner which avoids causing damage to adjoining properties (for example, see 3.1.1.1 of the BCA Volume Two)

under general obligations under OHS legislation, a builder (the person in charge of the site) continues to have to take reasonable steps to protect the health and safety of the public; this includes the development of and compliance with a safe work methods statement for demolition work.[[67]](#footnote-68)

While building practitioners have an obligation to comply with the BCA, the only mechanism for redress is through civil action after the damage has occurred.

In the absence of Regulations, there could be an increase of instances where adjoining owners would not be a party to decisions in relation to protecting their property: they would be fully reliant on the property owner (where the building work is being carried out) and the builder to put in place measures to address known risks and prevent damage.

There are incentives to either minimise costs associated with building work or minimise any building delays, which may result in increased instances of damage. These risks of damage, where protection work is not undertaken, are more likely to be an issue in urban areas where allotments are smaller on average and buildings are in close proximity.

Finally, in the absence of the Regulations there could be an increase in instances of damage occurring where no insurance has been taken out to fund repair work to damaged adjoining properties. Insurance is only required under the Act if a determination is made under the Regulations that the protection work is required. The Act does not specify the level of insurance required: the amount the contract of insurance must cover is an amount agreed by the owner and the adjoining owner. In the event of a dispute, the amount will be determined by the BAB.[[68]](#footnote-69)

#### The potential size of the problem

VBA 's survey of building practitioners found that on average around 20% of building permits will require protection work (though PwC consultations with surveyors indicate that this percentage is higher for commercial projects, in the range of 40%). This equates to about 20,000–25,000 projects requiring protection work each year.

On average, appeals and disputes in relation to protection work represented 16% (259 matters) of all appeals received by the BAB between 2009–14. Most appeals and disputes are made by the adjoining owner (86%). The largest category is appeals against a determination made by a RBS (40%) followed by compensation (16%), other (14%), insurance (13%), supervision costs (10%), and survey (7%).[[69]](#footnote-70)

An example of where a lack of adherence to the Regulations resulted in damage to an adjoining property is outlined in Box 5 below.

Box : Case study – Melbourne pit collapse

|  |
| --- |
| In July 2015, a pit collapse in Melbourne’s eastern suburbs forced the evacuation of two neighbouring townhouses due to risks to the buildings’ foundations. At the time of the collapse, VBA suggested the collapse would have been avoided had the building site Regulations been adhered to.  Following the collapse, the pit was required to be filled with 1,700 truckloads of rock, completed in September 2015, with the cost of this work estimated at $500,000. The Monash Council estimated that it had spent between $20,000–$50,000 managing the incident (as at September 2015).  In October 2015, an emergency order was issued for one of the neighbouring townhouses by Monash Council, requiring the owner of the property to arrange for emergency works to make the property safe. One estimate of the costs associated with the emergency works was between $120,000–$175,000 (while the townhouse owner was required to undertake the repair work, insurers were working with the owner to arrange for them to be recompensed). Both townhouses were made safe by April 2016. As at November 2016, both townhouses remain unoccupied pending repairs.  In April 2016, VBA referred a surveyor, two engineers and the builder to the Building Practitioners Board for an inquiry.  This incident outlines the importance of ensuring adequate protection work is undertaken and the substantial costs that can result when damage to neighbouring properties occurs during a construction project.[[70]](#footnote-71) |

### B2.2.2 Addressing the underlying problem

#### Option 6 – Remake current Regulations

The Regulations trigger provisions in the Act for protection work and the means by which adjoining properties can respond to requests and decisions.

There is also the right to appeal to the BAB in relation to any disputes associated with decisions about protection work under the Act.

The current reg 602 sets out the prescribed information required to be included in a notice to the adjoining owner (set out in current form 3) and the prescribed information the adjoining owner must include in a response notice (set out in current form 4). The Regulations also specify that certificates from two independent engineers is a valid basis for a RBS to reverse a decision made under current reg 602. This chapter of the RIS also assesses the requirement to carry out precaution work to protect the safety of the public.[[71]](#footnote-72)

The Regulations do not seek to prescribe circumstances in which protection work is required, but instead prescribe who can decide when protection work is required (the RBS). Whether protection work is required will depend on the nature of the building work. A range of factors including construction methods, proximity to the boundary or even the type of materials used may affect whether protection work is warranted and the particular type of protection work necessary. A RBS has both the necessary skill and objectivity to make an accurate assessment of the need for protection work or precautionary measures.

###### Costs

Processes associated with these Regulations are not expected to change the nature of protection work undertaken, because this is always dependant on the nature of the building work that has been approved through a building permit. The type of preventative measures required is determined on a case-by-case basis and depends entirely on the nature of building work and how that building work may adversely impact an adjoining property (for example, how close an excavation is to a adjoining property boundary or whether vibration-causing construction methodologies are adopted). The proposed Regulations set out the processes associated with notification and information provision requirements and prescribe time limits to respond to notices and make determinations.

For building owners, the major costs imposed by protection work Regulations is by the requirement to complete the notice of proposed building work and serve this on the adjoining owner/s.

Costs associated with notifying adjoining owners for domestic building work are estimated at $867,000 a year or $7.3 million NPV over 10 years. For nondomestic work, these costs are estimated at $750,000 and $6.3 million respectively.

For adjoining owners, costs are imposed by the requirement to respond to a notice of proposed building work either agreeing with the proposed works, disagreeing with the proposed works or requesting additional information. The costs incurred by adjoining owners in engaging in this process are estimated to be $1.6 million each year or $13.6 million NPV over 10 years.

Finally, RBSs incur costs where there is a need to issue a notice of determination following an adjoining owner disagreeing with the proposed protection work. The cost associated with the activity is estimated to be $8.7 million a year, or $73.3 million NPV over 10 years.

In total, costs associated with protection work Regulations under Option 5 are estimated to be $11.9 million a year, or $100.6 million NPV over 10 years.

###### Benefits

The Building Act provides machinery by which an owner (or practitioners on behalf of an owner) can gain necessary approvals to undertake work principally designed to protect an adjoining property from damage. In the absence of the requirements, negotiations would need to occur on a case-by-case basis and would be wholly dependent on the adjoining owner participating in negotiation: there would not be any means by which to compel negotiation. This could potentially lead to project delays while negotiations are conducted (in cases where practitioners required access to the adjoining property in order to provide the protection work), or potentially lead to cases where protection work is undertaken without the knowledge and/or consent of the adjoining owner.

By setting out time frames by which parties must act and respond in regard to protection work, the ability of adjoining property owners to delay the building work or refuse access is reduced. Additionally, RBSs are required to make decisions within 14 days once all necessary information is provided.

The Regulations also ensure that adjoining owners are notified of their rights to appeal the determination of a RBS to the BAB. The right of appeal through the BAB is likely to represent a more efficient, lower-cost process than going through the court system although the department has not been able to obtain data to confirm this. Over the five years to 2013–14, there were an average of 48 disputes and appeals that were brought to BAB a year in relation to protection work.

The other key benefit associated with protection work Regulations is the reduction in delay costs to projects that results from setting out a process for decision-making and prescribed timeframes (which limits the ease with which adjoining owners can delay projects). In general, there are two key types of delay costs considered, holding costs and opportunity costs. Holding costs relate to the financial costs incurred in relation to loans (that is, interest paid on loans during the delay) as well as taxes and rates paid on the land during the period of delay. Opportunity costs are the income lost from the next-best alternative use of the capital invested in the project over the duration of the delay period.

A break-even analysis was undertaken to quantify required benefits of protection work Regulations to equate to costs. It is estimated that there are 17,335 domestic building permits requiring protection work each year, with total regulatory costs associated with domestic work of $6.4 million a year. Protection work Regulations therefore need to produce a reduction in delay costs of $369 per building permit on average in order for costs to be justified. For nondomestic work, it is estimated that about 7,500 permits require protection work each year, with a regulatory burden of $5.5 million imposed a year. The Regulations must therefore result in a reduction in delay costs of $738 per permit on average for benefits to equate to costs.[[72]](#footnote-73)

**Consultation questions**

The department considers it feasible and reasonable that the Regulations would reduce delay costs to the extent required for the benefits to be greater than the associated costs. The Regulations contribute to the reduction in delay costs by providing a clear process (with prescribed timeframes) through which negotiations with adjoining owners can occur.

The second reading speech for the Local Government (Amendment) Bill 1975 (the 1975 Act) is of particular relevance and provides insight into the origins of the current legislation dealing with protection work. The 1975 Act introduced the first iteration of what is now pt 7.

The second reading speech on 30 September 1975 in the Legislative Assembly explains that:

*'The proposed legislation is designed to deal with the difficulties faced by the owner of land on which a building is to be erected in reaching agreement to underpin with the owner of adjoining properties. In the normal course of events an owner has not right to enter on adjoining land. Any encroachment on adjoining land by persons, materials or machines could constitute trespass.'*

What are your views in relation to pt 7 of the Act? Is the intent of pt 7 still valid? Does it still achieve its original policy objectives?

Do you agree that the protection work Regulations and clear powers reduce delay costs?

Do you think the Regulations lead to protection work being undertaken only when it is necessary or does it sometimes lead to unnecessary work being undertaken?

### B2.2.3 Addressing issues with the design / implementation of the Regulations

A range of issues with the application of current Regulations have been identified through consultations with industry stakeholders and a detailed review of the operation of the current Regulations. These issues and options to address them are set out below, together with analysis of the associated costs and benefits.

#### Option 6.1 – Better informing adjoining owners at the earliest possible point

**Issue:** Adjoining owners would be interested to know what their rights are in the protection work process at the earliest possible point of their involvement. The provision of information upfront would enable adjoining owners to be informed of available protections, which may lead them to agree to proposed protection work at the earliest possible point, reducing the burden that would otherwise be placed on all parties through undue delays to building work.

**Option:** Insert new requirements to provide additional information to that currently required under current reg 602(3) to accompany a s 84(1) protection work notice, including:

* VBA-approved guidance material that clearly explains the operation of the protection work process and the procedure for resolution of any dispute arising as a result of a breakdown in this process; this guidance material would be complemented by improvements to the current form 3 protection work notice which would include, importantly, notification of the existence of important rights in pt 7 of the Act which benefit the adjoining owner in relation to the protection work process
* one copy of an allotment plan showing the physical relationship of the proposed building work to an adjoining property

plans and specifications showing how the proposed building work may impact on adjoining property and how the proposed protection work addresses this risk.

###### Costs

Option 6.1 would impose minor additional costs on building owners (compared to remaking the Regulations) associated with providing additional information to adjoining owners when serving a s 84(1) protection work notice. The additional information required to be provided (the determination of the RBS, including the reason for which protection work and the notice is being provided, information relating to the allotment plan, plans relating to the proposed building and protection work and VBA guidance material) would be readily available to building owners.

For example, VBA's guidance material could be obtained from VBA directly or downloaded from its website. While the department considers the costs to be minor (and as such they have not been quantified) feedback is nevertheless sought from stakeholders about the magnitude of these costs.

**Consultation question**

Would requirements associated with Option 5.1 in terms of providing additional information to adjoining owners impose significant costs on building project proponents?

#### Benefits

Providing additional information to an adjoining owner at the start of the protection work process will provide more clarity in regard to:

* the nature of the proposed building and protection work and potential impacts on the adjoining owner

the rights of the adjoining owner in the protection work process.

This additional information may lead to the adjoining owner agreeing to proposed protection work at the earliest possible point in the protection work process and help reduce the number of disagreements and disputes that arise. This could avoid parties engaging in costly legal processes (such as disputes through the BAB) because information provided to adjoining property owners outlining their rights may give them more confidence in consenting to protection work. For example, notice of the protections available to an adjoining owner at the outset of the process may encourage the adjoining owner to participate in the process with confidence and in good faith from the outset which may have the potential to reduce disputes. In the absence of information about the source of disputes, the extent to which these benefits accrue in practice is unclear.

Given the costs of this options are assumed to be comparable to remaking the Regulations, the break-even analysis results are effectively the same: for domestic building work, the Regulations must produce a reduction in delay costs of $369 per building permit and for nondomestic work a reduction in delay costs of $738 per permit on average for benefits to equate to costs. As stated above, the department considers these to be feasible and reasonable: this option reduces delays by allowing adjoining owners to agree on proposed protection work at the earliest possible opportunity.

#### Minor changes

Some less-significant changes have been made through amendment to improve the operation of the Regulations. These are to:

* resolve any confusion created by the application of current reg 603 by changing how it is expressed in the Regulations; reg 603 will be revoked and merged into current reg 602 (see new reg 6A02) as specific matters a RBS must take into account when deciding if protection work is required, which includes certificates issued by other building practitioners (for example, an engineer under s 238 of the Act)

remove any confusion that s 238 certificates[[73]](#footnote-74) may be used as a means by the developer to an automatic exception to carrying out protection work: despite the fact two certificates have been issued, a RBS still has a responsibility to determine whether protection work is required because in this scenario a RBS is an objective third party whereas the engineer issuing the certificate will be acting on the instructions of their client; a RBS may rely on a s 238 certificate when making a decision in relation to the requirement for protection work but the presence alone of one or more such certificates does not amount to an automatic exception to the carrying-out of protection work.

#### Conclusion

Remaking the Regulations would need to reduce delay costs on average by $369 per domestic building permit and $736 per nondomestic building permit. Addressing issues with the design / implementation of the Regulations (by putting in place requirements that would ensure adjoining owners are better-informed at the earliest possible point) has similar break-even points. Notwithstanding a lack of data about the source of disputes and the role of misinformation, the department considers these break-even points are feasible and reasonable since the Regulations contribute to the reduction in delay costs by:

* providing a clear process (with prescribes timeframes) by which negotiations with adjoining owners can occur

allowing adjoining owners to agree to proposed protection work at the earliest possible opportunity.

## B2.3 Requirements for inspections, directions, notices and orders

### B2.3.1 The nature and extent of the underlying problem

#### The underlying problem

After construction, it is difficult for a potential buyer or occupant of a building to assess whether the minimum required building standards have been met during construction due to:

* the complexity of the processes involved in construction
* the number of inputs by various building practitioners and subcontractors into a single construction project
* the infrequent basis on which many buyers enter into building project transactions, especially in the domestic building market
* the building work having been completed, at which point noncompliance with building standards may be difficult to identify and assess, causing these issues to be hidden and difficult to detect visually

buyers' and occupants' general lack of experience and knowledge to make an informed decision as to when building work is compliant or noncompliant.

This means potential buyers and occupants are at a disadvantage when managing potential noncompliance with the Act and Regulations.

There are numerous reasons why deficient building work – building work that does not meet minimum building standards – may arise. These reasons include but are not necessarily limited to:

* illegal building work (that is, work not authorised by a building permit)
* lack of competence by owner-builders or registered building practitioners
* design faults
* deliberate noncompliance to cut costs
* failure to adequately supervise building work, including the work of subcontractors
* failure to identify and remediate latent conditions

incomplete work due to nonpayment by owners.

Where a poor standard of building work undermines the structural integrity of a building, this can result in:

* danger to life, leading to personal injury or in extreme circumstances death
* damage to property, leading to financial costs associated with rectifying building work and damage caused; consumers of domestic building work are most likely to have a mortgage and may be less likely to have the liquidity to finance rectification work or compensation for any damage to an adjoining property

loss of amenity.

Without expert oversight at key stages of building work, defects are unlikely to be detected. This issue is further exacerbated by cost and time pressures, which provide less of an incentive to oversee building work in accordance with best practice.

The law imposes minimum building and safety standards on building work. Victoria’s policy goal is that all new building work should comply with these minimum standards. Implementing minimum building standards in individual building projects requires a building control regime designed to prevent noncompliant building work being carried out, and when it has requires noncompliant work to be brought into compliance.

Building work that complies with minimum building and safety standards reduces the risk that a building may cause injury or death to people inside or nearby (for example, from building fire or collapse).

#### The case for regulatory control through building Regulations

In Victoria, the building permit system is the key building control tool designed to prevent noncompliant building work. It is supported by a mandatory inspection framework together with an enforcement of building and safety standards regime to prevent or remedy noncompliant building work. This chapter examines the inspection and enforcement regimes, insofar as they fall within the scope of the current Regulations.

The framework for the inspection of building work authorised by a building permit is provided in the Act.

The purpose of building inspections is to monitor the compliance of building work with current building and safety standards together with the building permit issued to authorise the work. To achieve this, inspections are carried out at key stages of building work by or on behalf of the RBS who issued the building permit and approved the design.

These key stages of work are defined in the Act as ‘mandatory notification stages’ of building work. Importantly, these stages mark when building work should be inspected, at a minimum. Inspection stages should be appropriate to the type of building work being carried out.

It is the responsibility of the person in charge of carrying out building work (that is, the builder) to notify the RBS when a mandatory notification stage of building work has been reached. On being notified, the RBS must cause the building work concerned to be inspected. The obligation to inspect extends to all building work completed by the mandatory notification stage.

Under the Act, if building work on inspection is found to be noncompliant, the RBS (or a person acting on their behalf) may direct the builder or a person who is apparently in charge of the site to fix the building work.[[74]](#footnote-75)

It is an offence under the Act not to comply with such a direction.[[75]](#footnote-76) If the work is not brought into compliance, the RBS may cause a building notice to be issued or take any other action permitted by the Act or Regulations. A failure to comply with a direction to fix building work is also a ground for disciplinary action.

Other enforcement tools are available under the Act to facilitate enforcement of building and safety standards (for example, emergency orders, building notices and building orders).

In summary, in the absence of Regulations in relation to inspections, directions, notices and orders (the base case) the following problems are likely to arise.

##### No clear, consistent and appropriate means for controlling when building inspections should be carried out

In the absence of Regulations, no mandatory notification stages would be set for inspection of building work authorised by a building permit. This would make the operation of ss 33 and 34 of the Act redundant.

The discretionary power conveyed on a RBS under s 35 of the Act to inspect building work would still be available. However, this power alone does not offer the same benefits as a structured regime of mandatory inspections at key stages of the building work. The mandatory inspection regime provides a check to ensure that a RBS will inspect building work at key stages of work, and it provides industry and consumers with a level of certainty about what to expect from the building surveyor.

Without the nomination of mandatory notification stages for individual building projects, building surveyors would be limited in their ability to track the progress and compliance of building work and to respond to noncompliant work through the issue of directions (and if required subsequently, notices and orders). This in turn may lead to an increase in new buildings that do not meet minimum required building standards, which may increase the risk of adverse impacts on building owners and occupants including as a result of building collapse, fire and loss of amenity.

Commercial entities or developers of larger nondomestic building projects are likely to be in a better position to self-regulate inspection regimes and monitor compliance of building work through complex contract and risk-allocation strategies. However, the extent to which commercial parties would seek to independently verify that building standards are being met at various stages of construction is more likely to be influenced by time and cost factors. These influences can undermine best practice and result in more shortcuts being taken by the builder to achieve financial savings for the developer.

Domestic building consumers are not always in a position to protect their own interests in this regard. For this reason it has been assessed that domestic building consumers would receive the most benefit from a mandatory inspection regime.

##### Lack of clear record-keeping and disclosure requirements in relation to direction made by a RBS under s 37 of the Act

The absence of such requirements would make the process of issuing directions less transparent, to the detriment of owners, builders and enforcement authorities. It would also remove a means of tracking the quality of building work, as directions are issued to remedy noncompliant building work.

##### Insufficient information included in notices and orders to enable compliance with, response to, disputation of, or enforcement of these notices and orders

In the absence of Regulations, critical pieces of information to enable the effective operation of the enforcement of the safety and building standards regime established under pt 8 of the Act may not be included in notices and orders.

The objective of the Regulations is to improve the enforceability of and compliance with notices and orders issued under pt 8 of the Act.

##### Lack of a clear administrative process to control how requests are made to a RBS to amend or cancel certain building orders under s 116 of the Act

The result of this is confusion and inconsistency of process between individual building surveyors. The objective of reg 906 is to provide certainty of process.

**Consultation questions**

How often are building orders issued? At what mandatory inspection stages are building orders most commonly issued? Is it difficult to comply with, amend or cancel a building order?

### B2.3.2 Addressing the underlying problem

#### Option 7 – Remake current Regulations

The Regulations (pt 9) currently stipulate four mandatory notification stages for inspection. Pt 9 of the Regulations also sets out what information must be contained in emergency orders, building notices and building orders.

The Regulations specify the following mandatory notification stages:

* before placing a footing
* before pouring an in situ reinforced concrete member nominated by a RBS
* completion of framework

completion of all building work.

###### Costs

The primary costs associated with pt 9 of the Regulations are:

* cost of a RBS's time to complete mandatory inspections

cost of a RBS's time to transcribe prescribed details into emergency orders, building notices and building orders.

In addition, minor costs are incurred in relation to:

* a RBS's time to identify mandatory inspection stages relevant to building work
* a RBS's time to transcribe identified mandatory inspection stages into a building permit
* a RBS's time to keep records in accordance with Regulation 902
* administrative costs of the owner making a written request authorised under s 116 of the Act requesting a building order to be amended or cancelled

administrative cost of a RBS informing an owner of their decision in response to a request made under s 116 of the Act.

The department’s view is that these costs are minor and will not impose any significant additional burden.

Consultation with building surveyors and building practitioners indicates that in most circumstances building practitioners can coordinate the timing of inspections with RBSs such that delays to building work are avoided or minimised to the extent possible. That said, in instances where inspections are not arranged in a timely manner there may be delay costs incurred where building work can not be continued until an inspection has been carried out by or on behalf of the RBS.

A key variable in quantifying the costs of undertaking mandatory inspections is the degree to which building surveyors would continue to perform inspections in the absence of Regulations. Consultations with building surveyors indicate that it is difficult to speculate what would occur in the absence of the current requirements in the Regulations. A RBS must be satisfied that building work being carried out is compliant with the Regulations and conducting inspections is a key activity in ensuring that this is occurring.

However, if the Regulations do not prescribe any mandatory notification stages – at which point the building practitioners are required under the Act to notify the RBS – it may be difficult in practice for RBSs to carry out these inspections at key points of the building project. That being said, even in the absence of Regulations building practitioners could potentially continue to notify the RBS of the need for an inspection to ensure that the RBS is satisfied with the quality of the work and willing to sign off on completion of the project.

**Consultation questions**

How motivated are builders or building surveyors to ensure that inspections are carried out? Why?

How often do building surveyors conduct inspections outside of the mandatory inspection stages? Why does this occur?

To what extent would a lack of Regulations prescribing mandatory inspection stages impact the behaviour of building practitioners and RBSs? Would building practitioners continue to request inspections by RBSs to the same extent that currently occurs?

Given this uncertainty, a range of cost estimates is provided in regard to the burden of mandatory notification requirements. At the low end, it is assumed that 90% of inspections that currently occur would continue to do so in the absence of Regulations, resulting in an annual cost of $13.6 million or $114.7 million NPV over 10 years. At the high end, it is assumed that only 50% of inspections would continue to occur in the absence of Regulations, resulting in an annual cost of $68.0 million or $573.6 million NPV over 10 years.

The cost for RBSs to complete prescribed information for building notices is estimated to be $750,000 a year or $6.3 million NPV over 10 years. The cost of RBSs to complete prescribed information for building orders is estimated to be $309,000 a year or $2.6 million NPV over 10 years. The cost of time associated with emergency orders is considered to be minor and not quantified.

In total, costs associated with inspections, directions, notices and orders under Option 6 are estimated to be between $123.6–$582.6 million NPV over 10 years.

###### Benefits

Inspections at the specified stages are important as these are identified as the points in the construction process at which it is crucial and convenient to identify noncompliant work. It provides a mandatory pause in building work so that further building activity does not compromise the ability to inspect core components.

If a RBS wanted to inspect a specific component, unless building work is paused there is a high risk it could be covered by other building materials. In these situations, either:

* the RBS does not inspect that component, giving rise to increases in latent defects because there is no certainty of compliance, or

the RBS requires the building work to be undone to allow the component to be inspected, increasing the costs of the building work (for example, an inspection of the framework after the walls are erected would be impossible without cutting into the walls).

As part of VBA's audit of building permits from late-2012 to mid-2014 (discussed in Chapter B1.1.3 Addressing issues with the design / implementation of the Regulations), 75% of the 963 building permits audited indicated that all the mandatory inspections had been carried out and approved. In contrast, no permits were found to be noncompliant with the mandatory inspection requirements, although information was missing for 23% of permits and 2% of permits could not be rated. The failure to record information in a permit may not necessarily mean that mandatory inspections were not carried out. The above information on the whole nevertheless suggests that the majority of mandatory inspections were conducted.

Requiring a building to be inspected at four significant stages during its construction sends a signal to consumers that building work will be inspected and minimum building standards will be enforced, resulting in viable economic investments in structurally sound buildings (noting that the strength of this signal is contingent on the extent to which consumers are aware of these requirements). This provides a substitute for potentially substantial search costs and may reduce the risk that purchasers and occupiers unwittingly contract for, buy or rent buildings that do not meet with the approved design or do not meet their needs.

The mandatory inspection regime is considered necessary by the department because most owners, especially in the domestic building sector, will not generally possess the knowledge or expertise to assess whether building work is compliant with building standards. The department’s view is that market forces are inadequate for the purpose of ensuring that building practitioners will always produce compliant building work. Hence the need for a person with the relevant statutory authority and sufficient technical expertise – the RBS – to independently assess building work for compliance.

Where noncompliant work is identified by a RBS, directions, building notices and orders can be issued. The aim of these is to require noncompliant building work to be brought into compliance or to address a health or safety risk by requiring evacuation or prohibiting occupation. Consultations with building surveyors indicated that for the vast majority of inspections, at least one issue is usually identified that requires at the minimum a direction to the practitioner (though the majority of issues identified are minor in nature).[[76]](#footnote-77) This information demonstrates that inspections play a vital role in ensuring building work is compliant with the Act and Regulations.

To estimate the benefits associated with Option 7, a break-even analysis was conducted identifying the number of defects that would need to be avoided through mandatory inspections and issuing of directions, notices and orders in order for the costs of the Regulations to equate with benefits.

The average cost of a building defect is estimated to be $751.[[77]](#footnote-78) This estimate is based on a residential construction defect with a simplifying assumption made (due to limited data) that this figure is applicable across all construction projects. While this figure has been used, the costs of a defect can be higher depending on the type of damage that needs to be rectified. Therefore, for Option 7.1 the average value of a defect the department has used is higher due to the nature of the defects targeted in that option and the evidence that is available to estimate the costs of those defects. For Option 7, the more general figure, discussed above, has been used.

**Consultation question**

When undertaking inspections, how often are issues identified and what are those issues?

Is there any difference in the number of inspections that are undertaken:

* by a MBS or a PBS?

in relation to a commercial building project and domestic building work? Is building work generally inspected more often than is required under the mandatory notification stages of the current Regulations?

Are estimated costs associated with a building defect considered reasonable? If not, can you provide estimates (including sources where possible) as well as any insight into whether the cost of defects differs materially across project types (for example, domestic versus commercial)?

Applying this figure, the number of avoided defects required is between 19,500–91,900 a year in order for the costs of the Regulations to equal the benefits. Using building permit figures for 2014–15, this equates to one potential defect being discovered between every 1–5 building permits issued (or one potential defect discovered between every 5–22 inspections).

To put this break-even requirement in context, Georgiou, Love and Smith[[78]](#footnote-79) considered home inspection reports commissioned for buying or selling purposes over a three-year period between 1988–96 in Victoria.[[79]](#footnote-80) For houses built by registered builders, the average defect rate was 2.29 per house.

Applying this average across all building permits, this equates to about 242,000 defects a year with Regulations in place, based on the estimated number of building permits in 2014–15. Thus the current mandatory inspection Regulations would need to be responsible for a reduction in defects of between 7%–28% compared to a no-Regulations scenario. The department considers that in the absence of the Regulations there would be a considerably higher prevalence of defects in the building industry (discussed above) and that a required reduction of this magnitude is considered reasonable and achievable.

This defect rate from Georgiou, Love and Smith[[80]](#footnote-81) is likely to be at the low end. Based on other sources of information, it is generally accepted that the rate of defects and disputes in relation to buildings has increased since 2002. However, due to the lack of available evidence and data, the department was unable to determine this rate accurately. For example, the *VCAT 2015–16 Annual Report* notes that over the past two years, there has been an increase in applications relating to high-rise apartment buildings.[[81]](#footnote-82)

### B2.3.3 Addressing issues with the design / implementation of the Regulations

A range of issues with the application and operation of the current Regulations has been identified through consultations with industry stakeholders and a detailed review of the operation of the current Regulations. The issues identified as a result of these processes and the options to address them are set out below, together with an analysis of the associated costs and benefits.

#### Option 7.1 – Addressing common building defects through additional mandatory notification stages

**Issue:** For new buildings and alterations, there is a need to better target the monitoring of compliance of building work with minimum necessary building and safety standards. Option 7.1 seeks to achieve this in two ways.

The first way is to revise current reg 901, which is now drafted with reference to three distinct scopes of work. There is no change to the requirement;[[82]](#footnote-83) the Regulation has been redrafted in specific reference to three distinct building scenarios. The purpose of this change is to reduce the interpretation issues about how the regulatory requirement is to work in practice regarding the:

* construction of a new building and the alteration of an existing building
* demolition or removal of a building

construction of a swimming pool.

The second way is the three new mandatory notification stages that have been proposed, but only for building work that requires the construction and the alteration of a building, which increases the total number of mandatory notifications from four to seven.

The three new mandatory notification stages are proposed to address concerns raised by stakeholders with the mandatory notification stages. A key concern raised numerous times was the period of time that elapses between the inspection points for the construction and alteration of a building because a substantial amount of building work takes place once the frame has been completed.

The impacts of this time gap are not readily identifiable. However, three themes emerge from recent VBA research[[83]](#footnote-84) and stakeholder submissions.

The first is an increase in water-damaged buildings caused by a range of factors including poor workmanship and site supervision, waterproofing being damaged by subsequent trades and the installation of inappropriate materials. This issue became apparent after research and evidence collection from industry bodies, building inspections, other states and territories, strata organisations, building and plumbing practitioners and insurance data.[[84]](#footnote-85) Additionally, VBA identified through a case file analysis[[85]](#footnote-86) of domestic building inspections that issues relating to water damage appear to be a common cause of dispute associated with building work.

The second is a high rate of defective fire ratings in lightweight construction and penetrations. This issue was raised in early consultations with fire authorities and peak industry stakeholders, with similar, corroborating information found by VBA in its research.[[86]](#footnote-87)

The third is the high number of complaints councils receive regarding stormwater drainage systems which impact on adjoining properties because they are not connected to the point of discharge (identified by the council under the Regulations), or because the gutter or downpipes have never been connected to the underground stormwater drainage system. One council provided an example of 187 complaints received, although it was not clear over which time period this was.

Accordingly, the three new mandatory notification stages proposed are:

* before covering walls, floors or ceilings, for the purpose of checking that fire resistance levels comply with the BCA and that the structural integrity of the framework has been retained as a result of subsequent work (for example electrical and plumbing work)
* before covering of waterproofing in wet areas (as defined in the NCC)[[87]](#footnote-88)

completion of any external drainage / stormwater.

These particular elements of a building are targeted because:

* the building work to comply with requirements associated with waterproofing, fire resistance and stormwater drainage occurs after the frame is completed
* fire-rated walls and waterproofing work on a building can be covered within a short space of time
* if these features are noncompliant and there are undiscovered defects, this can have catastrophic impacts for building owners and occupants if these elements fail as a result of substandard building work

these areas are a common cause of a dispute or complaint in relation to building work.

The department acknowledges that damage can occur because of misuse rather than by any defective building work and that this source of damage will not be reduced by introducing an additional mandatory inspection stage.

In relation to waterproofing, there is an emerging body of evidence that demonstrates that balconies are failing, due to causes including subsequent trades piercing compliant waterproof membranes or inappropriate materials used in the construction of the balcony. Due to the number of causes associated with balcony failure that can occur at any point during the building project, it was not considered to be an area that could be improved through a mandatory notification stage. There is no one point in time where an inspection of a balcony will ensure complete compliance. To address this problem, the vigilance of building practitioners is required.

##### Waterproofing

Requirements associated with wet areas aim to protect building occupants and users against illness, injury and loss of amenity, and to protect the rest of the building from water damage. If water is not contained in designated wet areas it can become destructive, resulting in compromised health and safety outcomes. Water damage from a wet area can also have a significant economic impact where rectification of damage is required, especially in high-rise buildings.[[88]](#footnote-89) In addition, complex and costly legal disputes may arise where multiple parties are involved (for example, strata corporations).

Water can cause rot to timber wall and floor framing; rust in steel fixings; deterioration or disintegration of wall linings, flooring (especially particleboard) and cabinetry; paint to peel; mould to grow; and water to pool in the subfloor.[[89]](#footnote-90)

Requiring a mandatory notification for wet areas ensures work is properly inspected before it is covered by tiles. Otherwise, if waterproofing is not compliant and flaws not detected, a building owner may not discover a problem for several years (due to the latent nature of a water leak), which may have already caused damage to frames and material of the building.

This regulatory change may also have positive impacts on industry as supervision may promote upskilling and awareness among building practitioners, which may result in greater oversight of wet areas during the construction stage. This helps to ensure that waterproofing work does not fail and allow water to flow into other non-waterproof areas of a building. VBA receives several enquiries each week about the waterproofing requirements for wet areas.

The costs of rectifying damage caused by water in a building can be significantly higher than the average cost of a defect used in the RIS. For example, research conducted by VBA[[90]](#footnote-91) in relation to water-damaged buildings found that the average annual insurance claim for rectifying water damage (from burst pipes)[[91]](#footnote-92) was about $6,100 from about 13,000 annual claims (during the 10-year period 2006–07 to 2015–16). However, this data did not include strata corporations so the figures are likely to be an underestimate of the real cost. In addition, VBA analysed data from the Victorian Managed Insurance Agency (VMIA) relating to building defect claims. These analyses found that from over 1,300 individual matters from May 2010 to January 2017, there was an average of 66 defect claims a year relating to waterproofing (as defined by VMIA), each with an estimated average claim cost of $17,400.

##### Fire-rating requirements

The objective of fire-rating requirements is suppressing the spread of fire and containing a fire to its room of origin. This requirement protects building occupants and users against injury and death from a building fire and protects the rest of the building and adjacent buildings from fire damage. If fire is not adequately contained and suppressed, it can spread quickly with fatal consequences and significant economic impacts.

Requiring a mandatory notification in relation to fire-rating requirements is imperative before covering walls, floors or ceilings, to check that fire resistance levels comply with the BCA and that the structural integrity of the framework has been retained as a result of subsequent work (for example, electrical and plumbing work). This is particularly important for attached dwellings (such as town houses and apartments) where substandard construction of fire-rating requirements can lead to fire spreading quickly between residences, causing avoidable property damage and potentially personal injury and death (see Box 6 and Box 7 below).

An early submission to the department by one industry stakeholder also suggested that mandatory inspections be introduced in relation to fire-rating of lightweight construction and penetrations due to the high number of defects and the catastrophic effects in the event of failure.

VBA’s analysis of insurance data[[92]](#footnote-93) (2006–07 to 2015–16) found the average annual claim for fire damage was about $36,000 per claim from an annual average of 2,800 claims. However, this data did not include strata corporations so the figure is likely to be an underestimation of the real cost

##### Storm water drainage systems

Under proposed new reg 613(1) (current reg 610), the design of every stormwater drainage system to the point of discharge from an allotment must be approved by a RBS. This approval will usually be granted as part of the building approval process when a RBS assesses an application before issuing the building permit. Requiring consideration of this aspect at the design stage reduces the risk of the plumber (who will install and connect the stormwater drainage system) being directed to install a design that is either inappropriate or not sufficient for diverting stormwater away from the built environment.

The relevant council is also required to identify at the building permit application stage (the design stage) the location of the point of discharge of a stormwater drainage system from an allotment either within the allotment or at the allotment boundary. Councils provide drainage systems to collect and convey stormwater to creeks and rivers; they also maintain the stormwater mains they own on private property.

Requiring a mandatory notification in relation to stormwater drainage will ensure that a stormwater drainage system meets the design requirements described above. Unless the RBS or an owner arranges a voluntary inspection before the system is covered up, they cannot verify that the system is consistent with council and building requirements for the site. Incorrect location and substandard construction can have significant adverse impacts including problems with stormwater run-off to neighbouring property or backflow to the owner’s own property. This approach also reflects the current approach in New South Wales, where mandatory inspections are required before covering of external drainage connections.[[93]](#footnote-94)

A RBS may rely on a certificate issued by a building practitioner registered in the category of engineer (class of civil engineer), which relates to an inspection of domestic building work relating to among other matters sewerage, water or drainage.

VBA analysed data supplied by the VMIA relating to building defect claims. These analyses found that from over 1,300 individual matters from May 2010 to January 2017, there was an average of 16 defect claims a year relating to drainage (as defined by VMIA), each with an estimated average claim cost of about $5,000.

###### Costs

The department estimates new buildings or alterations to existing buildings account for about 76,000 building permits a year. Assuming that three additional mandatory inspections would need to be undertaken for each of these permits, the total additional cost compared to Option 6 is $73.4 million a year, or $620 million NPV over 10 years. This figure assumes that the additional inspections are all attributable to the Regulations. This assumption is based on anecdotal evidence and early research findings from VBA: however, there is no evidence available to determine the extent to which building surveyors may already be undertaking inspections of this nature.

##### Benefits

Additional inspections will allow building surveyors to identify, and direct building practitioners to rectify, noncompliant building work. The department expects these benefits will arise because it is not known how often building permits are issued that require additional mandatory inspection stages as a condition of the building permit, notwithstanding the current powers building surveyors have under the Act to set out additional mandatory notification stages in the building permit that are not specified in the Regulations.

This will complement the strengthened powers inserted into the Act in 2016 which require a RBS to issue a direction for noncompliant building work to be brought into compliance.

Case file analysis undertaken by VBA has identified significant issues associated with water-damaged buildings. Based on an assessment of a random sample, issues relating to water damage were a factor in 45% of disputes that were independently inspected by VBA. Preliminary evidence collection and research by VBA has further highlighted costs involved in resolving complex disputes regarding water damage and rectification.[[94]](#footnote-95)

Based on consultation with industry stakeholders, the department considers mandatory inspection on completion of waterproofing will provide the best opportunity to allow these issues to be identified and remedied (by direction if necessary) before waterproofing is covered up, at which point it becomes more costly to identify and rectify. This approach is consistent with the current approach in NSW where mandatory inspections are required before wet area waterproofing.[[95]](#footnote-96) However, the department has not undertaken an assessment of whether the outcomes in relation to waterproofing are better than in Victoria due to a lack of readily available data.

The same rationale applies to defects relating to stormwater drainage works and fire rating.

Fire safety is also an issue: see Box 6 and Box 7 below.

Box : Case study – Rangeview Estate, Diamond Creek

The purpose of this case study is to demonstrate the importance of identifying and addressing noncompliance in relation to fire safety standards during construction.

Sixty-nine townhouses were constructed at Rangeview Estate, Diamond Creek between 2007– 2012. After the townhouses were sold, some owners became concerned about defective building work and raised the matter with the builder, who failed to rectify the defects.

An investigation by VBA identified major defects in the buildings including noncompliant fire walls between rooms which could have caused a serious risk to life had a fire started. The cost of fixing these problems was estimated at $7.6 million.

The Building Practitioners Board took disciplinary action against the builder in 2015–16 resulting in the builder being fined and banned from practising as a registered building practitioner for three years, the maximum disqualification period possible.

In February 2016, the *Sydney Morning Herald* reported that the RBS, who signed off on the work, had stated in relation to the fire walls that 'it’s not a mandatory inspection'.[[96]](#footnote-97)

Box : Case study – Lacrosse tower fire

This case study demonstrates the importance of identifying and addressing noncompliance in relation to fire safety standards during construction.

In November 2014, a fire broke out at a 23-storey apartment block in Docklands. The cause of the fire was an unextinguished cigarette on a sixth-floor balcony which eventually led to the ignition of combustible external wall cladding and spread to the top of the building. The MFB post-incident analysis of the fire found that the use of noncompliant aluminium composite panelling had contributed to the spread of the fire.

VBA subsequently launched an external wall cladding audit of some 170 high-rise buildings and found a noncompliance rate of 51%. Of these buildings, one apartment building was found to pose a safety risk to its occupants.

In June 2016, VBA completed its investigation into the practitioners involved. It referred the builder, building surveyor and fire safety engineer to the Building Practitioners Board, alleging that they had breached the Building Act and Regulations and failed to carry out their work in a competent manner and to a professional standard.[[97]](#footnote-98)

The department generally accepts this evidence. This is because issues with these particular building features have been raised continuously, over a period of time and across a range of stakeholders.

##### Break-even analysis

Under Option 7.1, the existing four mandatory notification stages would need to result in the same reduction in building defects as required by Option 7 (remaking the Regulations), a reduction of 7%–28% relative to a no-Regulations scenario.

In addition, this option would need to derive additional benefits through VBA’s analysis indicates that these defects are significantly more costly to rectify relative to building defects targeted by existing mandatory inspections (as discussed in relation to Option 7 above). VBA’s analysis indicates that rectification costs are:

* between $6,100–$17,100 on average for defects associated with waterproofing
* $36,000 on average for insurance claims related to fire damage, though it is not clear the extent to which compliance with fire-rating requirements would reduce these costs

about $5,000 for defects associated with incorrect or a lack of stormwater draining.

As a conservative estimate, the lowest average defect cost figure provided by VBA ($5,000) was applied to the break-even analysis.

Applying these assumptions, the three additional notification stages would need to result in the avoidance of a further 14,700 defects each year, or a reduction of about 6% in the current number of defects occurring each year.

#### Matters for future consideration

The department notes that Option 7.1 above is based largely on anecdotal evidence. The decision to highlight these areas, by introducing additional mandatory notification stages in the proposed Regulations, is to reinforce the need for RBSs and building practitioners to monitor these areas closely during the construction of a building. Submissions in relation to Option 7.1 will influence whether the proposed mandatory notification stages will be retained or reduced when the new Regulations are made. The department will work with owners corporations and other stakeholders through the evidence improvement project to collect further evidence of the costs and benefits of the proposed changes.

In relation to Option 7.2 discussed below, this option did not proceed in the proposed Regulations because the department requires further information to determine whether commercial building projects will continue to be monitored, at a minimum, in accordance with the proposed Regulations. This is because of the cost-saving influences that can undermine best practice. This information is required to determine the likelihood of an adverse impact occurring if Option 7.2 was adopted because of the higher impacts when a defect occurs in larger commercial projects (such as high-rise buildings).

#### Option 7.2 – Limit the mandatory inspection regime to domestic building work only

**Issue:** There are questions around the need for mandatory inspections outside of domestic building work (for example, commercial projects may best deal with defects via contractual arrangements as opposed to mandatory inspections).

**Option:** Limit the current mandatory inspection regime to domestic building work only, with nondomestic building work subject to only one mandatory inspection related to precautions taken to protect the public. However, there is a need for more evidence to allow a proper analysis as it is not clear what the impacts of this option would be.

As a result, this option is presented for consultation purposes to obtain further information to and allow a proper consideration of the risks and merits of this proposal. A preliminary cost-benefit analysis of this option is provided below.

###### Costs

Costs associated with Option 7.2 will equal the costs of remaking the Regulations (Option 7), less the current costs associated with mandatory inspections for nondomestic work.

Removing mandatory inspection requirements for nondomestic work would result in savings from RBSs performing fewer inspections. In 2014–15, there were about 19,000 nondomestic building permits issued. Assuming the number of mandatory inspections required for these projects fell from four to one (this assumes that all nondomestic projects would still require an inspection in relation to public safety), and applying the same proportion of inspections that would still occur in the absence of mandatory requirements as under Option 7 (between 50%–90%), the total reduction in costs is estimated to be between $1.8–$9.0 million a year, or $15.3–$76.5 million NPV over 10 years.

This results in total costs for Option 7.2 of between $12.8–$60.0 million a year, or $108.4–$506.0 million NPV over 10 years.

While the rationale for this option is that those engaged in commercial building work are better-equipped to look after their own interests, additional costs may nevertheless arise in relation to increased instances of rectification work being required or defects going undiscovered (potentially posing safety risks). This is particularly relevant if the removal of mandatory inspections from nondomestic building work led to an increased incidence of defects. However, this is less likely for nondomestic building work given a greater ability to self-regulate inspection regimes and monitor compliance of building work through complex contract and risk-allocation strategies. For example, what proportion of commercial building projects actually have a site engineer appointed? This evidence could form the basis of a specific exemption (rather than a blanket exclusion) from the requirement to comply with mandatory notification requirements.

By way of an illustrative example, a 10% increase in defects recorded in Victoria (applying previously described assumptions regarding defect rates and defect costs) would result in additional costs of $33.2 million a year.

###### Benefits

Using the same break-even methodology as for previous options but assuming mandatory inspections would only apply to domestic building work, the Regulations would need to result in between 17,100–79,800 defects being avoided each year. Assuming there are 242,000 defects recorded a year under the current Regulations, this equates to a required reduction of 7%– 25% a year compared to a no-Regulations base case. The department considers this break-even point is feasible and achievable as it represents a continuation of the current regulatory approach (for mandatory inspection stages), with a reduction in regulatory burden due to the application of stages to domestic building work only.

**Consultation questions**

For commercial building projects, do you consider that alternative building instruments (such as contractual arrangements) are sufficient to ensure defects are identified and rectified throughout the course of the project, or are mandatory inspections required?

What is your perspective of the risks associated with removing or reducing the scope of mandatory notification stages in the Regulations?

#### Minor changes

The department proposes to make minor changes in relation to the current Regulations relating to emergency orders, building notices and building orders. The proposed changes include:

* a requirement for minor additional information (to that required by current regs 903–905) to be included in emergency orders, building notices and building orders including details of any inspections carried out which are relied on by a RBS or a MBS when issuing the same
* clarifying that details of inspections need only be provided where inspections have been carried out

providing new forms which building surveyors may use for emergency orders, building notices and building orders to facilitate the issue of legally valid and enforceable notices and orders, and useful for future audits purposes.

The department’s view is that these changes will not impose any significant additional burden.

#### Conclusion

Remaking the Regulations (Option 7) would need to result in a reduction in defects of 7%–28% compared to a no-Regulations’ scenario in order for benefits to equal costs.

Prescribing additional mandatory notification stages (Option 7.1) results in total costs of between $88.1–$142.5 million a year, or $743.2–$1,202.1 million NPV over 10 years. This would need to achieve the same reduction in defects associated with remaking the Regulations (a reduction of 7%–28%), with a further reduction in high-risk, high-cost defects (targeted by the additional stages) of 6%.

Limiting the mandatory inspection regime to domestic building work (Option 7.2) reduces regulatory costs by between $1.8–$9.0 million a year and would need to result in a reduction in defects of 7%–25% for benefits to equal costs. This results in total annual costs between $12.8–$60.0 million ($108.3–$506.0 million NPV over 10 years). This would require a reduction in defects of 7%–25% for benefits to equal costs.

Despite the cost-benefit analysis, Option 7.2 is not the preferred option as it requires further evidence to be gathered to verify current industry practice. While the RIS analysis indicates that risk is low for noncompliant work in commercial projects, there is no evidence available to verify the compliance rate.

Until this analysis can be verified with evidence that the compliance rate for commercial building work is high, Option 7.1 is the department’s preferred option. Despite the additional costs associated with this option (estimated at $73.4 million a year), the department considers that the break-even point is likely to be met. This is because available evidence indicates that defect costs associated with waterproofing, fire-rating systems and stormwater drainage are much more costly to rectify than the defects targeted through existing mandatory inspections. Based on a conservative assumption of an average rectification cost of $5,000, a moderate reduction in total defects of 6% is required. This department considers this reduction is achievable.

This includes dividing mandatory notification stages into three distinct scopes of work to better target key points in the construction process where it is crucial and convenient to identify noncompliant work by means of inspection. This will benefit building owners and occupants.

On this basis, the department considers there is not enough evidence in respect of the risks which may arise if commercial building projects were released from the mandatory inspection regime.

The department’s view is that market forces are inadequate for the purposes of ensuring that building practitioners always perform compliant building work. Hence a real need exists for a person with relevant statutory authority and sufficient technical expertise (that is, a RBS) to independently assess building work for compliance by means of inspections at key stages of building work, in respect of both domestic and commercial building work.

# B3 Completion / use phase

## B3.1 Occupancy permits and certificates of final inspection – form and information for an application

### B3.1.1 The nature and extent of the underlying problem

#### The underlying problem

The current occupancy permit system in Victoria is established by pt 5 of the Act. The key objective of this system is to protect the safety and health of people who use and occupy buildings.[[98]](#footnote-99)

The occupancy permit system aims to achieve this objective by controlling when and how a building, subject to the requirement for an occupancy permit, may be occupied and used.

The issue of an occupancy permit will also start the clock for when a building action may be brought.[[99]](#footnote-100) Where an occupancy permit is not required, a certificate of final inspection will serve the same purpose.[[100]](#footnote-101)

It is important to note that an occupancy permit or certificate of final inspection cannot be used as evidence that building work complies with current building standards.[[101]](#footnote-102) This is the role of the building permit system[[102]](#footnote-103) and the inspection[[103]](#footnote-104) and enforcement of building and safety standards[[104]](#footnote-105) regimes established by the Act and supported by the current Regulations.

#### The case for regulatory control through building Regulations

##### The occupancy permit as a tool to control when a building may be occupied

At the design stage of a project, when issuing a building permit, the RBS must state in that permit if an occupancy permit is required.[[105]](#footnote-106) Where this requirement is specified, the Act prohibits a person from occupying a building, once erected, or a PoPE until an occupancy permit has been issued by the RBS.[[106]](#footnote-107)

The RBS must not allow occupation of a building or PoPE[[107]](#footnote-108) (by issuing an occupancy permit) until the building or PoPE is suitable for occupation.

These complementary measures are designed to prevent occupation of a building or PoPE before it is safe to do so. Occupation of an unsafe and unfinished building or PoPE may lead to injury, death or other adverse consequences due to a lack of amenity or accessibility.

For a building in respect of which an occupancy permit is already in place, a MBS may cancel an occupancy permit if the building or the part of a building to which the permit relates is no longer suitable for occupation for the classification stated on the permit[[108]](#footnote-109) or if the strength of the building has become less than required to carry the loads stated on the permit.[[109]](#footnote-110)

Independently of the occupancy permit system, a MBS may also issue an emergency order to an owner and occupier to evacuate a building, land or place if he or she is of the opinion there is a danger to life or property. A building notice may also be served on an owner of a building, land or PoPE if the building or PoPE is unfit for occupation or use as a PoPE[[110]](#footnote-111) or is a danger to the life, safety or health of any person using the building, land or PoPE.[[111]](#footnote-112) A building notice may be confirmed by a building order which may prohibit occupation and require work to be carried out to make the building safe. Penalties apply for noncompliance with a building order and emergency order.[[112]](#footnote-113)

##### The occupancy permit is used as a tool to control how a building is used

A RBS may use an occupancy permit to control the use of a building:

* by specifying the classification of the building in the permit
* by stipulating in the permit the permitted use of the building

by stipulating in the permit the conditions to which use of the building is subject.

The Act requires compliance with these matters by mandating that occupation of a building or PoPE must be in accordance with the occupancy permit, which includes the classification, permitted use and conditions of use, where imposed in the permit.[[113]](#footnote-114) Penalties apply for failing to do so.[[114]](#footnote-115)

An example of how a condition on an occupancy permit may be used to control the safe use of a building is a condition which requires continuing performance of ESMs (ESMs). ESMs are life-safety features that are required to be installed in buildings in accordance with the BCA. It is through the occupancy permit that the maintenance requirements associated with ESMs can be enforced. The maintenance of ESMs is critical to ensuring adequate occupant health and safety in buildings (see Chapter B3.3 Essential safety measures for further discussion of this).

A MBS may cancel an occupancy permit if the building or the part of a building to which the permit relates is no longer suitable for occupation for the classification stated on the permit.[[115]](#footnote-116)

##### The occupancy permit is used as a tool to control when and how the use of a building may be changed

Reg 1011(1) prohibits the change of use of a building until it meets the building standards applicable to the new use. Partial compliance may be satisfactory in certain cases if approved by the RBS.[[116]](#footnote-117) The occupancy permit is used as a tool to assist with the enforcement of this requirement by evidencing the permitted use(s) of the building.

Further, and in addition to the control of change of use contained in regs 1011(1), ss 40 and 51 of the Act place a further control on change of use by prohibiting occupation of a building in contravention of the use of the building or PoPE specified in the occupancy permit.

This means that before a new use is adopted, in addition to making the building comply with building standards for the new use,[[117]](#footnote-118) amendment to the current occupancy permit will be required which authorises the new use.[[118]](#footnote-119)

A MBS may cancel an occupancy permit if the use of the building or part of the building has changed from the use stated on the permit.[[119]](#footnote-120)

##### How the Regulations support the operation of the occupancy permit framework established by the Act

The Regulations support the operation of the occupancy permit framework established by the Act by:

* prescribing circumstances in which an occupancy permit is not required[[120]](#footnote-121)

prescribing the form to be used for and information included in an occupancy permit application, the occupancy permit itself and a certificate of final inspection (where an occupancy permit is not required).[[121]](#footnote-122)

To demonstrate an occupancy permit has been issued and is in force for a particular building, the Regulations require the display of an occupancy permit in an approved location in a building, and require the owner to ensure a copy of any occupancy permit is available for inspection by a MBS and a chief officer, on request.[[122]](#footnote-123)

##### Unnecessary regulatory burden imposed on the public if occupancy permits required for buildings and structures that are nonhabitable

Buildings and building work that do not require an occupancy permit fall outside the controls in the occupancy permit system. Nonhabitable buildings and structures (such as private carports and sheds) are buildings that can safely be excluded from the protections provided in the occupancy permit framework. This is because it is not necessary to manage the health and safety of occupants in these types of buildings by means of the occupancy permit system as there are no occupants; or if there are, the time spent by occupants in the building is negligible. For these buildings and structures, only a certificate of final inspection will be required (in addition to compliance with building standards and the building permit and inspection regimes). This reduces burden on the consumer and the RBS.

The Regulations also exclude from the requirement for an occupancy permit an alteration to a house[[123]](#footnote-124) or within a sole occupancy unit in an apartment building, flat complex or hotel.[[124]](#footnote-125) This is because such buildings are likely to already have an occupancy permit issued and in force, and the alteration will not change the use of the building as specified in the existing occupancy permit.

Certain buildings and building work specified in column 2 of the table in sch 8 to the current Regulations are also excluded from the requirement for a building and occupancy permit.[[125]](#footnote-126)

If no building permit is required, it follows that no occupancy is required under pt 5 div 1 of the Act. Nor will a certificate of final inspection be required, as the requirement for the certificate is only triggered on completion of the final mandatory notification stage of building work as required under the building permit system.

Sch 8 excludes from the requirement for a building or occupancy permit structures and building work such as certain temporary structures,[[126]](#footnote-127) demolition work and certain telecommunication facilities.[[127]](#footnote-128)

Occupancy permits are also not required for minor building work and building work which in the opinion of the RBS does not compromise the suitability of a building for occupation.[[128]](#footnote-129)

The department received submissions to exclude decks and other smaller building projects from the permit process because they were low-risk to health and safety. However, due to the impacts decks can have on safety (for example, by their height) and the amenity of adjoining owners (for example, by overlooking), an exemption was not considered appropriate until further consideration of what possible dimensions or limitations would be necessary to mitigate those impacts. There is further discussion about exemptions in Chapter B5 Other topics.

**Consultation questions**

Can you provide specific examples of the costs of undertaking the permit process being more than the costs of building work? Were the risks associated with this building low?

What safety problems, if any, are posed by building work which is currently exempt from the permit process? What are these problems and when do they occur? Should such building work be required to have an occupancy permit? Why or why not?

##### Incomplete occupancy permit applications and lack of information to demonstrate a building is suitable for occupation

As explained above, the Regulations considered under this topic prescribe information to be included in an application for an occupancy permit made to a RBS under the Act.[[129]](#footnote-130) The objective of these Regulations is to ensure the RBS has sufficient information to determine if a building is suitable for occupation before issuing an occupancy permit.

Three problems may arise as a result of the submission of an incomplete occupancy permit application.

First, a RBS under sch 2 cl 2 of the Act may require the applicant to provide additional information or documents or amend the application before it is dealt with further, leading to additional delay and administrative costs for both the applicant and the RBS. These costs will be similar to those incurred in relation to a refusal and resubmission of an application for a building permit.

Second,a RBS must refuse the occupancy permit under s 44 of the Act, leading to additional delay and administrative costs associated with delayed occupation of a building and the compilation of a new application. The costs associated with a refusal of an occupancy permit, a request or requests for additional information and the issue of an occupancy permit before a building is suitable for occupation, are attributed to the Act.[[130]](#footnote-131) However, the effect of the current Regulations that prescribe information to be included in an occupancy permit application[[131]](#footnote-132) is to avoid or minimise costs associated with these problems.

Third,the occupancy permit may be issued in the absence of sufficient information to demonstrate a building is suitable for occupation, meaning that occupation of an unsafe and unfinished building may be permitted. This is a practitioner compliance issue under the Act.

In the absence of pt 10 of the current Regulations and the prescribed information required to be included in an application for an occupancy permit, the department assumes it would be significantly less likely that applications would contain sufficient information for the RBS to assess the application. This could result in requests from the RBS to the owner and/or agent for more information.[[132]](#footnote-133) Such requests can create additional administrative costs and may lead to delay costs being imposed on owners. The rationale for these assumptions is similar to the rationale for prescribing information requirements for building permits, discussed in Chapter B1.1 Building permit requirements.

The information currently prescribed for an occupancy permit application is the minimum information required to show that a building or place is suitable for occupation. For more detailed consideration as to whether the information requirements are sufficient, refer to the discussion of current form 5 below at B3.1.3.

##### Lack of information to demonstrate the building was independently assessed and approved as suitable for occupation

In the absence of current reg 1005 there would be no uniform, clear and easily accessible source of information (that is, the occupancy permit document) to demonstrate that a building has been independently reviewed and approved as suitable for occupation by the appropriate statutory authority (being the RBS). Current reg 1006 serves the same function for certificates of final inspection.

The current occupancy permit form[[133]](#footnote-134) includes critical pieces of information to demonstrate that a building or PoPE is suitable for occupation and importantly how that building may be safely occupied and used.

For more detailed consideration as to whether the information requirements for occupancy permits and certificates of final inspection are sufficient, refer to the discussion of current forms 6 and 7 below at B3.1.3.

##### Lack of information to demonstrate the building was independently assessed and approved as suitable for occupation by the RBS and lack of oversight in relation to occupancy and use of a building

Current regs 1007 and 1008 relate to the display of occupancy permit information and current reg 1009 relates to the power to inspect an occupancy permit. In the absence of current regs1007–1009 it would be difficult to ascertain if an occupancy permit had been issued and was in force for a building. This has the potential to convey a lack of assurance to occupiers that a building has been independently reviewed and approved as suitable for occupation, before occupation, by an appropriate person with statutory authority (being the RBS). Further, the power to inspect enables those with enforcement functions (such as a chief officer in relation to ESMs) to monitor compliance with the ESMs conditions listed on a permit.

### B3.1.2 Addressing the underlying problem

#### Option 8 – Remake current Regulations

This option would require re-introducing the current Regulations (current regs 1001, 1002, 1005, 1006, 1007, 1008 and 1009), which would have the effect of :

* assisting the Act to define the scope of application of the occupancy permit system

imposing administrative requirements on VBA has developed a nonregulatory guideline, *Guideline for the lodgement of documents under s 30 of the Building Act 1993*,in relation to building permit documentation. A similar guideline / checklist is proposed to be developed in relation to reg 1013, the lodgement of documents with council in relation to occupancy permits.

##### Changes to forms

Minor formatting and cross-referencing amendments have been made to current forms 5 (Application for occupancy permit), 6 (Occupancy permit) and 7 (Certificate of final inspection) to support amendments to relevant parts of the Regulations and/or to make the forms clearer and easier to understand, and as a result, complete.

##### Revise offences in reg 1007 to improve enforcement by removing the words ‘must take all reasonable steps’

This change would mean that a person in charge of carrying out building work will be required to actually provide, rather than take steps to provide, the relevant information onsite. Regulators have discretion in how they enforce the Regulations and whether noncompliance should be strictly enforced. A warning may be sufficient if noncompliance with this Regulation occurs where information wasn’t readily available due to external circumstances (such as a tablet holding electronic records being out of battery power). However, if after repeated requests the information is still not available then this Regulation can be easily enforced because the offence is clear. Having this information available onsite ensures building practitioners involved in the construction process and regulators monitoring the building work can check and monitor compliance with the approved designs associated with the building permit. Having this information available at the building site also supports the monitoring and enforcement activity of regulators when conducting site inspections, especially in regional and rural areas.

##### Mandate the use of current form 5 for the making of an application for an occupancy permit

In the proposed Regulations current form 5 has been revised and is now required to be used for an occupancy permit application. Minister’s Guideline *MG-08 Issuing of Occupancy Permits* currently requires the use of this form, so this change is not material. It will provide consistency and certainty regarding the requirement to use current form 5 and will impose no extra cost.

In addition, some additional information is proposed to be required to be supplied in and with current form 5. The department anticipates that by requiring this additional information, the application process will be streamlined by better matching the information required in the application form to the statutory prerequisites that must be satisfied before a RBS can issue an occupancy permit or simply to increase the accountability of the parties to the application.

The changes being proposed for current form 5 are to:

* require more identification information in relation to the parties to an application, the related building permit (if applicable) and the nature of the application (such as, an occupancy permit for a new building or change of use)
* require information that alerts a RBS as to whether a reporting authority is required to report and/or consent to an application for an occupancy permit

include evidence of suitability for occupation including plumbing compliance certificates, electrical safety certificates and evidence that services such as gas and water are connected.

The department considers it likely that the requirement to provide additional information will not impose a material administrative cost. This is because the additional information required is minor and is information which the applicant will already have in their possession; the additional requirement is the administrative task of including that information in the application form.

##### Additional information to be required in current form 6 (Occupancy permit) and current form 7 (Certificate of final inspection)

The department received some stakeholder submissions on occupancy permits as part of this review. These submissions raised issues in relation to reporting authorities, PoPEs and ESMs.

In relation to information requirements on an occupancy permit, one stakeholder suggested alternative solution information be included as this information is not readily available to those who may not have access to the building permit (such as prospective purchasers of a building).

In the proposed Regulations, the following changes have been included in current form 6, which is the form for an occupancy permit:

* for prominence, moving the approved location for the display of the occupancy permit to the top of the form and adding a note below this information that it is an offence to fail to display the permit as directed: this amendment is intended to improve compliance with reg 1007(2)
* requiring specific details of approvals under current regs 113 and 113 A that relate to the building (alternative solutions relating to fire and bushfire performance requirements): this information is currently required, but the format for recording it in the permit has been changed from narrative to a table for clarity and ease of reference
* for consistency with the balance of the form, requiring details of any BAB determinations to be provided in table format
* inserting a new combined allotment statement where applicable to ensure a future owner is aware if there has been a determination under current reg 502 to ensure that ongoing use of the building and any future modifications will not compromise the safety and amenity of the building given the determination: this is not a material change as it will be a tick box
* inserting a note to alert people to the existence of a statement made under current reg 503(2) (subdivision of existing buildings) if applicable and also providing anyone with an interest in this statement notice with a right to obtain a copy of that statement under current reg 326

clarifying related obligations and powers in the Act and current Regulations by providing clear links to these in explanatory notes in the body of current form 6.

Changes considered in respect of current form 7, which is the form for a certificate of final inspection, include the changes described above in relation to current form 6 regarding alternative solutions and BAB determinations (as the case requires).

It is likely that the requirement to include additional information on the occupancy permit will impose very minor additional administrative costs, predominantly incurred by building surveyors as part of the assessment process. The department does not consider these changes to be material because they do not require more effort than completing a table (instead of providing a narrative) and ticking a box.

**Consultation questions**

Are the current information requirements of the occupancy permit and occupancy permit forms sufficient? Why or why not?

In practice, does a building surveyor require the same information to be annexed to each application for an occupancy permit for similar classes of buildings? If so, what is this information and how is it used? Would a checklist of documents to be annexed to an application for an occupancy permit help applicants compile the application in one go?

#### Conclusion

In order for benefits to exceed costs, remaking the Regulations would need to provide applicants and a RBS with a saving of about 45 minutes each per application. This equates to a time saving of 16% per application for both parties.

The department considers this is likely to be achieved given the potential for significant additional time costs associated with requesting clarification and additional information in the absence of clearly defined requirements. The preferred option is therefore to remake the Regulations.

## B3.2 Occupancy permits / certificates of final inspection – places of public entertainment

Places of public entertainment (PoPEs) were originally regulated under the Victorian *Health Act 1958*, now repealed. PoPEs were regulated along with other public buildings, defined under s 3 to include hospitals, theatres, galleries, private schools, churches and other recreation venues.

The introduction of the *Building Act 1993* saw the regulation of PoPEs move from the *Health Act 1958* to the building regime. While justification for the transfer of responsibility cannot be found, it is most likely that the transfer was due to the view that most PoPEs constituted a building or structure and were therefore more adequately regulated under the building regime than the public health regime.

#### The current legislative regime – what is a PoPE?

Pt 5 div 2 of the Act and pt 11 of the current Regulations set out the requirements for occupancy permits for PoPEs.

In the Act, a PoPE is defined as:

(a) a prescribed building or building in a prescribed class of buildings which is used or intended to be used for the purpose of providing public entertainment; or

(b) a prescribed place or places in a prescribed class of places—

(i) which is enclosed or substantially enclosed; or

(ii) to which admission can be gained by payment of money or the giving of other consideration—

and which is used or intended to be used for the purpose of providing public entertainment”.[[134]](#footnote-135)

Under the s 3 of the Act, public entertainment is defined as 'an entertainment or meeting to which admission may ordinarily be gained by members of the public'.

The Regulations support the Act by prescribing the PoPEs that require an occupancy permit. Accordingly, any PoPE that is prescribed in the Regulations must fall within the definition of a PoPE in the Act.

The current definition in the Act is very broad and this broad definition provides a large scope for the Regulations to prescribe what buildings, temporary structures and places are required to obtain a PoPE occupancy permit.

By contrast, current regs 1102 and 1104 only prescribe the following classes of buildings and places as PoPEs:

* a Class 9 building[[135]](#footnote-136) greater in size than 500 m2 used or intended to be used for entertainment or meeting for which admission may ordinarily be gained by members of the public
* prescribed temporary structures, provided such structures do not form part of any other building other than a temporary structure or temporary building;[[136]](#footnote-137) prescribed temporary structures include tents, marquees or booths, seating stands, stages or platforms and prefabricated buildings[[137]](#footnote-138)

a place with an area greater than 500 m2;[[138]](#footnote-139) an occupancy permit is not required for a place with an area greater than 500 m2 if the public event is organised and controlled by a community-based organisation and the number of people at the event at any one time does not exceed 5,000.[[139]](#footnote-140)

A place will be a PoPE if it is a controlled (by fencing, structures or natural features) space such that a reasonable person would see it as being an exclusive area.[[140]](#footnote-141)

The main purpose of the Act is to provide for the Regulation of building and building standards and to provide improvements in the health, safety and amenity of people who use buildings.[[141]](#footnote-142) However, it is clear from the second reading speech that it was also envisaged that the Act would extend to provide for the health, safety and amenity of persons attending open-air public venues including non-building venues and temporary structures.

The PoPE provisions in the Act and Regulations may in some instances operate to complement planning controls and local laws in relation to event management. However, the focus of the PoPE provisions is to protect the safety and health of people who use buildings, temporary structures and other enclosed PoPEs.

#### Occupancy permits for a PoPE

The requirement to obtain an occupancy permit for a place or building that will be used for the purposes of providing public entertainment and events is in ss 49 and 50 of the Act.[[142]](#footnote-143)

### B3.2.1 The nature and extent of the problem

#### The underlying problem

Public gatherings and events are a common occurrence in Victoria and usually take place without serious problems. Examples of large-scale public gatherings and events include White Night,[[143]](#footnote-144) the Moomba Festival,[[144]](#footnote-145) the Formula 1 Australian Grand Prix[[145]](#footnote-146) and the Meredith Musical Festival.[[146]](#footnote-147) Smaller-scale public gatherings and events include performances or exhibitions held at the Regent or Princess theatres, the Melbourne Museum, the National Gallery of Victoria or the Royal Exhibition Building.

That said, there are risks associated with managing crowds of people within confined spaces (buildings) at public gathering and events, and with managing the design and safe erection of temporary structures for use at public gatherings and events. These are discussed below.

##### Managing crowds of people within confined spaces (buildings) at public gathering and events

Crowd disasters can occur and quickly become a threat to life in confined spaces.

Fruin,[[147]](#footnote-148) an expert on the safety of people in crowds, asserts that crowd forces can reach levels that become impossible for an individual to resist and/or control. At an occupancy rate of about seven people per square metre, individual control is lost and the crowd becomes an almost fluid mass.[[148]](#footnote-149)

The layout of a building, its capacity to hold people and the ability of a crowd of people moving through its access (ingress and egress) points can present risk factors that could contribute to the injury or death of people in the building during a public entertainment gathering and event.

##### Managing the design and safe erection of temporary structures for use at public gatherings and events

Structural failures when they occur present an obvious risk to the safety of people using temporary structures at public entertainment gatherings and events.

At public entertainment gatherings and events, most patrons are unfamiliar with their surroundings. Even where patrons know the location of exits, the exits may become blocked, preventing a means of escape. When exits are not obstructed, the additional combined factors of alcohol use, loud music, loud background noise and special effects can disorient patrons when an incident occurs and prevent them from safely exiting the building or place where the public gathering or event is being held.

Temporary structures (such as stages, tiered seating and marquees) commonly feature at public entertainment gatherings and events. These types of structures may fail if they are poorly designed or inadequately set up, resulting in their total or partial collapse.

The general public attending a public entertainment gathering or event will rarely possess the expertise to assess the suitability of a building, PoPE or temporary structure and its design and safety features when making a decision to attend the gathering or event.

#### The case for regulatory control through building Regulations

In Victoria, the method of approving the use of a PoPE, including the use of temporary structures, occurs via the issuing of occupancy permits. The Act sets out the requirement for an occupancy permit to be obtained before public entertainment being provided at a PoPE. However, the requirement only applies to PoPEs that are prescribed.

The Regulations support the Act by providing for conditions to be imposed that specifically address the issue of crowds in unfamiliar buildings and PoPEs.

Without Regulations, PoPEs would not be prescribed and therefore there would be no related requirement to obtain an occupancy permit. As a result, RBSs and VBA (which issues occupancy permits for temporary structures) would have no means by which to place additional conditions on the use of a PoPE or temporary structure to ensure it was occupied safely. However, where an event is held on council land or is a council event, local laws and legislation will also apply. Further, public event risks (such as crowd and traffic controls, waste management and site safety) are managed through complementary legislation including the *Planning and Environment Act 1987*, the *Liquor Control Reform Act 1988*, the *Food Safety Act 1984* and the *Gas Safety Act 1997*.

#### The potential size of the problem

While the exact number of nightclubs, sporting venues and other PoPEs that currently require a PoPE permit is not known, the Victorian Commission for Gambling and Liquor Regulation liquor licence statistics suggest that the number of nightclubs or similar venues currently operating in Victoria is somewhere in the vicinity of 1,000.[[149]](#footnote-150)

The department estimates that the total number of PoPE venues across Victoria (including buildings and places) is likely to be in excess of 5,000. However, the number of applications for occupancy permits submitted a year is only a proportion of the figure (see further discussion in Chapter B3.2.2 Addressing the underlying problem).

##### Australian incidents

To date, Australia has been fortunate and has not experienced the major crowd disasters at public entertainment venues or events (such as nightclubs and sports stadiums) that have occurred overseas.

The department notes that on 30 December 2016, there was a crowd crush at Falls Festival at Lorne that occurred with patrons exiting the Grand Theatre, a festival marquee. Some festival patrons were injured but there were no fatalities. Festival organisers reported ‘a confluence of events resulted in a serious incident that will require an investigation into the various contributing factors which will take some weeks to determine'.[[150]](#footnote-151)

In 1973, 15 people died at the Whiskey Au Go Go nightclub in Brisbane when the nightclub’s foyer was set alight in an arson attack.[[151]](#footnote-152) Most of the 100 or so patrons managed to escape by jumping from broken upper-level windows onto an awning and then dropping 4.5 m to the ground. The 15 victims died of asphyxiation as they struggled to open blocked fire escape doors at the rear of the building.

Other major building fires in Australia include the Savoy Hotel fire in Kings Cross in 1975[[152]](#footnote-153) and the Childers Palace Backpackers Hostel fire in 2000,[[153]](#footnote-154) each of which claimed 15 lives (although neither of these buildings were being used as a PoPE).

In December 2013, a minor stage collapse occurred at a Taylor Swift concert at Brisbane’s Suncorp Stadium. A statement from the concert’s promoters released shortly following the incident claimed that 'an issue with staging [which] required the relocation of patrons from a small area around the stage for safety reasons [had occurred] … [t]his affected less than 1% of the fans in attendance and they were moved within the venue. [The] safety of Taylor's fans is considered paramount and once all fans' safety was ensured the show continued'.[[154]](#footnote-155)

##### Overseas disasters

Recent examples of overseas PoPE events have resulted in major loss of life. Some of the causes have included nightclub and stadium fires, stampedes and crushing incidents and stage and structure collapses, involving:

* soundproofing foam on the ceiling of a venue that caught fire and released poisonous gases that quickly killed those attending an event: in excess of 30 lives were lost; the lack of emergency exits and the excessive number of patrons attending the event were also noted[[155]](#footnote-156)
* a stampede that occurred due to nightclub patrons attempting to flee capsicum spray that had been released by a security guard to break up a fight on a dance floor; patrons rushed down a nearby set of stairs and were trampled in the process, resulting in 21 deaths[[156]](#footnote-157)

a fire that occurred when pyrotechnics used as a stage prop by the band set ablaze cheap soundproofing foam on the walls and ceiling, resulting in over 100 people being trampled to death.[[157]](#footnote-158)

##### Building fires

Fires have occurred in nightclubs and public places of worship overseas resulting in death and injury to hundreds of people. Lack of emergency exits, inadequate crowd control measures coupled with persistent breaches of the relevant building codes were cited as the primary causes of the fires.

##### Sporting events

The United Kingdom has suffered tragic events at soccer matches including the Bradford City stadium fire in 1985 which claimed 56 lives and resulted in 265 injuries[[158]](#footnote-159) and the Hillsborough Stadium disaster in 1989 which saw 96 people killed and resulted in a further 766 injuries due to crushing and inadequate crowd control.[[159]](#footnote-160)

##### Stage and structure collapses

Several high-profile stage and structure collapses have occurred at outdoor concert venues overseas in recent years.[[160]](#footnote-161) In each case, the stages had been designed and/or constructed inadequately which resulted in deaths and multiple injuries to patrons and employees of the events.

##### Open space crowd disasters

In 2010 at a music festival held in Duisberg Germany, 510 people were injured and 21 people died as a result of suffocation following a crowd stampede.[[161]](#footnote-162) The number of people attempting to gain access to the event, combined with inadequate crowd control in an unfamiliar environment, resulted in the crowd disaster.

### B3.2.2 Addressing the underlying problem

#### Option 9 – Remake current Regulations

Occupancy permits (including prescribed temporary structure occupancy permits issued by VBA) are the most relevant tool available to impose conditions to address accepted risks associated with the use of a building once the building work is completed.[[162]](#footnote-163)

This option retains the current regulatory requirements with respect to occupancy permits for PoPEs and temporary structures, including:

* what constitutes a prescribed PoPE
* the definition of prescribed temporary structures

conditions that may be placed on an occupancy permit for a PoPE and/or temporary structure.

###### Costs

The Regulations trigger the need to obtain an occupancy permit for a PoPE and/or temporary structure and thus impose costs on building owners and event organisers to apply for such a permit. This is captured by the cost of time associated with preparing and submitting occupancy permit applications to a MBS (for buildings and places) or VBA (for temporary structures). The number of applications for occupancy permits for temporary structures assessed and issued by VBA for the period 2013–15 is set out in **Table 3**.

The department was unable to obtain reliable data with respect to the number of applications for occupancy permits for buildings and places of public entertainment for the same period. An estimate of the number of applications for occupancy permits for PoPEs was developed following consultation with and receipt of limited data from MBSs (see further **Table 4** below).

Table 3: Prescribed temporary structure occupancy permits issued

| **Financial year** | **Permits issued** |
| --- | --- |
| FY2012–13 | 65 |
| FY2013–14 | 89 |
| FY2014–15 | 83[[163]](#footnote-164) |
| Total | 237 |

Consultations with councils revealed that the number of events where an occupancy permit is required for a building or a place has fallen substantially in recent years, following regulatory amendment in 2013 which exempted community-based organisations (holding events with less than 5,000 attendees) from the requirement to obtain an occupancy permit.

The magnitude of costs incurred by PoPE and temporary structure occupancy permit applicants will differ based on whether the application relates to a public event in a ‘place’, a Class 9b building with over 500 m2 of floor space or a prescribed temporary structure. Consultations with VBA and councils found that the costs associated with applying for and assessing a PoPE occupancy permit relating to a place differed depending on the complexity of the event, and therefore two scenarios for public entertainment events in places have been modelled, ‘basic’ applications and ‘complex’ applications. Additionally, there are costs associated with safety officer requirements associated with PoPEs held in public places which are included in cost estimates.

**Table**  summarises estimated annual costs associated with each permit type. The costs associated with the requirement to engage a safety officer for public entertainment events in places are included in the cost estimates.

The additional costs that apply when a building or temporary structure is required to obtain an occupancy permit to conduct public entertainment are associated with the conditions that are imposed through that occupancy permit. Current reg 1105 specifies the conditions that may be imposed and does not limit those conditions. Accordingly, the costs associated with a PoPE will vary between MBSs, and there will be variation in relation to conditions between the type of building used and/or the type public entertainment being provided. This will be the same in relation to the conditions imposed by VBA for prescribed temporary structures; the conditions may vary based on the type of structure and /or the type of entertainment being provided.

As there is a lot of discretion and considerable flexibility in relation to what conditions can be imposed, there will be significant variability in the costs that apply. This is why the costing of those additional costs was difficult for the RIS. Due to the number of variables that will impact on a decision about what conditions could be imposed, it was impossible to establish an exact cost for the purposes of the RIS.

Table 4: Volume and costs associate with PoPE applications

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Permit type** | **Estimated annual number** | **Estimated cost to prepare application** | **Estimated cost associated with safety officer training** | **Total annual cost^** |
| Place – basic | 225 | 2,000 | 5,950 | 1,061,000 |
| Place – complex | 9\* | 8,000\* | 5,950 | 167,747 |
| Building | 226 | 200 | - | 45,200 |
| Temporary structure | 95\*\* | 200 | - | 19,000 |
| **Total** | **555** | - | - | **1,293,000** |

Source: PwC calculations based on consultation with MBSs, VBA permit and PTSOP data and Regulatory Change Measure: Building Amendment (Places of Public Entertainment) Regulations 2013

\*This is an annualised estimate – MBS consultation indicated that this category of PoPE generally has a multiyear duration (average of four years assumed)

\*\*Estimate based on five-year average (2011–15) of PTSOP applications received by VBA

^Totals may not add due to rounding

Total costs incurred by event holders and building owners in relation to PoPE Regulations is estimated to be around $1.3 million a year, or $10.9 million NPV over 10 years.

**Consultation questions**

Are the estimated costs to apply for and obtain an occupancy permit for a PoPE or a prescribed temporary structure reasonable? Are there additional costs that should be captured?

###### Benefits

The benefit derived from the PoPE and temporary structure occupancy permit requirement is the reduced likelihood of deaths and significant injuries occurring at public entertainment gatherings and events in the event of fire, crowd disaster or structural collapse.

Examples of overseas PoPE and temporary structure disasters were provided earlier in this chapter. Australia has been fortunate and has not suffered any serious PoPE or temporary structure failures to date. However, minor incidents have occurred whereby temporary structures have failed (roof and podium collapse) at public entertainment events. These events did not result in loss of life but they demonstrate that there is the potential for similar incidents to occur in the future should the PoPE Regulations not be remade.

As the benefits of avoided events are difficult to quantify with certainty, a break-even analysis has been prepared to estimate the frequency with which an adverse building, place or temporary structure incident would need to be avoided in order to justify the regulatory burden. Two break-even points are calculated:

* the number of building fires that must be avoided to validate the existence of the Regulations; building fires have been selected as a proxy for adverse outcomes addressed by the Regulations as they occur more commonly than other events and more-robust data is available relating to costs associated with building fires

the number of deaths avoided as a result of the existence of the Regulations: while there is limited evidence of deaths that have occurred as a result of fires in public entertainment venues and crowd disasters in Australia, this is likely a result, at least in part, of appropriate Regulations being in place; evidence from overseas jurisdictions suggests a significant correlation between crowd disasters and fires where less-robust regulatory controls have been adopted.

As a proxy for the cost of a building fire in a PoPE, post-incident report data from MFB for a selection of fires in Victoria between 2002–08 is used (55 data points in total).[[164]](#footnote-165) Of the total incidents, six relate to Class 9b buildings (five schools and one hotel / convention centre).

The average value of the damage resulting from these fires was $978,000.[[165]](#footnote-166)

Based on this assumption, the Regulations would need to result in one avoided fire about every 0.75 years (or 13 fires avoided over the period of the Regulations) in order for the regulatory costs ($10.9 million over 10 years NPV) to equate with the benefits.

Alternatively, the Regulations would need to result in one avoided death every 3.25 years (applying the estimated value of a statistical life of $4.2 million).

The department considers that the benefits associated with the Regulations are likely to outweigh costs. Evidence from overseas jurisdictions suggests that a single crowd disaster or building fire in a PoPE often results in multiple deaths and injuries. As an illustrative example, a single event which resulted in five deaths (well below the casualties of overseas incidents) would result in costs associated with loss of life in excess of $20 million, which is close to double the expected costs of the Regulations over 10 years.

### B3.2.3 Addressing issues with the design / implementation of the Regulations

#### Minor changes

The department is proposing to remove the Melbourne Cricket Ground and the surrounding Yarra Park in East Melbourne as a prescribed place of public entertainment under reg 1103(b). VBA processes for PoPEs do not provide additional protections in these cases because these places fall within the jurisdiction of the Melbourne City Council. The Melbourne City Council can effectively assess the risks associated with using these venues as PoPEs. Councils already issue occupancy permits for PoPEs and are also required in some cases to issue a siting permit under s 57 of the Act.

The current use of Kardinia Park and the MCG is not considered different to other sports grounds in Victoria (such as Etihad Stadium and AAMI Park). VBA considers Kardinia Park and the MCG should be regulated consistently with other sports grounds by removing overlapping roles between councils and VBA. Kardinia Park has been retained in the proposed Regulations because it is currently undergoing redevelopment.

VBA will also amend Practice Note 2013-66 to advise practitioners that seating stands for more than 20 people includes stands that form part of a vehicle including a truck or semitrailer. The note will be revised, as VBA has recommended that the seating stand size, and not the number of people, should be the factor for when an occupancy permit is required.

#### Other changes for future consideration

The department is also considering other amendments to the Regulations to clarify and improve their operation. Amendments under consideration are set out in **Table 5** below:

Table 5: Minor amendments to occupancy permit (PoPE) Regulations being considered by the department

|  |  |  |  |
| --- | --- | --- | --- |
| **Current Regulation** | | **Possible amendment** | **Proposer** |
| 1102 | Prescribed classes | Remove the requirement under subregulation (b) to obtain an occupancy permit for prescribed places | Various MBSs  Discussed in detail under Option 9.1 above |
| 1104 | Prescribed temporary structures | |  |
| (a) | Tents, marquees, or booths with a floor area greater than 100 m2 | Amend the definition to:  (i) remove booths with a floor area greater than 100 m2  (ii) include inflatable structures with a floor area greater than 100 m2 | VBA There is an increased use of inflatable structures by industry  The bigger the floor area of temporary structures used for public entertainment, the more likely issues could arise in relation to occupant capacity, ingress and egress  Booths are more appropriately dealt with in the definition of prefabricated buildings |
| (c) | Stages or platforms (including sky borders and stage wings) exceeding 150 m2 in floor area | Amend the definition of stages and platforms to decrease the threshold floor area from 150 m2 to 100 m2 | VBA  For regulatory consistency  Expanding the scope of the Regulation to align the threshold with other floor area restrictions in the Regulations |
| (d) | Prefabricated buildings exceeding 100 m2 other than ones placed directly on the ground surface | Amend the definition of prefabricated buildings used for the purpose of providing public entertainment to include:  (i) cube structures  (ii) unregistered shipping containers[[166]](#footnote-167)  (iii) booths  (iv) fold-out and/or transportable structures forming part of a vehicle | VBA  Expanding definition to include more commonly utilised prefabricated structures  Further information to determine whether fold-out structures forming part of a truck or semitrailer should be regulated  VBA acknowledges these vehicles are increasingly used at public events as stages |

**Consultation question**

The department invites stakeholders to make a submission on the proposed amendments under consideration by the department and outlined in Table 5 above.

#### Option 9.1 – Reduce scope of Regulations to buildings and temporary structures only (remove the requirement to obtain an occupancy permit for public entertainment events that occur in places)

**Issue:** The current requirements for PoPEs capture ‘places’ that may include a natural or fenced enclosure, but it is questionable whether it should be the role of a MBS to be considering occupancy permits for prescribed places, which are not buildings or structures.

Numerous legislative instruments exist to regulate public events in open spaces. In some instances there is overlap between regulators (for example, between councils and the state government). Additionally, some MBSs have submitted that they do not have the requisite skills to assess applications for occupancy permits for gatherings and events held in open spaces (such as parks, gardens and paddocks).

**Option:** Narrow the scope of occupancy permit Regulations in relation to PoPEs such that Regulations would apply to buildings and structures only. This would require a review of building legislation and consultation with stakeholders (such as councils) on the role of the MBS and what activities they are to undertake when issuing a PoPE permit.

###### Costs

If the requirement to obtain an occupancy permit for a PoPE was limited to Class 9b buildings and temporary structures, there would be a reduction in the number of occupancy permit applications submitted for assessment each year to councils: an estimated nine complex applications and 225 basic applications would be avoided each year. This would represent a regulatory saving to public gathering and event organisers who would otherwise incur costs to complete and submit an application for an occupancy permit and to engage appropriately qualified safety officers for public gatherings or events in a place or open space. Further, it would also represent an administrative saving to councils as a MBS would no longer be required to assess applications for occupancy permits for a public gathering or event in a place (though in theory this cost is covered by a fee imposed on applicants).

**Consultation questions**

What is the average number of qualified safety officers usually required under an occupancy permit for a PoPE at an event? Is this usually based on the number of people, the type of entertainment or the layout of a building?

By requiring PoPEs for buildings and structures only, there is a reduction in regulatory burden for applicants of $1.2 million a year, or $10.4 million NPV over 10 years compared to remaking the Regulations.

This produces a total cost for Option 8.1 of $64,000 a year or $540,000 NPV over 10 years.

###### Benefits

In the absence of requirements to apply for and obtain an occupancy permit for entertainment events held in public places, safety measures would still be in place via alternative regulatory instruments such as council laws, OHS laws and the *Planning and Environment Act 1987*.

**Consultation questions**

Should the scope of the Regulations be reduced to remove the requirement to obtain an occupancy permit for a public gathering or event in a place? What places other than a building are occupancy permits for PoPES issued for?

Applying the same break-even analysis as that adopted for Option 9, the Regulations associated with this option would need to result in one building fire being avoided every 15 years, or one avoided death every 65 years. This assumes there would be no increased safety risks for patrons attending public gatherings or events in the absence of PoPE and prescribed temporary structure requirements.

#### Further submissions (out of scope of the RIS)

During the pre-RIS consultation process,[[167]](#footnote-168) the department received submissions from stakeholders requesting that consideration be given to further amendments to pt 11 of the current Regulations.

A common theme of submissions received in relation to pt 11 of the current Regulations was related to aspects contained in pt 5 div 2 of the Act. Any amendments to the Act will need to be considered as part of the midterm evaluation.

The department has reviewed the pre-RIS submissions and prepared a list of consultation questions, which will influence the focus of the midterm evaluation of PoPE requirements in Victoria.

The consultation questions are set out in **Table**  and will inform decisions about future legislative and regulatory reform projects. The department invites submissions from affected stakeholders about the questions. Submitters should include evidence and case study examples to support their submission.

Table 6: Additional amendments put forward by stakeholders

|  |  |
| --- | --- |
| Current provision | Consultation question |
| S 53(2) of the Act provides that an application for an occupancy permit for a temporary structure may be made to VBA | Should MBSs (rather than VBA) be permitted to assess and approve applications for occupancy permits for temporary structures? |
| Reg 1105 – conditions of use | Are the current conditions of use adequate / outdated / requiring amendment? |
| Reg 1105(b) – safety officer training qualifications | Are the current training qualifications appropriate?  Should safety officers be required to refresh their training at certain intervals, for example every five years? |
| Reg 1105(c) – responsibilities of the safety officer | Are the current responsibilities adequate / outdated / requiring amendment? |
| Reg 1106 – temporary structures | Should the temporary structure standard be considered by VBA when assessing an application for an occupancy permit for a temporary structure? |
| New Regulation | Should councils be required to maintain a register of occupancy permits issued in relation to PoPE buildings and places and submit it to VBA annually?  There is currently no requirement to hold a register of PoPE buildings and places: such a register will assist future audits. |

#### Conclusion

Remaking the Regulations (Option 9) would impose costs of $10.9 million NPV over 10 years on PoPE applicants. In order for benefits to equal costs, the Regulations would need to result in one building fire being avoided every 0.75 years, or alternatively, one death avoided every 3.25 years. Overseas evidence suggests that a single public entertainment event involving a fire or crowd disaster can result in multiple deaths (in excess of 20 and as high as 100 for a single event, based on identified examples). Even applying a far more conservative estimate of a single event resulting in five deaths as a result of inappropriate or no Regulations, the benefits associated with PoPE Regulations would be more than double the costs over a ten-year period.

Reducing the scope of the Regulations to buildings and structures only (Option 9.1) would reduce the regulatory burden by $10.4 million NPV over 10 years compared with remaking the Regulations. This would produce a total cost of about $540,000 NPV over 10 years. In order for benefits to equate with costs, the Regulations would need to result in one building fire being avoided every 15 years or one death avoided every 65 years.

The department’s preferred option is to remake the current Regulations (Option 9) until further evidence can be gathered to demonstrate that Option 9.1 would not create any regulatory gaps, which could have adverse impacts on the health and safety of people who use PoPEs.

## B3.3 Essential safety measures

In Victoria, ESMs must be maintained in accordance with the current Regulations. ESMs are defined in the Regulations. Sch 9 of the Regulations also lists the items in a building that are prescribed ESMs for the purpose of that definition.[[168]](#footnote-169)

There is a requirement for all ESMs in the specified class of building to be maintained and for a maintenance report to be prepared a year by the building owner.

The discussion about ESMs in the RIS focuses primarily on building fires, because this is the primary reason ESMs are installed in a building.

However, ESMs are essentially a set of safety measures designed to provide for the safety of people in a building or PoPE. These features play a critical role in mitigating risks to building occupants in the event of all emergencies. For example, illuminated signs identifying emergency exits address risks associated with occupant confusion and disorientation in the event an emergency evacuation caused by an earthquake. Backup power and lighting will be critical in the event of a power failure, especially in high-rise buildings.

### B3.3.1 The nature and extent of the underlying problem

#### The underlying problem

Building controls cannot materially reduce the incidence of fires, with the most common causes being human factors (such as leaving appliances unattended, misuse of electrical equipment or arson).[[169]](#footnote-170) Building fires have the potential to spread quickly if the appropriate fire-suppression systems are not in place or functioning properly. As a result, building fires can be associated with extensive losses and these can be wide-reaching. These losses may include loss of life, injury to building occupants, property damage (including damage to equipment, sales stock and information loss), community damage and environmental damage.

In developed countries, occupants will expect that the fire safety measures and equipment required to be installed will be maintained over time to ensure they remain in proper working order to prevent death and injury.

The occupants of a building are most at risk in the event of a fire. Occupants are most often third parties rather than the building owners themselves, especially in commercial and retail buildings. These third parties (including tenants, employees and visitors) have limited control and oversight over the level of maintenance a building owner undertakes, especially in public buildings.

Tenants of commercial and retail buildings may have more leverage to negotiate the level of fire safety maintenance through lease agreements. However, most building tenants, owners and managers lack the required expertise to identify the types of fire safety measures that need to be installed for a particular building type, how the components or features of each measure should be maintained and how often they should be checked and tested.

The costs of undertaking maintenance is also likely to impact on the level and frequency of maintenance a building owner decides to undertake.

#### The case for regulatory control through building Regulations

In general, building controls are focussed on:

* reducing the spread of a fire and enabling the safe evacuation of a building's occupants
* minimising the spread and enhancing the containment of fires through the installation of fire safety features and building materials

managing specific fire risks in buildings, risks that can make occupants more vulnerable to fire.

In Australia and Victoria, the installation of appropriate passive and active fire safety systems is mandated by the NCC and checked before occupation. These systems are designed to suppress a fire, contain a fire, detect a fire and provide early warnings of fire danger.

The current Regulations impose an obligation on building owners to maintain those fire safety systems and features. Fire safety measures, which are compliant when first installed as part of building work, can deteriorate over time, presenting a risk that the building measure will not perform to the level required. For example, paths of travel and exits can become obstructed, exit signage may require replacement light bulbs or minor alterations may compromise fire-rated walls.

In the absence of the Regulations, it will be at the discretion of a RBS if they decide to include ESM conditions on the occupancy permit that is issued. If conditions are included, the owner is required by the Act[[170]](#footnote-171) to comply with them. Moreover, building owners would continue to have a common-law duty of care to those they allow to occupy the building that it is safe and fit for occupation. Active duties of care under existing legislation would also continue to operate in relation to buildings used as workplaces,[[171]](#footnote-172) buildings and venues that serve liquor[[172]](#footnote-173) and retail premises.[[173]](#footnote-174)

However without specific building Regulations:

* the RBS would no longer be required to include ESM conditions on an occupancy permit[[174]](#footnote-175) or to make a maintenance determination where an occupancy permit is not required[[175]](#footnote-176)
* building owners would no longer be required to prepare an annual report on ESM maintenance[[176]](#footnote-177)

there would be no maintenance schedules.[[177]](#footnote-178)

Fire safety measures and equipment need to be tested, serviced and maintained in order to ensure they can function as designed. If the fire safety measures fail:

* safe evacuation of a building could be hampered, which could increase the likelihood of injury or death of occupants or responding firefighters

the fire might be more difficult to contain, suppress and extinguish, which could increase the extent of losses and other broader impacts to the community and environment.

#### The potential size of the problem

There is a significant life risk associated with fires and a high probability that fires can result in the loss of life.

MFB reported 54 preventable fire-related fatalities between 2006–07 and 2014–15.[[178]](#footnote-179) However, it is not clear how many of these fatalities can be attributed to building fires. CFA reported 107 preventable fire-related fatalities in residential, commercial and aged care buildings between 2006–07 and 2015–16. An estimated 97% of these fatalities occurred in residential buildings.[[179]](#footnote-180) It is not clear how many fire-related injuries are caused by building fires a year as this data were not available.

It is estimated that between 2006–07 and 2015–16[[180]](#footnote-181) the fire brigades attended over 36,507 structural fires. An estimated 2% of these fires were categorised as requiring a significant response[[181]](#footnote-182) from the fire brigades.

The case studies in boxes 8, 9 and 10 illustrate the broader community, economic and environmental impacts of fires. ESMs seek to reduce these impacts through early warning and fire-suppression systems.

Box : Case study: 2012 Warrnambool Exchange fire

The purpose of this case study is to demonstrate the far-reaching and lingering economic and social impacts of fires in buildings.

On 22 November 2012 at 4.35 AM, a fire occurred in the vicinity of the Telstra Exchange maintenance control room in Warrnambool, south-west Victoria. The fire spread throughout the exchange causing immediate terminal damage to key telecommunications equipment, systems and 60% of the building.

The fire caused a telecommunications outage that lasted for about 20 days during which services were progressively restored. The outage affected about 100,000 people in south-west Victoria, a region covering about 67,340 km2.

The extent of the outage is illustrated by survey response statistics of the broad impact:

* 94.6% of respondents suffered some inconvenience related to a business transaction
* 69.8% were unable or found it difficult to make vital purchases such as food or fuel
* 86.5% were unable to communicate with friends or family
* 24% were unable to conduct business and had to shut down for some period of time

over 60% felt that the outage had a negative impact on community life.[[182]](#footnote-183)

Box : Case study: Lifestyle classics (2006)

The purpose of this case study is to demonstrate the broader health impacts of fires from the toxic plumes of smoke.

On 18 April 2006, a fire occurred in a factory warehouse building in Moorabbin. The building was used for the manufacturing and storage of mattresses.

Due to the large quantities of smoke produced, concerns were also held for neighbouring residents that included staff and residents of a large nursing home located downwind from the fire. There were reports that the smoke plume could be seen as far away as Warragul to the south and Melton to the north.[[183]](#footnote-184)

Box : Case study: DS Chemport (2005)

The purpose of this case study is to demonstrate the risks associated with building fires depending on the use of the building and the potential for significant environmental impacts due to contaminated run-off.

On 8 July 2005, a fire occurred in a factory used by DS Chemport, a manufacturing company providing goods and services to the printing industry, to store a large quantity of dangerous goods which were used to manufacture printing chemicals (such as fountain solution).

The fire completely destroyed the entire contents within the factory area and severely damaged the building structure. Extensive water and smoke damage was sustained to the front office and laboratory area. The estimated cost of damage to the building was $1 million. Losses of stock, plant and equipment were put at $1.5 million and the envisaged business interruption was estimated to cost about $500,000.[[184]](#footnote-185)

### B3.3.2 Addressing the underlying problem

#### Option 10 – Remake current Regulations

The current Regulations impose an obligation on building owners to maintain fire safety systems and features.

ESM conditions are included for occupancy permits and certificates of final inspection for Class 1b–9 buildings. These instruments list all the ESMs regarding the building or PoPE, specify the level of performance to enable the ESM to fulfil its purpose and the nature and frequency of inspection / testing required to ensure the performance level of the ESM is maintained.

Table 7: Categories under which ESMs are classified in the Regulations

|  |  |
| --- | --- |
| **Categories under which ESMs are classified in the Regulations** | |
| * Building fire integrity * Means of egress * Signs * Lighting * Firefighting services and equipment * Air handling systems | * Automatic fire detection and alarm systems * Occupant warning systems * Lifts * Standby power supply system * Building clearance and fire appliances * Mechanical ventilation and hot, warm and cooling water systems |

All building owners must:

* prepare an annual report including details of any inspection report for each ESM

make the annual report available to a MBS or chief officer on request.

The requirement for a RBS to include ESM conditions on an occupancy permit was first required by Regulations introduced in 1994, which is why the maintenance requirements for ESM in buildings constructed before this date differ.

For pre-1994 buildings, the owner of a building or PoPE must ensure ESMs are maintained in a state which enables the ESMs to fulfil their purpose and are not removed from their approved locations except for maintenance.

For post-1994 buildings, specific requirements for ESM maintenance (rather than a general obligation to ensure ESMs can fulfil their purpose) are specified on occupancy permits or maintenance determinations. These conditions must be complied with by the building or PoPE owner and maintenance schedules and maintenance determinations must be made available for inspection by the building owner to a MBS or chief officer.

For occupiers of buildings, all exits and pathways to and from exits must be maintained.

###### Costs

Costs are imposed on building owners by the requirement to comply with ESM maintenance requirements. While maintenance requirements differ for pre- and post-1994 buildings, the overall cost to carry out maintenance each year is similar across all buildings, regardless of when construction occurred.[[185]](#footnote-186) However, costs will differ between classes of buildings and also within each building class, depending on the size of the building and what it is used for.

Estimates of the existing building stock for each building class subject to ESM requirements and estimated annual costs to comply with requirements are provided in Appendix A.

Additionally, assumptions are required around the current level of compliance with ESM maintenance requirements. Based on data provided by VBA, it is assumed that 10% of building owners comply fully with the Regulations, 33% comply partially with the Regulations and the remaining building owners do not comply at all with ESM maintenance requirements.[[186]](#footnote-187) For owners that are partially compliant, it is assumed that they incur 37.5% of the full costs.[[187]](#footnote-188) Finally, it is assumed that in the absence of Regulations, a proportion of building owners would still maintain ESMs given common-law obligations and duty of care requirements regarding building occupants. Given the difficulty in determining what action owners would take under a no-Regulation scenario, a simplifying assumption is made that 50% of owners that currently either fully or partially comply would continue to do so in the absence of Regulations.

Based on these estimates, the total cost imposed by the Regulations in relation to ESM maintenance under Option 9 is estimated to be between $26.3–$42.5 million a year, or $221.5–$358.6 million NPV over 10 years.

Building owners are also required to produce an annual ESM report outlining the maintenance measures that have been undertaken. This cost is estimated to be $917,000 a year, or $7.7 million NPV over 10 years.

Occupiers of buildings are required to maintain paths to exits and clear pathways, which may impose some costs, which are likely to be minor and are not quantified.[[188]](#footnote-189)

Total costs under Option 9 are estimated to be between $27.2–$43.4 million a year or $229.3–$366.3 million NPV over 10 years.

###### Benefits

Benefits attributable to the Regulations are:

* accurate records of ESM maintenance activities that demonstrate the level of compliance with obligations
* improved knowledge among building owners and subsequent owners of a building (whose search costs would be high to discover the ESMs in their building; this cost will increase depending on the type of building and whether any alternative solutions are readily identifiable) of their ESM obligations

a reduction in the number of fatalities, fire-related injuries and property damage in relevant classes of buildings.

The benefits of preparing an annual report largely relate to the role it plays in assisting building owners to understand their duties in relation to fire safety in buildings. The obligation to prepare a report requires an owner to ensure all ESM are operating at their required level of performance. In addition, the report serves as a record showing that the owner has taken the necessary steps to comply with ESM maintenance obligations.

Given the difficulty in identifying with any certainty the extent to which ESM maintenance Regulations reduce the severity of fires at present (in other words, quantifying costs under a hypothetical no-Regulations scenario), a break-even analysis was carried out. The break-even analysis examines the required reduction in the severity of building-related fires (where ESM Regulations are applied) and number of deaths associated with these fires.

MFB data[[189]](#footnote-190) shows that between 2006-07 and 2014–15, MFB attended 231 building fires classified as Level 3 and above: these incurred damage estimated at around $270 million.[[190]](#footnote-191) This is an average cost of $1.2 million a fire.[[191]](#footnote-192) Costs associated with fatalities resulting from building fires are estimated by Australian Government figures for the value of a statistical life of $4.2 million.[[192]](#footnote-193) **Table**  provides a range of break-even results attributing various shares of the assumed benefits to the two key components, reduced severity of fires and reduced loss of life.

Table 8: Break-even analysis results (Option 10)

|  |  |  |  |
| --- | --- | --- | --- |
| Assumed proportion of benefits related to reduced severity of building fires | Assumed proportion of benefits related to avoided loss of life | Required reduction in fire severity, $’000  (low – high) | Required reduction in loss of life, no. of lives  (low – high) |
| 0% | 100% | - | 6–10 |
| 25% | 75% | 270–420 | 5–8 |
| 50% | 50% | 530–850 | 3–5 |
| 75% | 25% | 790–1,270 | 2–3 |
| 100% | 0% | 1,060–1,690 | - |

Taking the midpoint of the table above, the Regulations would need to be responsible for a reduction in the severity of building fires of between $530,000–$850,000 and between three and five avoided deaths a year.

The break-even above does not account for additional benefits associated with:

* the reduced severity of smaller-scale fires (below Level 3) that ESMs contribute to: MFB data indicates there were about 2,200 building fires attended a year between 2006–07 and 2011–12: it is likely that costs associated with these fires would be significantly greater in the absence of ESMs

the reduction in injuries associated with building fires; MFB data indicates there were 10 injuries between 2004–05 and 2014–15; without a requirement to maintain ESMs these figures would be expected to be significantly higher.

### B3.3.3 Addressing issues with the design/implementation of the Regulations

A range of issues with the application of the current Regulations have been identified through consultations with industry stakeholders and a detailed review of the operation of the current Regulations. These issues and options to address them are set out below, together with analysis of the associated costs and benefits.

#### Option 10.1 – Improve drafting and introduce approved forms for an annual report and maintenance determination

**Issue:** A lack of understanding by building owners of their maintenance obligations and a lack of compliance with annual reporting requirements. This issue was identified through a survey of MBSs conducted VBA. Common causes of this problem given in response to the survey questions were:

* unnecessarily complex Regulations to follow, especially for small business owners

poor understanding of the requirements associated with annual reporting.

**Option:** Under this option, the current differences in ESM requirements for pre- and post-1994 buildings would be removed and references to historic Regulations removed from the definitions. In addition, approved forms including prescribed information would be developed for an annual report and maintenance determination, to help reduce administrative burden.

###### Costs

While current ESM requirements differ for pre- and post-1994 buildings, the cost of maintenance is generally similar regardless of the build date.[[193]](#footnote-194) Therefore, the removal of the split in requirements is not expected to significantly impact maintenance costs.

Relative to remaking the Regulations, this option will facilitate more efficient annual reporting associated with ESM reporting due to the introduction of an approved form (which will reduce the time taken for owners to complete the form). In the absence of data indicating the extent to which administrative savings will be realised, an indicative range of 10%–50% (compared to current processes) is applied. The expected time saving is estimated to be between $800,000–$3.9 million NPV over 10 years. This produces total costs for Option 9.1 of between $225.4–$365.5 million NPV over 10 years.

**Consultation questions**

Do stakeholders expect that the introduction of approved forms for completing annual reports and maintenance determinations will lead to administrative savings?

Are the estimated savings applied in the analysis considered reasonable?

###### Benefits

Given the relatively minor reduction in costs associated with this option, the break-even points are not materially different from remaking the Regulations unchanged. Results are summarised in **Table** .

Table 9: Break-even analysis results (Option 10.1)

|  |  |  |  |
| --- | --- | --- | --- |
| Assumed proportion of benefits related to reduced severity of building fires | Assumed proportion of benefits related to avoided loss of life | Required reduction in fire severity, $’000  (low – high) | Required reduction in loss of life, no. of lives  (low – high) |
| 0% | 100% | - | 6–10 |
| 25% | 75% | 260–420 | 5–8 |
| 50% | 50% | 520–840 | 3–5 |
| 75% | 25% | 780–1,270 | 2–3 |
| 100% | 0% | 1,040–1,690 | - |

#### Option 10.2 – Introduce a standalone maintenance schedule

**Issue:** Owners cannot keep track of all the ESM conditions and early consultation[[194]](#footnote-195) has indicated that building owners do not understand which documents set out their ESM obligations. These issues could be related to the layering of ESM conditions.[[195]](#footnote-196)

The current situation with multiple documents (maintenance determinations and occupancy permits, and what other documents existed before 1 July 1994) containing ESM conditions can make it difficult for building owners to identify their ESM obligations. The presence of multiple documents will also make the system appear confusing.

This will be especially pertinent to older buildings that do not have ESM conditions included in the occupancy permit as this is generally the key reference point for building owners to understand their compliance obligations.

**Option:** Introduce:

* a requirement for a standalone maintenance schedule for recording ESM conditions when an occupancy permit is amended, a new occupancy permit is issued for an existing building or where a maintenance determination has been issued

approved forms for the standalone maintenance schedule, to help reduce administrative burden.

###### Costs

The major costs associated with this option, in addition to maintenance and reporting costs, will be incurred by building owners to engage a building surveyor to produce a maintenance schedule. The department expects that developing a prescribed form for the standalone maintenance schedule will help reduce the administrative burden associated with preparing it.

These costs will be incurred on a one-off basis, and assuming all building owners were required to undertake this activity, total costs are estimated at $76.4 million to produce a standalone maintenance schedule. This equates to an annual cost of $9.1 million NPV over 10 years.

To the extent that this option results in a higher rate of compliance with maintenance requirements (given an increased understanding of maintenance obligations), there will be additional costs incurred by building owners. Given the difficulty associated with forecasting the collective response of building owners following implementation of this option, this cost cannot be quantified with certainty. As an illustrative example, for every 1% increase in compliance compared with the current Regulations,[[196]](#footnote-197) total regulatory costs associated with maintenance and reporting are estimated to increase by between $530,000–$860,000 a year, or $4.5–$7.2 million NPV over 10 years.

Building owners will already have the annual report readily available. The department therefore does not expect this requirement to impose a material additional regulatory burden on owners.

Total costs associated with Option 10.2 are estimated to be between $36.2–$52.5 million a year, or $305.7–$442.7 million NPV over 10 years.

###### Benefits

Expected benefits of this option in addition to remaking the Regulations include that improved records of ESMs will improve intelligence of building owners and provide a single point of reference to ascertain ESM requirements.

It is the department’s view that improved records will facilitate increased compliance, which will result in more ESMs being maintained and performing to the required level. It is expected that the rate of ESMs failing or underperforming will be reduced. The rate of compliance with ESM maintenance requirements may increase incrementally from the introduction of a standalone maintenance schedule that notes all ESM conditions on a single document, reducing confusion and improving understanding of requirements. This incremental increase in compliance is assumed to correlate with a decrease in the severity of building fires.

In terms of the break-even analysis, the higher costs compared to current Regulations (associated with the one-off maintenance schedule, forwarding to council and any additional costs incurred as a result of higher compliance) would require an increased reduction in the severity of building fires compared to the estimated average cost under current Regulations, as well as further reductions in the number of avoided deaths. Given the resulting compliance rates under new Regulations are uncertain, the following break-even analysis assumes the same compliance rate as remaking the Regulations with the higher break-even point a result of costs associated with producing a standalone maintenance schedule.

Table 10: Break-even analysis results (Option 10.2)

|  |  |  |  |
| --- | --- | --- | --- |
| **Assumed proportion of benefits related to reduced severity of building fires** | **Assumed proportion of benefits related to avoided loss of life** | **Required reduction in fire severity, $’000  (low – high)** | **Required reduction in loss of life, no. of lives  (low – high)** |
| 0% | 100% | - | 9–12 |
| 25% | 75% | 350–510 | 6–9 |
| 50% | 50% | 710–1,020 | 4–6 |
| 75% | 25% | 1,060–1,530 | 2–3 |
| 100% | 0% | 1,410–2,050 | - |

Taking the midpoint of the table above, the Regulations would need to be responsible for a reduction in the severity of building fires of between $710,000–$1.0 million and between 4–6 avoided deaths a year compared to a no-Regulations scenario.

**Consultation questions**

Should the requirement to produce a standalone maintenance schedule be focussed on particular types of buildings or particular uses that may have less-detailed records on ESMs? For example, should this option target buildings built before 1994 due to the assumption that these buildings will have poor documentation of ESM maintenance requirements?

#### Minor changes

Under the proposed ESM Regulations, the requirements apply to all Class 4 parts of a building. Under the current Regulations, annual maintenance reports are not required to be prepared for Class 4 parts of a building constructed before 1 July 1991. There is also no requirement to maintain an ESM unless an occupancy permit is issued or a maintenance determination is issued after 1 July 1991.

Class 4 buildings represent a small subset of the current building stock so this change is not considered to add to the regulatory burden. Also, fire risks in Class 4 buildings may actually be higher because of different requirements for commercial buildings, which assumes no one is sleeping in them overnight.

##### Strengthen information-sharing between enforcement agencies

Enforcement agencies have called for a more rigorous compliance and monitoring program. This option is about strengthening intelligence and relationships between regulatory bodies across Victoria. It is a non-regulatory option.

An approach to improve linkages between enforcement agencies could be developed through a memorandum of understanding (MoU) between fire authorities, councils and VBA. The MoU could require a strategy to be developed each year that will guide the compliance regime. Each year authorities could specify the number of audits they will conduct, what types of buildings each authority will focus their resources on and the types of responses that will be taken when noncompliance is discovered.

It may even be worthwhile extending the membership of this group to those who regulate work safety, liquor licensing and retail leases.

The department has received anecdotal information that there is low awareness of ESMs and a need to improve public information about fire safety measures.

At the end of each year, the group could produce a report on ESM compliance and responses to noncompliance. This report would be a tool for educating building owners and sharing intelligence with other regulators.

##### Compliance and enforcement of ESM maintenance requirements

Stakeholders expressed concern that current penalties are not acting as a sufficient deterrent. Fire authorities have expressed the view that it is difficult to prosecute and to issue infringement notices, and that a chief officer cannot require immediate rectification.

However, a chief officer will notify the relevant council of any breach and a MBS can issue a building notice or order in relation to the noncompliance to seek immediate rectification. Further consultations are required to determine if this is a significant issue.

Notices and orders are enforcement measures set out in pt 8 of the Act and can be issued if noncompliant building work is detected or if the building is not considered safe to use or occupy.

For the purposes of the proposed Regulations, the department recommends all penalties and infringements in the Regulations be increased to the maximum allowed.

##### Maintenance of exits

Under the current Regulations, the occupier of certain buildings and PoPEs is obliged to maintain exits. To better reflect landlords’ maintenance obligations under existing tenancy laws,[[197]](#footnote-198) the department proposes to split current reg 1218 into two Regulations, so liability for failing to maintain exits will lie with the owner while owners and occupiers will be required to keep exits free from obstruction.

Further, the department proposes to introduce a new infringeable offence in relation to people who obstruct exits. This will enable regulators to prosecute people who compromise the safety of a building or PoPE.

##### Strengthen existing obligations by introducing a requirement for ESM maintenance to be included as a condition of the occupancy permit

Enforcement authorities including fire authorities submitted that the level of penalties for not complying with ESM maintenance requirements should be consistent whether or not they are a condition of an occupancy permit. For this reason, current reg 1205 has been replaced with a general requirement of ESM maintenance being a condition of an occupancy permit.

#### Other changes for future consideration

##### Remove the wide definition of ESM from proposed Regulations

The complexity with following ESM requirements under the current Regulations is because of this wide definition, which only applies to buildings constructed before 1 July 1994.

The definition is wider because it includes:

(d) any other measure (including an item of equipment, form of construction or safety strategy) required for the safety of persons using a building or PoPE required to be provided in relation to that building or place by or under the Act or any previous corresponding Act before 1 July 1994.[[198]](#footnote-199)

The purpose of this wide definition is to capture existing ESM maintenance requirements that were existing before 1 July 1994 when the requirement to record ESM maintenance obligations in an occupancy permit came into effect. This is reflected in pt 12 sub-div 1 of the current Regulations which apply to all buildings in classes 1b and 2–9, and to PoPEs.[[199]](#footnote-200)

Before this date, ESM maintenance obligations were not required to be recorded as a condition of an occupancy permit. This is reflected in pt 12 sub-div 2 of the current Regulations, which applies to all buildings in classes 1b, 2–3, 5–9[[200]](#footnote-201) and PoPEs constructed before 1 July 1994.

The wide definition will potentially include for example balustrades and slip and trip features not associated with an exit.

It is considered necessary to retain the wide definition until further information is provided to the department to support its removal. It is the department’s understanding that the intent of the wide definition is to capture a larger range of safety features that may have been required in the past but which are no longer required because ESMs on or after 1 July 1994 buildings are more limited and specific. For example, older buildings have more passive ESMs (such as fire-rated walls) rather than active features (such as sprinklers and alarms). In addition, owners of older buildings may rely more on evacuation strategies rather than on active fire-suppression systems.

##### Remove the requirement to prepare an annual report for certain classes or use of a building

The department has had discussions with stakeholders and VBA about the value of annual ESM reporting for standalone buildings (such as milk bars or single-storey chains of shops) that only have one or two ESM safety features.

To determine what type of buildings could be exempt from the requirement to prepare an annual ESM report, the department needs further information to determine what buildings are considered to be a low risk of causing harm to occupants or adjoining property in the event of a fire. This review will be undertaken as part of the midterm evaluation.

##### Require the annual ESM report to be certified by a suitably qualified person

Stakeholders have called for stronger oversight of businesses that provide ESM maintenance services. Many of the anecdotes and submissions indicate that service providers without the requisite skills and expertise are undertaking compliance work for building owners. However, it is not clear from the information available if this is causing any problems or resulting in any harms.

A lack of appropriate expertise could lead to underperforming or inadequately maintained ESMs. This in turn could contribute to creating a greater health and safety risk for building users or occupants, as discussed above.

The requirement to engage a suitably qualified person to verify an annual ESM report would impose additional costs of $16.6 million NPV over 10 years compared to remaking the Regulations. This results in total costs of between $245.9–$382.9 million NPV over 10 years. In order for benefits to equal costs, the Regulations would need to result in:

* the average cost of a Level 3-or-above building fire being between $570,000–$880,000 lower compared to a no-Regulations scenario

between 3–5 fewer deaths associated with building fires a year compared to a no-Regulations scenario.

Further information is required to determine how a ‘suitably qualified person’ would be defined in the Regulations, or whether it should be defined at all and left to the judgement of the building owner. What is ‘suitable’ will likely depend on the type of building or ESM feature. The more complex, the more qualified a person will be required to be. It would be expected that a fire safety engineer would be appropriately qualified for an annual ESM report in relation to a Class 2 building but a building owner may be suitably qualified for a small business (as the minimum ESM requirements may only be a fire extinguisher, a smoke alarm and fire-protected walls).

There may also be additional costs if building owners are required to have their annual ESM report certified by a suitably qualified person. A suitably qualified person may not be willing to certify an annual ESM report where they think additional maintenance action must be undertaken to comply with the Regulations.

This cost will be driven by the extent that certification requires additional expenditure for ESM maintenance. Further, the amount of additional expenditure required could vary across different buildings, building types and owners. As the department does not have evidence to indicate how these factors might interact, such factors have not been included in the calculation of costs above.

Conversely, the use of a suitably qualified person may result in costs savings for a building owner. These savings will be driven by how much ongoing maintenance improves the functionality of ESMs (for example, resulting in reduced false alarms, which can be costly) or where a suitably qualified person provides guidance to a building owner on how they can comply with their ESM obligations in a more cost-effective manner.

There was not enough information to determine if this option would address issues in relation to noncompliance with ESM maintenance requirements. After further analysis, it appeared this option was actually targeting another problem: that is, the failure of the ESM due to a lack of technical knowledge by the person undertaking the testing in accordance with the maintenance requirements. Some stakeholders have requested this change because there are ESM features that are highly complicated and technical, and they told the department the testing should only be undertaken by appropriately qualified persons rather than by the owner or the owner’s agent.

Stakeholders are invited to provide any evidence or information that would enable further consideration of this option by the department.

#### Conclusion

Remaking the Regulations unchanged imposes a regulatory cost of between $229.3–$366.3 million. Assuming half the benefits are attributable to a reduction in financial costs due to a reduction in the severity of fires and half are attributable to avoided fatalities associated with building fires where ESMs are in place, the Regulations would need to result in:

* the average cost of a Level 3-or-above building fire being between $530,000–$850,000 lower compared to a no-Regulations scenario

between 3–5 fewer deaths associated with building fires a year.

Removing pre- and post-1994 differences and introducing prescribed forms is estimated to reduce regulatory costs by between $800,000–$3.9 million NPV over 10 years compared to remaking the Regulations, but it does not materially change the break-even results associated with remaking the Regulations.

Introducing a standalone maintenance schedule would impose additional one-off costs of $76.4 million NPV over 10 years compared to remaking the Regulations. This results in total costs of between $305.7–$442.7 million NPV over 10 years. In order for benefits to equal costs, the Regulations would need to result in:

* the average cost of a Level 3-or-above building fire being between $710,000–$1.0 million lower, compared to a no-Regulations scenario

between 4–6 fewer deaths associated with building fires compared to a no-Regulations scenario.

The department considers that the increase in regulatory costs associated with Option 10.2 is likely to be exceeded by benefits in terms of reduced severity of building fires and reduced loss of life. Thus the preferred approach is to implement options 10.1 and 10.2 in addition to remaking the Regulations. Taken together, these options result in total costs of between $35.8–$52.4 million a year, or between $301.8–$441.9 million NPV over 10 years.

In order for benefits to equal costs, the Regulations would need to result in:

* the average cost of a Level 3-or-above building fire being between $700,000–$1.0 million lower compared to a no-Regulations scenario

between 4–6 fewer deaths associated with building fires a year compared to a no-Regulations scenario.

## B3.4 Swimming pool barriers

### B3.4.1 The nature and extent of the underlying problem

#### The underlying problem

This chapter considers the means by which the building Regulations can address the issue of drowning and near-drowning incidents involving very young children in residential swimming pools and spas.

Residential swimming pools and spas can be a water hazard to young children. While pool fencing laws differ throughout Australia, every jurisdiction requires swimming pools and spas to be surrounded by a safety barrier (that is, a pool fence). Swimming pool and spa barriers form part of an ongoing, multifaceted strategy to prevent access to swimming pools and spas by young children.

It is widely accepted that there are two simple and effective means to prevent young children from gaining access to swimming pools and spas. Firstly, owners and occupiers must install and maintain the efficacy of swimming pool and spa barriers and gates to prevent unobserved access. Secondly, parents and caregivers must maintain direct supervision of young children in and around swimming pools and spas at all times.

#### The case for regulatory control through building Regulations

In the absence of Regulations, the BCA would continue to require swimming pools and spas built on or after 8 April 1991 to install safety barriers, although requirements vary for those constructed before 1991, between 1991–2010 and after 2010).

There would, however, be no requirement for any owner to maintain such barriers or for occupiers to ensure that the barriers remain closed at all times. No building Regulations in this area may therefore lead to an increase in the number of faulty barriers and/or gate latches as well as an increase in the percentage of barriers being propped open.

#### The potential size of the problem

Each year in Victoria, on average two children aged under five drown in residential swimming pools and spas.[[201]](#footnote-202) Each year on average 13 children[[202]](#footnote-203) aged under five are either admitted to hospital or present to an emergency department (and do not require admission) following near-drowning incidents in swimming pools and spas.[[203]](#footnote-204)

While the number of child drownings in Victoria in residential swimming pools and spas has declined since the introduction of legislated pool safety requirements in the early 1990s, the toll in terms of both death and injury is still substantial and to a certain extent avoidable.

Between 1 January 2000 and 9 November 2016, 22 children aged 0–4 and a further six children aged 5–12 drowned in residential swimming pools or spas in Victoria.[[204]](#footnote-205) Of the 28 drowning deaths,[[205]](#footnote-206) the safety barrier gate was left open in eight instances. In three instances, the gate was found to be faulty. In four other instances, the safety barrier was faulty and in five instances, there was no safety barrier at all. Two deaths involved a climbing point allowing access to the swimming pool and five deaths involved children accessing a swimming pool from a neighbouring property. An apparent lack of adult supervision in each of the identified deaths was noted by the Coroner.[[206]](#footnote-207)

It is widely acknowledged that not all drownings involving very young children result in fatalities. Near-drownings represent a significant aspect of the trauma associated with residential swimming pools and spas. Depending on how long a child is under the water and the timeliness and effectiveness of resuscitation efforts, the child may suffer consequent health effects including traumatic brain injury. Many of the near-drownings result in severe long-term injury, which imposes emotional and financial costs on families and society more broadly.

Data obtained from the Victorian Injury Surveillance Unit (VISU) reveals that on average there are 13 hospital admissions and emergency department presentations in Victoria, related to near-drowning incidents involving children aged 0–4 in swimming pools and spas each year.[[207]](#footnote-208)

A 2008 study of near-drowning events across Australia (across settings including natural water bodies and bathtubs) found that 20.3% of near-drownings resulted in some form of permanent brain damage.[[208]](#footnote-209) Further, a recent and ongoing, long-term study at The Children’s Hospital at Westmead by the Centre for Trauma Care, Prevention, Education and Research (CTCPER)[[209]](#footnote-210) found in about 20% of drowning events there was some form of long-term behavioural and learning impairment and in 10% of cases there was severe neurological deficit, which means that 30% of children who are involved in a near-drowning incident had some form on ongoing impairment.[[210]](#footnote-211) While these studies focused on drowning and near-drowning events in New South Wales, the department considers these studies to be a reasonable comparator in the absence of similar Victorian data.

#### Analysis limitations

The following chapter provides analysis and results in relation to the respective costs and benefits associated with the swimming pool and spa-barrier Regulations (both current and proposed). While best efforts have been made to identify robust data sources on which to base the analysis, the following limitations and caveats that should be kept in mind when interpreting the results.

##### Diversity of pool and barrier stock in Victoria

There is significant uncertainty about the number of pools built in Victoria, the period in which pools were built (and therefore the standard that applies to the associated barrier) and the number of owners of pre-2010 pools that have upgraded their barriers to the current standard, despite not being required to do so. These assumptions significantly impact the calculations of costs incurred by pool owners.

The department considers that many pre-1991 pools have no effective physical barrier (that is, no fence constructed as the use of lockable door sets is permitted). The department estimates 90,000 pools and spas were constructed before 8 April 1991.[[211]](#footnote-212)

##### Cost of barriers

While consultations with barrier installers have been undertaken to estimate the costs associated with barrier maintenance and upgrades, it is likely that the magnitude of costs incurred by pool owners will vary from case to case, potentially significantly. For barrier upgrades in particular, the cost incurred by the pool owners will be influenced by the existing barrier in place, the ease with which a four-sided isolation barrier can be installed (given the location of the pool in relation to existing buildings) and the materials used to construct the barrier. For some owners of pre-2010 pools, only a relatively minor upgrade will be required in order to comply with the current standard. For others, the installation of a completely new barrier and potentially the removal of an existing barrier will need to occur. Given this, the total costs associated with upgrades is difficult to quantify with certainty.

##### Aim of the Regulations

The key benefits of the Regulations are a reduction in drownings and near-drowning incidents resulting in death and serious injury to very young children. Such benefits are difficult to quantify with any certainty. Best efforts have been made to apply proxy estimates to the value of life and associated avoided costs from traumatic brain injury and ongoing learning difficulties sustained from near-drownings, but these estimates are likely to only partially capture the expected benefits. For instance, all near-drowning incidents will result in costs being incurred including hospital admission costs and more intangible costs (such as the distress suffered by victims and their families). While noting these additional costs qualitatively, the analysis in the chapter has only quantified the costs associated with the most serious near-drowning incidents, which equate to about 30% of all near-drownings, or four children a year. The outcomes for the remaining nine children involved in near-drowning incidents cannot be stated with any accuracy However, there would be costs associated with these near-drownings and such costs may not be insignificant.

##### Benefit of four-sided barriers

The extent to which the adoption of the post-1 May 2010 barrier standard will reduce drowning and near-drowning incidents relative to the current Regulations is uncertain. While assumptions have been applied to quantify the potential impact, it should be noted than any deviation from this (either above or below the estimates) will have a bearing on the resulting quantified benefits associated with the Regulations.

Victorian coronial data revealed that in eight of the 28 drowning deaths the safety barrier gate was left open. In these eight cases, it is arguable that the drowning deaths were caused by human error and would not have been prevented by requiring the installation of a four-sided isolation barrier.

A further assumption has been made that the remaining 20 drowning deaths did not involve open gates. A contributing factor in three of the remaining 20 deaths was a faulty gate, but the data is not clear as to whether the gate was faulty due to a lack of maintenance or if it was faulty due to the gate being noncompliant (at point of installation). Another contributing factor in three of the remaining 20 deaths was a faulty barrier, but the data were also not clear as to whether the barrier was faulty because of lack of maintenance or noncompliance. Accordingly, the department has assumed that the risk of drowning death in 20 out of the 28 cases could have been prevented if a compliant, four-sided isolation barrier had been installed.

Based on the available Victorian coronial data, an effectiveness rate of 71% has been adopted in the cost-benefit analysis.

##### Coroners’ data

The department acknowledges the limitations with the Coroner's data given the lack of information in many instances regarding the existence, age, type and location of a barrier for each drowning death.

The building standard to which the barrier was constructed was not recorded in the coronial case files. Accordingly, the department is unable to state with any certainty the age and type of barrier that was in place at the time of the drowning death. As a result of this data restriction, it is not known whether drowning deaths involving very young children occur more frequently where a pre-2010 barrier is in use.

Based on the coronial data available, an effectiveness rate of 71% was adopted to assess the preferred option.

This figure represents the maximum potential effectiveness of the preferred option. The department notes that any deviation from this rate (either above or below the estimate) will affect the resulting quantified benefits associated with the Regulations.

The upper bound threshold has been adopted to take account of the following factors:

* the high social and economic impacts associated with drowning and near-drowning incidents in swimming pools and spas (so the department has used a conservative estimate)
* in many instances, pre-1991 pools have no physical barrier (that is, no fence) but permit the use of child-resistant door sets, although it is not known which proportion of the incidents investigated related to pre-1991 pools

data from other jurisdictions (set out in Chapter B3.4 Swimming pool barriers) support an increase in effectiveness between the two standards (1991–2010 and post-2010).

### B3.4.2 Addressing the underlying problem

#### Option 11 – Remake current Regulations

There are three standards of swimming pool and spa barriers currently in Victoria:

* swimming pools and spas constructed on or after **1** May 2010 must comply with AS1926.1–2007, which requires the installation of a four-sided isolation barrier (this means that an external door from a dwelling cannot open into a swimming pool or spa area)
* swimming pools and spas constructed between 8 April 1991 and 30 April 2010 must install a barrier that complies with AS1926.1–1993 (child-resistant window and door sets permitted)

swimming pools and spas constructed before 8 April 1991 must install a barrier that complies with pt 7, regs 701-705 of the current Regulations (child-resistant window and door sets permitted).

Many pre-1991 swimming pools and spas have no physical barrier or fence around the pool or spa area. Even where a physical barrier or fence has been constructed, there is often direct access to the pool or spa area from a dwelling via a child-resistant door set. Up until 1 May 2010, child-resistant door sets were permitted to form part of a barrier. Again, such door sets cannot always prevent direct access from a dwelling to a pool or spa area.

**Figure 2**, **Figure 3** and **Figure 4** show examples of barriers that comply with each standard.[[212]](#footnote-213)

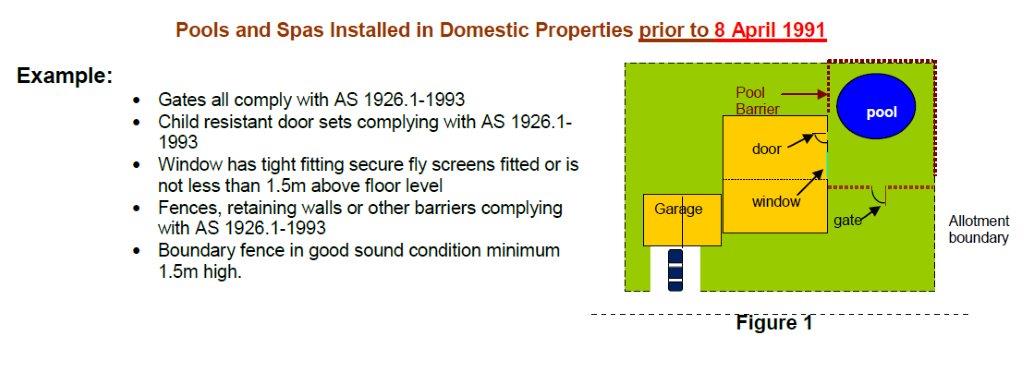


Figure 2: Pre-1991 built swimming pool and spa barriers

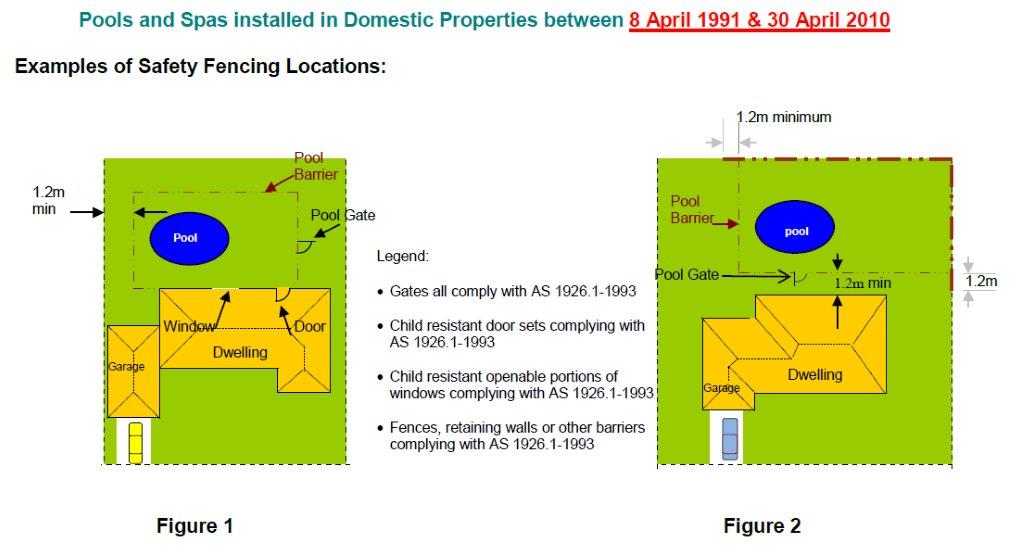
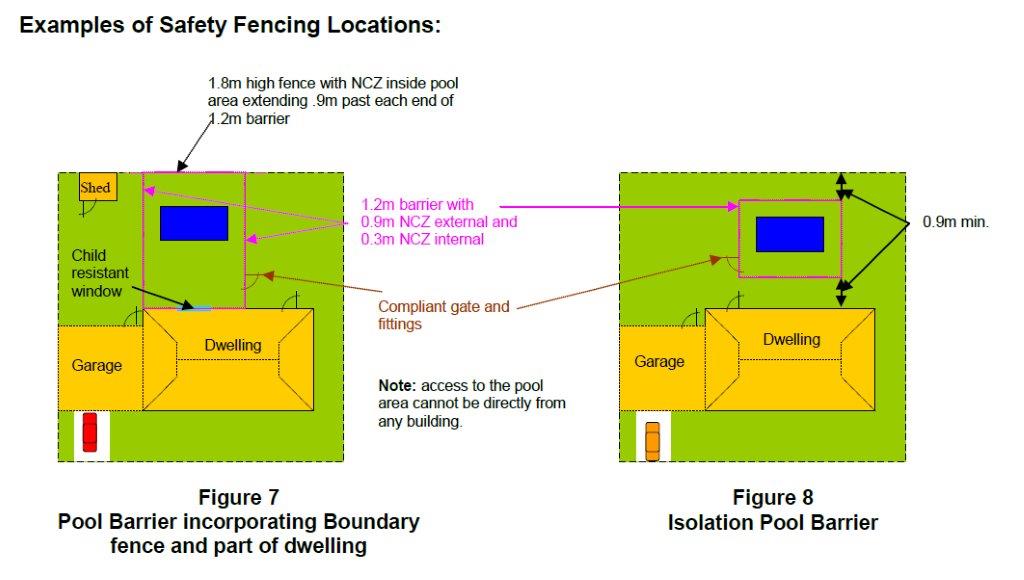


Figure 3: 1991 – 2010 built swimming pool and spa barriers



Isolation pool barrier

Pool barrier incorporating boundary fence and part of dwelling

Figure 4: Post-1 May 2010 built swimming pool and spa barriers

The technical requirements for swimming pool and spa barriers have been in place in Victoria since 1994 and have been subject to periodic, minor amendment since this time. The requirements were based largely on Australian Standard 1926 together with advice received by the then regulator, the Building Commission.

All pools and spas in Victoria (regardless of when they were built) are subject to the Regulations which set out maintenance requirements for safety barriers. Specifically:

* occupiers must take reasonable steps to ensure elements of the barriers (such as fences, gates and locks) restricting access to the pool or spa are maintained and operating effectively at all times
* occupiers must take reasonable steps to ensure the gate or door is in the closed position except when a person is in the act of entering or leaving the part of the allotment or building containing the swimming pool or spa

a person who enters or leaves the part of an allotment or building containing a swimming pool or spa must ensure that any gate or door is in the closed position at all times, except when that person or another person is in the act of entering or leaving that part of the allotment or building.

At the time of publication of the RIS, the department was unable to access reliable data which recorded the existence, location, age or type of barrier (for example, three-sided, four-sided or other type) in Victoria.

The department is cognisant of the fact that the death or near-drowning of a child is a tragic event and a highly sensitive subject for many readers.

The following cost-benefit analysis, which includes ascribing a value to human life and long-term injury, has been undertaken to allow the department to comply with the requirements set out in the Victorian Guide to Regulation regarding preparing a RIS.

While the costs and benefits of any proposed policy are always considered by government, they are rarely considered in isolation. The department’s main priority when considering the options that relate to the maintenance and effectiveness of swimming pool and spa barriers is the safety of the people who use those pools and spas, particularly very young children.

###### Costs

The major costs imposed by the Regulations in their current form are those incurred by owners to maintain existing safety barriers. The total cost of barrier maintenance imposed by the Regulations is estimated to be:

* the annualised average cost of barrier maintenance ($18)[[213]](#footnote-214)

the estimated number of pools and spas that comply with the current requirements is 13,175).[[214]](#footnote-215)

This results in a cost of $260,000 a year or $2.2 million NPV over 10 years.

Further costs have been modelled to allow for a higher compliance range of 50%–80% in line with the department’s expectation that compliance rates will increase over the next decade due to increased enforcement activities. Applying these compliance rates, the estimated costs range between $1.7–$2.7 million a year, or $14.2–$22.7 million NPV over 10 years.

###### Benefits

The primary benefit derived from the Regulations in their current form is the number of avoided drownings and near-drownings as a direct result of owners maintaining and owners and occupiers using their swimming pool and spa barriers in accordance with the Regulations.

Break-even analysis provides an indication of the required reduction in drownings and near-drownings required from the Regulations in order for costs to equate with benefits. In order to estimate the potential benefits arising from avoided drownings and near-drownings, it is necessary to establish the number of incidents that currently occur (under existing Regulations), from which a hypothetical required reduction can be estimated under which costs and benefits are equal.

Data from the National Coronial Information System[[215]](#footnote-216) indicates there were 28 drownings of young children between January 2000 and November 2016, which equates to two drownings per year on average.[[216]](#footnote-217) Data from the VISU[[217]](#footnote-218) indicates that between 2000–01 and 2013–14 there were a further 13 near-drowning incidents a year on average.

Relying on the CTCPER study from New South Wales and applying its conclusions regarding outcomes for children involved in near-drowning incidents to Victoria, the department estimates that 10% of these incidents result in some form of severe neurological deficit (permanent traumatic brain injury) and 20% of these incidents result in some form of long-term behavioural and learning impairment.[[218]](#footnote-219) This equates to on average at least one permanent traumatic brain injury and at least three long-term behavioural and learning-impaired children in Victoria every year.[[219]](#footnote-220) It is not known with any accuracy as to what impact (either little-to-none, mild-to-moderate, temporary or permanent) is suffered by the remaining nine children involved in near-drowning incidents following immersion in a swimming pool or spa.

The analysis shows that depending on the level of compliance achieved, the Regulations would need to be responsible for a reduction in drownings and immersion-related injuries of between 1.6%–16.3% a year for costs to equate with benefits. Put another way, this is equal to:

* 0.02–0.2 drownings avoided a year
* 0.02–0.15 near-drowning incidents resulting in a severe neurological deficit avoided a year

0.03–0.31 near-drowning incidents resulting in some form of long-term impairment avoided a year.

Given the minor required reduction these estimates represent and the assumed effectiveness of barriers, the department considers the benefits associated with the current Regulations are likely to outweigh the costs.

### B3.4.3 Addressing issues with the design / implementation of the Regulations

A range of issues with the application of current Regulations have been identified through consultations with industry stakeholders together with a detailed review of the operation of the current Regulations. These issues and options to address them are discussed below, together with analysis of the associated costs and benefits.

#### Option 11.1 – Specify uniform pool and spa fencing requirements[[220]](#footnote-221)

**Issue:** Victoria’s swimming pool and spa-barrier requirements are complex and confusing. Currently, there are three design standards for pool and spa barriers that apply in Victoria depending on when the swimming pool or spa was constructed. Multiple standards have created confusion for consumers and regulators as to which barrier standard should apply and have directly impacted compliance and enforcement activities and outcomes.

At the time of publication of the RIS, the department did not have access to reliable data as to the location, age, state and type of swimming pool and spa barriers in Victoria.

**Option:** Require all pools and spas to erect a barrier that complies with the most recent Australian Standard, AS 1926.1–2007 (a four-sided isolation barrier). Currently in Victoria, only pools and spas built on or after 1 May 2010 are subject to this requirement. Existing barriers that do not comply with AS 1926.1–2007 would need to be replaced or substantially updated to comply with the requirements under the Australian Standard (see pictorial example at earlier in this chapter). This option would eliminate the complexity and confusion that is associated with the three standards under which existing pools have been constructed and provide for a simpler regime which will aid consumers to comply with and regulators to enforce the Regulations.

###### Costs

The major cost is the requirement for owners of pools and spas built before 1 May 2010 to install a four-sided isolation barrier to comply with AS 1926.1–2007. In the absence of reliable data, the department estimates that 50%–80% of affected pool owners would be required to comply with this requirement.

Australian Bureau of Statistics (ABS) data have been used to estimate the number of swimming pools and spas built before 1991 and between 1991– 2010.[[221]](#footnote-222) Based on this data it is estimated that 90,000 pools were built before 1991 and a further 50,000 between 1991–2010.

Estimates were sought from pool barrier construction companies[[222]](#footnote-223) as to the average cost to erect a basic, four-sided aluminium isolation barrier with one gate. Industry reports[[223]](#footnote-224) suggest that the average pool constructed in Victoria measures 3 m wide by 8 m long. Such a pool would require the construction of a barrier (including gate) which totals 30 m. The cost to install a 30 m barrier (including a gate) and remove an existing fence is estimated at about $4,875, including GST.[[224]](#footnote-225)

The department assumes, based on consultations with stakeholders, that a proportion of owners of pre-2010 pools have already upgraded their fences to comply with the current Australian Standard. Additionally, some owners will only incur a proportion of the full upgrade cost to comply with the requirements proposed under this option. The average cost of a barrier upgrade is estimated to be between $3,600–$3,900 for pre-1991 pools and between $1,300–$1,800 for pools built between 1991–2010.[[225]](#footnote-226)

While this is not an insignificant cost, it is worth noting analysis by the Queensland Government in 2010 as part of its RIS examining the swimming pool improvement strategy.[[226]](#footnote-227) The Queensland RIS found a strong positive relationship between socioeconomic status and pool ownership. Households below the 50th percentile in terms of socioeconomic status recorded pool ownership rates of 0%–6.2% (depending on the decile) while households above the median recorded pool ownership rates of 10.6%–44.1% (depending on the decile). Assuming a broadly similar trend is applicable to Victoria, this suggests a greater proportion of the burden associated with upgrades will fall on households with relatively higher incomes.

Given the above assumptions, the total cost of upgrading pre-2010 barriers to comply with the current Australian Standard is estimated to be between $195.2–$353.8 million in present value terms.

In addition, owners will continue to incur barrier maintenance costs on an ongoing basis. Depending on the level of compliance achieved, maintenance costs are estimated to be between $26.2–$42.0 million NPV over 10 years.

Total costs associated with Option 11.1 are estimated to be between $221.4–$395.8 million NPV over 10 years.

###### Benefits

##### Evidence of benefits in other jurisdictions

Queensland and New South Wales have introduced similar schemes in recent years with the aim of reducing the complexity of pool- and spa-barrier requirements, while at the same time acknowledging that four-sided isolation barriers tend to be accepted as superior to three-sided barriers.

Amendments to the Queensland scheme were introduced in 2009 which required pools and spa owners to comply with a single standard which required the erection of a four-sided isolation barrier by 30 November 2015 (a five-year transition period) around all swimming pools and spas, or earlier if the property was being sold or leased before this time.

The Queensland RIS[[227]](#footnote-228) estimated the benefits of upgrading pools and spa barriers to a new, four-sided isolation barrier in terms of avoided deaths and near-drownings that may otherwise occur.

An analysis of Queensland child drowning death data for the 1983–2014 provides valuable information with respect to the efficacy of the Queensland barrier requirements for swimming pools and spas.

Between 1983–1991 (when no pool barrier standards existed), the average annual number of child drowning deaths in swimming pools and spas was at least 10[[228]](#footnote-229) (highest year was 15, lowest was seven). Contrast these figures to the period 2010–14 – following the introduction of the retrospective, mandatory requirement to install a four-sided isolation barrier around all residential swimming pools and spas –and the annual number of child drowning deaths in swimming pools and spas had dropped to three (highest year was five, lowest was two).[[229]](#footnote-230)

It is arguable that the Queensland statistics indicate that the strengthened pool safety barrier requirements have been very successful but that drownings and near-drownings still pose a significant challenge for families and society.[[230]](#footnote-231) Effective four-sided barriers act as an important, secondary protective mechanism and when coupled with constant adult supervision of children in and around swimming pools and spas, barriers will continue to prevent drownings and near-drownings.

A review of the NSW *Swimming Pools Act 1992* by the NSW Government in 2008[[231]](#footnote-232) and cited in the 2015 review paper[[232]](#footnote-233) considered all available studies with respect to the effectiveness of a four-sided barrier relative to a three-sided barrier.[[233]](#footnote-234) Each study reviewed in 2008 found that there was a significantly higher risk of fatal drowning and near-drowning incidents where only three-sided barriers (relative to four-sided barriers) had been installed.[[234]](#footnote-235) Queensland Injury Surveillance Unit (QISU) research conducted by Barker et al. in 2003 found that where barriers failed to meet the relevant Australian Standard, the relative risk of fatal child access to the swimming pool or spa via a house door compared to a pool gate was 2.88 times higher. Considering compliant and noncompliant barriers together, the relative risk of fatal child access to a swimming pool or spa via a house door versus a pool gate was 2.99 times higher. QISU held that 'this suggests that even when not fully functional, an [isolation] barrier that separates the house from the swimming pool or spa is more effective at preventing child immersion deaths than a barrier that allows direct child access'.[[235]](#footnote-236)

A 1998 Cochrane Review[[236]](#footnote-237) found that a four-sided isolation barrier is an effective environmental intervention that would significantly reduce unintended access to swimming pools and spas and reduce the risk of drowning for very young children.[[237]](#footnote-238) The review cited a study undertaken in Western Australia in 1988[[238]](#footnote-239) that compared isolation fencing (enclosed pool on four sides) with perimeter fencing (three-sided fencing) that found the odds of drowning were 83% lower where a four-sided isolation barrier was in place compared with a three-sided barrier. The review concluded that 'fencing which completely encircles the pool and isolates it from the house is much more effective than methods where children can still gain access to the pool through the house'.

In addition to benefits related to reducing the number of drownings and near-drownings that currently occur in domestic swimming pools, this option will also provide benefits in terms of simplifying the regulatory regime by moving from three to one applicable standard. While the magnitude of this benefit is difficult to quantify, the department expects that by clarifying that all pool owners must comply with the most recent Australian Standard (a four-sided isolation barrier) and coupled with increased enforcement activities, there will be an increase in compliance with the Regulations.

##### Quantified benefits (Option 11.1)

It is difficult to ascertain the extent to which current drownings and near-drownings will be reduced under this option. In the absence of definitive evidence, Victorian Coroner's data have been used which indicate that in recent years 20 of 28 swimming pool drownings in Victoria (71%) were attributable to non-behavioural factors (that is, were not due to pool gates being left open). The department notes this likely represents an upper bound of the potential benefits, given it cannot be known with certainty that compliance with the latest swimming pool barrier standard would have prevented all of the remaining drownings.

The department has also assumed that actual compliance rates will be lower than 100%. The department expects actual compliance will increase significantly from current levels to somewhere between 50%–80%. These lower compliance rates decrease expected benefits by between $46.2–$115.6 million NPV over 10 years. The assumed increase in compliance compared to the current Regulations reflects the department’s expectation that compliance rates will increase over the next decade due to increased enforcement activities (such as audits undertaken by VBA and councils). The department notes some councils conduct routine inspections and have audit programs (such as Hume City Council)[[239]](#footnote-240) and some councils have undertaken audits in the last 24 months. For example, the Shire of Campaspe combined their recent audit with an enforcement policy aimed at encouraging greater compliance with swimming pool barrier requirements.[[240]](#footnote-241) Should this increase in compliance not eventuate, estimated benefits would be lower than those calculated.

Based on these assumptions, total benefits are estimated to be between $115.6–$185.0 million NPV over 10 years.

This option results in a net impact (benefits minus costs) of between -$105.8 million and -$210.8 million over 10 years.

The department is proceeding with Option 11.1 as the preferred option for public consultation about whether uniform pool fencing requirements will be accepted by the public. This is the best option for addressing issues associated with having three sets of rules for swimming pool barriers depending on which year the pool was built. One of the major issues that is frequently raised with the department by stakeholders is that having three sets of rules is confusing.

##### Implementation

An implementation date of 1 October 2020 (a three-year transition period) for the uniform four-sided isolation barrier requirements is proposed. The department considers this is a sufficient time to upgrade barriers because it is assumed that the building work involved will not be significant or complex and it can be completed in a short period of time. However, if submissions suggest this period of time is not sufficient, a longer transition period would be considered when the Regulations are remade.

The proposal is that by or before 1 October 2020, all swimming pools and spas constructed before 1 May 2010 must have a barrier that:

* complies with AS 1926.1–2012 Swimming Pool Safety – Part 1: Safety barriers for swimming pools, as issued from time to time and AS 1926.1–2007 Swimming Pool Safety – Part 2: Location of fencing for private swimming pools, as issued from time to time or

was approved after 1 May 2010 (barriers approved for construction on or after this date must be four-sided isolation barriers).

Where existing pool owners are required to upgrade the barriers and strict compliance with the proposed Regulations is not feasible (due to the design of the pool, which may not provide adequate space for an isolation barrier to be installed) an alternative compliance can be achieved by:

* opting for an alternative solution under the NCC[[241]](#footnote-242) or

applying to the BAB for a modification to the Regulations.[[242]](#footnote-243)

**Consultation question**

Is three years sufficient time to implement the uniform four-sided isolation barrier upgrade requirements?

#### Other options that can be implemented in addition to the proposed Regulations

The department is also proposing other, less-significant measures (in terms of expected costs and benefits) to improve the operation of the Regulations. These measures will be implemented in line with the commencement of the new Regulations if they are supported by stakeholders and the evidence provided.

##### A voluntary swimming pool and spa register (non-regulatory)

There are currently limits to the efficient dissemination of information to pool and spa owners regarding pool safety, maintenance requirements and obligations and inspection services.

A voluntary swimming pool and spa register would be established and maintained by VBA. Pool and spa owners would be invited to register their pools via VBA's website. Provision of information for registration would likely include the name of the owner, the age and location of the pool, the address, and a post and email address). The establishment of the register would enable efficient dissemination of information to pool and spa owners regarding pool safety, maintenance requirements and obligations and inspection services.

Safety information including seasonal reminders to parents and caregivers to maintain active supervision of young children in and around swimming pools and spas could be disseminated via the register.

Several pre-RIS submissions together with recent findings of the Victorian Coroner recommended the establishment of a Victorian swimming pool and spa register.

The effectiveness of the register would be monitored as part of the department’s ongoing evaluation of the proposed (2017) Regulations.

The department intends to implement a voluntary pool and spa register as the best way to target pool owners with information regarding pool safety, maintenance requirements and obligations and inspection services, especially by industry bodies and VBA. This option will impose costs on government to establish and maintain the register but it will enable information and safety campaigns to have a wider reach.

##### A voluntary annual pool and spa self-assessment tool (non-regulatory)

The self-assessment tool would allow pool and/or spa owners assess their pool and/or spa barrier using a checklist and recommend that any compliance or maintenance issues be referred to a RBS or MBS for advice.

Safety information including reminders to parents and caregivers to maintain active supervision of young children in and around swimming pools and spas can form part of the self-assessment checklist.

The department intends to implement a voluntary annual pool and spa self-assessment tool.

##### Clarify the definition of 'owner' in relation to a swimming pool or spa

See proposed reg 12A01.

##### Clarify the responsibilities of owners and occupiers with respect to the barrier maintenance provisions

The owner of a swimming pool or spa must take all reasonable steps to ensure that a barrier restricting access to a swimming pool or spa is properly maintained (proposed reg 143).

The occupier must take all reasonable steps to ensure that a barrier restricting access to the swimming pool or spa is operating effectively (proposed reg 144).

The department considers the owner is best-placed to maintain the swimming pool and spa barrier while an occupier is best-placed to regularly assess whether the barrier is operating effectively and report any breaches to the owner or owner’s agent for rectification. Proposed Regs 143 and 144 have clarified the obligations of the owner and occupier under current reg 1220(1).

The occupier must take all reasonable steps to ensure any gate or door forming part of a barrier restricting access to a swimming pool or spa remains closed except when a person is entering or leaving part of the land containing the swimming pool or spa (proposed reg 145(1)). This Regulation restates the obligations in current reg 1220(2).

A person who opens a gate or door forming part of a barrier restricting access to a swimming pool or spa must ensure that the gate or door is closed immediately after entering or leaving the part of land containing the swimming pool or spa (proposed reg 145(2)). This Regulation restates the obligations in current reg 1220(3).

#### Conclusion

The department’s preferred approach is to implement Option 11.1 – uniform four-sided isolation barrier requirements for all swimming pools and spas. The department’s main priority, which is shared by numerous stakeholders, is the safety of people who are in and around swimming pools and spas, particularly young children who are most vulnerable and must be protected as far as is possible from drowning and near-drowning incidents.

Research reports cited earlier in this chapter[[243]](#footnote-244) found the risk of drowning and near-drowning events involving very young children is related to the type of barrier used to restrict access to the swimming pool and/or spa area. The rate of drownings observed in swimming pools and spas that had a four-sided isolation barrier separating the swimming pool and spa area from any dwelling or other building occurred at a significantly reduced rate when compared to the occurrence rate for swimming pools and spas with only a three-sided barrier (where the dwelling or another building constitutes part of the barrier and often access to the swimming pool and spa area is gained via a door within the dwelling, albeit often with a child-resistant door set affixed).

While there have been no studies considering this particular matter using Victorian data, the department considers the findings of the studies conducted in other comparable Australian jurisdictions can be applied to the Victorian setting and clearly establish the case for consideration of the adoption of one standard for swimming pool and spa barriers in Victoria which requires the installation of a four-sided isolation barrier which complies with the requirements set out in AS 1926.1–2012 Swimming Pool Safety – Part 1: Safety barriers for swimming pools, as issued from time to time and AS 1926.1–2007 Swimming Pool Safety – Part 2: Location of fencing for private swimming pools, as issued from time to time.

# B4 Fees

The Act provides for some fees to be prescribed by the Regulations and also provides broad Regulation-making powers to set fees in s 261(l) and 261(la) of the Act.

In addition, the Act requires some fees to be determined by VBA in accordance with ministerial guidelines. Fees for building practitioner applications for registration and annual registration are set with regard to *Minister's Guideline MG-10 Building Practitioners Board – Fees* issued under s 188(5) of the Act.

## B4.1 Context of fees review

The proposed Regulations will impose fees for some actions required by the Regulations to be undertaken by VBA, the BAB and councils.

#### VBA and BAB fees

VBA is currently undergoing its own change management to put into place new processes and practices that will respond to building reforms. This includes consideration of fees and charges relating to the registration and building practitioner conduct functions that have been transferred from the now-abolished Building Practitioners Board. The department will work with VBA as its internal review progresses to ensure timely consideration of any necessary changes to Regulations in this regard.

Consequently, VBA and BAB fees are to be remade in their current form to allow time to review all systems, processes and fees. Review of those fees will progress as a priority project within the broader building reform framework.

#### Council fees[[244]](#footnote-245)

In preparing the RIS, the department was conscious that councils have been involved in other regulatory processes including a review of planning fees over the past 24 months, which has required significant effort and resources to engage with the department.

For the purposes of the RIS, council fees have been assessed based on information collected from councils through a survey. The survey was sent to ten councils and seven responses were received from Stonnington, Glen Eira, Dandenong, Hume, Ballarat, Whittlesea and Mildura councils. Further consultations were undertaken with three of the councils that responded. While there were three metro council respondents, one interface council and one regional city council, we did not obtain responses from councils in the other two categories (large shire and small shire).[[245]](#footnote-246)

The department acknowledges that the estimates in this chapter may not be an accurate reflection of actual costs. For this reason, it is difficult to draw definitive conclusions about the level of efficient costs except to say to some extent this is taken into account by calculating fees based on average costs.

This review will be conducted as part of the department’s midterm evaluation. The intent is to review and remake the fees within a three-year timeframe. However, this will require significant effort and resources from councils. Further discussion of the fees review is in RIS Chapter A3.6 Evidence improvement project.

In light of the low response rate to the survey, it is acknowledged that further engagement is required with councils to gather data to ensure the assessment of regulatory fees is robust. It is accepted that some processes may vary between councils, depending on the specific characteristics of a municipality (such as the extent of flood areas, the level of building activity and population density). However, significant time and resources of a larger sample of councils is required to assess these processes.

Early submissions from councils raised issues with the current structuring of fees charged for council services.

Submissions also outlined ambiguity around the manner in which report and consent fees can be charged by councils, given the evidence of different approaches of levying these fees per building permit application. The Regulations are sometimes interpreted as setting a maximum fee for each Regulation for which a report or consent is required. Further information from councils is needed to properly assess the cost drivers associated with these applications.

Maximum fees being set for providing reports and consents by councils across Victoria may result in over- or underrecovery of costs depending on the cost structure of particular councils and how fees are currently being levied.

## B4.2 Nature and extent of the problem

If the current Regulations expire and no fees Regulations are made in their place, there may be no legal basis for fees to be charged.

The fees currently prescribed enable VBA, BAB, councils and reporting authorities to recover the costs of the services they provide. If costs cannot be recovered directly from those that benefit from these services, the costs will have to be met from other funding sources (such as general rate revenue or state government funds).

An inability to recover fees may result in delays to building activity and impact the provision of other services.

### B4.2.1 The need to recover costs for services

As noted in the *Cost Recovery Guidelines* (Department of Treasury and Finance, 2013), cost recovery is typically adopted when government services do not directly benefit all Victorians. Most building activities directly benefit a person rather than the community as a whole. It is reasonable and equitable for state and local governments to recover the costs of providing these services.

In instances where costs are being underrecovered, they can place significant pressure on government budgets. Where costs are being overrecovered there may be inefficient costs or suboptimal use of council resources. In the case of appeals to the BAB, the level of fees may deter users and impact access to justice.

The major cost of regulatory fees is that they add to the cost to the consumer or the producer of participating in the building industry. This may deter applicants or practitioners from undertaking building activity, but there is no specific evidence that the fees themselves are causing noncompliance or deterrence. In the case of the lodgement of building permit documentation, charging a new fee where no fee existed before may impact levels of compliance with lodgement of documentation for works valued under $5,000.

The department identified the following principles, which reflect the *Cost Recovery Guidelines*, to guide the review of fees:

* fees for building regulatory functions of councils and VBA should support Victoria’s building objectives
* fees should be set to encourage the optimal use of the functions of councils and VBA in terms of building activities they provide
* fees should not overrecover costs and are to be based on efficient cost

fees should be equitable.

### B4.2.2 Council services and current fees

To determine an appropriate rate of cost recovery in relation to council services, a four-step approach was adopted.

First, activities that should be subject to cost recovery were identified. In consultation with one of the councils in the sample, key activities associated with each service for which fees may be charged were identified, as were characteristics of applications that affect the cost of assessing the application in practice (that is, the class of the application or whether it is provided in hard or soft copy).

Second, assess the frequency of the activity/output. A data request was sent to the sample of ten councils asking for the number of relevant applications in 2014–15 by class and by type of lodgement (hard copy or electronic).

Third, estimate the costs incurred by councils in carrying out activities and producing outputs that need to be recovered through regulatory fees. The data request asked the councils for labour costs, staff oncosts and overheads. The councils were also asked to allocate staff time to each of the activities relevant for each Regulation to ascertain staff costs, as well as nonstaff costs applicable to each Regulation. The total of staff and nonstaff costs provided the current cost estimates, by class and by type of lodgement.[[246]](#footnote-247)

Four, calculate fees and associated levels of cost recovery under different fee options.

describes each service a council provides which has a corresponding fee in the current Regulations and seeks to identify the activities associated with providing that service.

**Consultation questions**

Do the fee amounts in Table 11 seem reasonable, given the activities that are involved to provide the services?

Is the assessment process different across different types of report and consent applications?

Is the cost to councils of approving multiple reports and consents the same as the costs for providing only one or two in relation to a building permit application?

Table 11: Council services that attract a regulatory fee

| Council service | Activities associated with providing service | Fee units | Fee $ (16–17) |
| --- | --- | --- | --- |
| **Report and consent**  The RBS determines when a report and/or consent is required and will refer the building permit application to the relevant council for consideration. If consent is not received, the RBS cannot issue a building permit. | Relevant chapters on report and consent are contained in the RIS at Reporting authority approvals (Chapter B1.2), Siting and amenity controls (Chapter B1.3), Projections (Chapter B1.4) and Bushfire safety (Chapter B5).  Each service provided may require different activities to be undertaken.  Each type of report and consent is discussed below. |  | |
| **Demolition**  Note the requirement to obtain a report and consent is in the Act. | Applications for a building permit for demolition may be suspended if a request is made to the Minister for Planning to introduce heritage protection requirements to the subject site, or a planning scheme amendment is in progress. | 4.60 | 64.10 |
| **Variation of a siting provision (single dwellings)**  See Chapter B1.3 Siting and amenity controls. | Councils must consider the variation request against the Minister’s Guideline MG-12 Siting and Design of Single Dwellings and s.188 A of the Building Act. The assessment may include referral to internal council departments, site visits, consideration of potential amenity impacts on existing dwellings and comments from adjoining owners. | 18.43 | 256.90 |
| **Projections beyond street alignment**  See Chapter B1.4 Projections. | When a council receives a report and consent application to vary the requirement, it will assess it in relation to the potential for public safety detriment. The council may also internally refer the application to its infrastructure department, consider the intended purpose of the proposed works and the ability to comply with the building Regulation before deciding. | 18.43 | 256.90 |
| **Building above or below certain public facilities** | The application is received and assessed by council; comment may be sought by the operator of the public facility. | 18.43 | 256.90 |
| **Protection of the public – erection of precautions over the street alignment**  See Chapter B2.2 Protection work. | On receipt of the referral / application, council considers the effect of precautions over the street alignment on the functioning of the street. Council may review a traffic management plan or construction management plan and comments from council’s infrastructure department before deciding on an application. | 18.43 | 256.90 |
| **Install or vary a septic tank system**  See Chapter B1.2 Reporting authority approvals. | Council may refer the request for report and consent to its environmental health department for assessment. Councils have delegated responsibilities under the *Environment Protection Act 1970* in relation to approving the installation or alteration of septic tank systems. | 18.43 | 256.90 |
| **Building in a flood area**  See Chapter B1.2 Reporting authority approvals. | In giving its consent to construct on flood-prone land, council will assess the proposal taking into account danger to the life, health or safety of occupants of the building due to flooding of the site.  Council will refer the application to the floodplain management authority. This process also allows council to determine the allowable minimum floor level of the building. Council is also required to inform the floodplain management authority and sewerage authority of the floor level for the site. | 18.43 | 256.90 |
| **Legal point of discharge** | A request for a legal point of discharge may be referred internally to council’s infrastructure or engineering department. Council will then provide the applicant with the external drainage plans to confirm the location of discharging stormwater collected from the site into council’s drainage assets. | 4.60 | 64.10 |
| **Accepting lodgement of building permit documentation**  The Act requires a RBS to provide council with a copy of building permit documentation within seven days of issuing the permit. Council receives the documentation and must keep records in the prescribed manner for the prescribed period of time.  Currently a fee is only payable in relation to works costing $5,000 and above (current reg 320).  See Chapter B1.1 Building permit requirements. | The Regulations require council to store the documentation for 10 years following completion of building works and the council must make the documentation available to an owner or mortgagee. After this time, records must be kept until the building is removed or demolished and kept in a manner specified by the Keeper of the Public Records (within the meaning of the *Public Records Act 1973*).  Receiving, copying, filing, storing and making files available are services provided by council for all building permit documentation. | 2.75 | 38.30 |
| **Requests for information**  The Regulations enable any person to request the following information:   * designated areas (flooding, termite, snowfall, sewered areas) * building permits, occupancy permits and certificates of final inspection issued in the past 10 years * statements about combined allotments or building subdivisions, building notices and orders. | Council would refer to mapping information. It may also include consulting other statutory authorities or council records.  Generally this information is readily available and will require a file search. | 3.67 | 51.20 |
| The Regulations enable an owner, mortgagee or a prescribed building practitioner to request a council to provide approval dates of mandatory notification stages for building work carried out on that building or land. | Generally this information is readily available and will require a file search. | 3.67 | 51.20 |

Given the limited available information about the cost drivers for council to provide services, it was difficult to assess whether the fees set are appropriate. As discussed in RIS Chapter A3.6 Evidence improvement project, the department will be gathering information to better understand what activities are undertaken to provide these services. For example, currently the fees for each type of report and consent are not differential. This would not be equitable if the assessment processes are not the same (for example, if certain report and consent decisions did not require a site visit).

The current fee associated with report and consents is $256.90. This amount basically equates to about one hour's work by a professional ($215) and one hour's work by administrative staff ($50 per hour).

### B4.2.3 Victorian Building Authority services and current fees

**Table 1** describes each service VBA provides that has a corresponding fee in the current Regulations and seeks to identify the activities associated with providing that service. The department notes the fees are not likely to reflect current costs because it has been some time since VBA has conducted a review of its cost base.

In addition, the table does not include building practitioner fees, which are discussed in RIS Part C. These fees are determined in accordance with the Act.[[247]](#footnote-248)

Table 12: VBA services that attract a regulatory fee

| **VBA service** | **Activities associated with providing service** | **Fee units** | **Fee $ (16-17)** |
| --- | --- | --- | --- |
| **Owner-builder certificate of consent**  If an owner-builder seeks to undertake domestic building to a value great than $16,000,[[248]](#footnote-249) they must obtain a certificate of consent from VBA. The certificate of consent enables an owner-builder to obtain a building permit and carry out domestic building work on their own land. | On receipt of the application, VBA will assess whether to grant the certificate against the ownership and occupancy of the land and whether the owner-builder has prescribed knowledge of the duties and responsibilities of an owner-builder. VBA will then issue or refuse the certificate of consent. If issued, VBA maintains a public register of owner-builder certificates of consent with details of the address and building work. | 6.90 | 96.18 |
| **Application for building product accreditation (Building Regulations Advisory Committee)**  A certificate of building product accreditation is proof that a product meets the performance requirements of the Regulations or the BCA. It is a function of BRAC, under the Act, to provide a centralised assessment for product accreditation. | Once an accreditation application is received by VBA, it is first reviewed by the Technical and Regulatory Services Unit of VBA. Following the initial review by BRAC and a BRAC subcommittee if required, an application may either be required to provide further information, be approved or refused. A list of product certificates is maintained on VBA's website. | 138.31 | 1928.04 |
| **Duplicate building practitioner's certificate**  If a registered building practitioner’s certificate is lost or destroyed, VBA can issue a replacement certificate or duplicate certificate. | VBA may verify insurance and registration details before providing a duplicate certificate. | 2.75 | 38.31 |

### B4.2.4 Building Appeals Board adjudication services and current fees

BAB makes decisions about matters relating to the Regulations, the BCA and the Act.

An owner, agent, reporting authority, building surveyor or adjoining owner in the case of protection work may take a dispute, request for appeal or modification to BAB.

**Table 1** below describes each service BAB provides which has a corresponding fee in the current Regulations and seeks to identify the activities associated with providing that service.

The fees for Class 1 and Class 10 buildings appeals are lower than for Class 2–9 buildings because:

* providing services in relation to Class 1 structures is likely to involve infrequent purchasers of construction services ('mums and dads') who may be restricted financially to have a matter heard by BAB if it was set higher
* hearing matters in relation to a Class 10 structure is likely to be less complex and more straightforward because they are usually minor structures (such as sheds and decks) and involve minor building work, except for private bushfire shelters which are Class 10c buildings; these matters involve lower costs to BAB because there is less time involved in considering an application as the issues are simpler and involve less technical assessment

Class 2–9 buildings are usually commercial buildings, are more-complex structures and high-risk due to the type of occupancy and use. Hearing matters in relation to these buildings involve higher costs to BAB because issues associated with these applications can be more complex, which can result in BAB sitting in session for longer periods; BAB also needs to cover the costs of an technical officer to review and assess the issue before it is considered.

Table 13: BAB services that attract a regulatory fee

| **BAB adjudication service** | **Activities associated with providing service** | **Fee units** | **Fee $ (16–17)** |
| --- | --- | --- | --- |
| **Appeals**  BAB hears matters relating to appeals and disputes under pt 10 of the Act. An applicant can seek BAB review a decision under the Act or Regulations. Decisions may include refusals to issue an occupancy permit and decisions about protection work or a building order. | BAB hears matters on a weekly basis and normally comprises a panel of three members for an individual matter. BAB may also conduct site inspections as well as consider application documentation. A written determination with reasons is issued to all relevant parties once BAB has made its decision.  On review of documentation, further information may be requested and a hearing scheduled. Matters are heard by three board members and decisions are made about 16 weeks after submission of a completed application. |  |  |
| *Appeals and disputes (Class 1 & 10 buildings)* | Matters under ss 139, 144, 144 A, 150 or 164 of the Act | 13.82 | 192.65 |
| *Appeals and disputes (Class 1 & 10 buildings)* | Matters under ss 138, 140, 141, 142, 151, 152, 153, 154, 155, 156, 157,158 or 159 of the Act | 23·04 | 321.18 |
| *Appeals and disputes (Class 2–9 buildings)* | Matters under ss 139, 144, 144 A, 150 or 164 of the Act | 23·04 | 321.18 |
| *Appeals and disputes (Class 2–9 buildings)* | Matters under ss 138, 140, 141, 142, 151, 152, 153, 154, 155, 156, 157,158 or 159 of the Act | 46.10 | 642.63 |
| *Fast track* | S 147 of the Ac  t | 36.88 | 501.57 |
| **Modification and compliance applications**  If an applicant believes a particular clause of the Regulations should be altered given specific circumstances of a building work proposal, a modification request can be made to BAB for consideration. | On receipt of the application, BAB will review the case documentation, request further information if required and schedule a hearing. BAB will only approve modifications it believes are reasonable and not detrimental to the public interest as required by ss162(3) of the Act. |  |  |
| Modifications (Class 1 & 10 buildings) | Matters under s 160 of the Act | 8.29 | 115.56 |
| Modifications (Class 2–9 buildings) | Matters under s 160 of the Act | 18.43 | 256.91 |
| Referrals (design) | Matters under s 160 A of the Act | 18.43 | 256.91 |
| **Access**  If a Regulation relates to access for people with disabilities, the application must demonstrate how meeting this requirement would impose unjustifiable hardship on the applicant. | Applications to modify Regulations relating to access for persons with disabilities tend to be lengthier proceedings. |  |  |
| *Referrals (access provisions)* | Matters under s 160B of the Act | 41.89 | 583.95 |
| **Additional fees**  If BAB spends additional time or resources in relation to a hearing, it may charge additional fees. | BAB may charge additional fees to recover costs if it is required to inspect a site or hear a fast-track hearing over two hours. |  |  |
| **Fast-track appeals** |  | 14.75 per hour | 200.60 per hour |
| **Site inspections[[249]](#footnote-250)** | Site inspections can be an aspect of fast-track appeals | 14.75 per hour | 200.60 per hour |

## B4.3 Findings from targeted consultations with councils

Councils were unsure about whether they should charge report and consent by application or by Regulation. Given the different nature of the Regulations, they tend to charge by Regulation. However, the current Regulations are very clear, that the fee can only be charged per building permit application.

The driver of costs for councils was the number of applications that were lodged: no further details were requested from councils around cost drivers. There was not enough data provided to identify whether the processes were simpler in rural areas. Processes were not shown to be simpler in suburban / regional areas, just different: for example, apartment developments in urban areas can be just as complex as industrialised development on agricultural land. Site visits for siting under pt 4 of the Regulations was also a cost driver.

Better data is required for the department to determine the appropriateness of setting different fees based on the type of permit or approval. To set differential fees, data is required to enable an assessment of whether the fees are set at a rate that could either be undercharging or overcharging for the service that is being provided.

For example, for this cost-benefit analysis the average staff costs per task were developed to cover administrative tasks but did not include tasks for enforcement costs, referrals or expert technical advice.

**Table 1** shows the average unit cost of providing each service (based on data collected from a sample of councils) and the number of councils from which the average unit cost was calculated.

Average staff costs per task were developed to cover administrative tasks but did not include tasks for enforcement costs, referrals or expert technical advice.

**Table 1** shows total assumed costs of providing each service (based on data collected from a sample of councils) which has been calculated based on the average unit cost of providing each service and the expected volume of the various services provided.

Table 14: Cost per application

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Number of councils** | **Staff costs ($2016–17)[[250]](#footnote-251)** | **Nonstaff costs ($2016–17)[[251]](#footnote-252)** | **Storage costs ($2016–17)** | **Fuel costs ($2016–17)** | **Average unit cost ($2016–17)**[[252]](#footnote-253) |
| Report and consent (current reg 312): |  |  |  |  |  |  |
| * demolitions (s29A) | 6 | 71 | 9 |  |  | 80 |
| * siting, allotments and projections, building work in special areas | 7 | 270 | 1 |  | 3 | 273 |
| * protection of the public | 7 | 274 | 1 |  | 3 | 277 |
| Stormwater drainage (current reg 610(2)) | 7 | 132 | 1 |  | 3 | 136 |
| Lodgement in relation to works (current reg 320):[[253]](#footnote-254) | 7 | 39 | 31 | 45 |  | 115 |
| * costing $5,000 and above | 7 | 39 | 31 | 45 |  | 115 |
| * cost below $5,000 | 7 | 39 | 31 | 45 |  | 115 |
| Requests for information (current reg 326) | 7 | 19 | 25 |  |  | 45 |

**Table** 1 shows these average unit costs, as well as the expected volume to give the relevant total cost.

Table 15: Unit and total costs

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Average unit cost ($2016–17)[[254]](#footnote-255) | Total volume from surveyed councils  (2016–17)[[255]](#footnote-256) | Total assumed costs from surveyed councils ($2016–17) |
| Report and consent (current reg 312): |  |  |  |
| * demolitions (s29A) | 80 | 1,806 | 145,005 |
| * siting, allotments and projections, building work in special areas | 273 | 10,381 | 2,838,773 |
| * protection of the public | 277 | 371 | 103,032 |
| Stormwater drainage (current reg 610(2)) | 136 | 7,515 | 1,024,499 |
| Lodgement in relation to works (current reg 320): | 115 | 19,786 |  |
| * costing $5,000 and above[[256]](#footnote-257) | 115 | 17,883 | 2,054,031 |
| * cost below $5,000 | 115 | 1,903 | 218,603 |
| Requests for information (current reg 326) | 45 | 20,722 | 922,904 |
| TOTAL | **80** | **60,582** | **7,306,846** |

## B4.4 Options for fees

While fees are intended to increase annually in line with the Victorian Government’s indexation of fees and penalties (when designated in fee units, to account for inflation), there has been no comprehensive review of the appropriateness of building fees since the current Regulations were made.

Two options are considered for fees:

* Option 1 is to remake the Regulations

Option 2 is to set fees to reflect full cost recovery with lodgement fees to apply to all lodgement.

Another potential option for structuring report and consent fees may be to set them with greater granularity (for example, by type of report and consent). This might include different fee amounts for projections beyond street alignment, building above/below certain public facilities, siting and temporary structures. While this may improve the accuracy of cost recovery, it would also introduce greater complexity to the fees. Better data is required for the department to determine the appropriateness of setting differential fees.

### B4.4.1 Base case

The analysis of options in the RIS will be assessed against the base case, which is the situation in the future if no new Regulations about fees are made after the current Regulations sunset.

The possible outcome under the base case is, if no new Regulations are made then council, VBA or BAB may not be able to charge fees for some of the building services they provide, despite having to still provide these services. The costs will have to be met from other funding sources (such as general rate revenue or state government funds).

A fee may not be imposed without clear statutory authorisation. If the Actrequires a fee to be prescribed, it must be prescribed in the Regulations. Under the base case, if there is no prescribed fee then no fee can be collected for that function.

#### VBA and BAB fees

There is no clear statutory basis for VBA or BAB to charge fees in relation to any of the current functions that have a corresponding fee Regulation. If these Regulations are not remade, then those fees cannot be charged.

#### Council fees

Councils may set their own fees for the services they provide pursuant to the *Local Government Act 1989* under s 111 and s 113, depending on the statutory function being performed.

It may be possible for a council to make a local law under the *Local Government Act 1989* that requires that a fee be paid in relation to functions or powers conferred on the council under the Act.

Whether or not a local law could authorise or prescribe a fee, where the Act is wholly silent as to the imposition of fees, will need to be considered on a case-by-case basis. A local law must not under sch 8 of the Local Government Act – without clear and express authority conferred by the Building Act under which the local law is made – impose any tax, fee, fine, imprisonment or other penalty.

Under the base case:

* a council will not be able to set prescribed fees required by the Act; if the fees are not prescribed then a council will not be able to collect fees for the lodgement of applications for building and occupancy permits
* no fee will be payable for requests for information as the Act does not require the payment of fees: it is the Regulations that impose and set the fee, so without the Regulations no fee would be payable; in the event a council sought to impose the fee by making a local law under the Local Government Act, further consideration would be required to determine if that was within power (sch 8 of the *Local Government Act 1989)*

a council’s capacity to determine report and consent fees will not be affected under the base case due to its capacity to determine fees under cls 1 and 4 of sch 2 to the Act; the only difference is that there would not be an upper limit on the fees charged, which the Regulations provide by setting a maximum fee.

### B4.4.2 Assessment criteria

The department identified the following principles, which reflect the Department of Treasury and Finance's *Cost Recovery Guidelines*, to guide the review of fees.

**Support Victoria’s building objectives:** the fees charged for building regulatory functions of councils and VBA should support Victoria’s building objectives (as outlined in RIS Chapter A2.1 Objectives of the proposed Regulations) by ensuring they do not unnecessarily inhibit building investment and activity, and that they promote certainty for the sector and not undermine health and safety considerations.

**Optimal use of resources:** cost recovery aims to avoid the situation where all taxpayers have to pay the costs associated with regulating building activity regardless of whether they benefit from, or give rise to the need for, such Regulation. Fees should be set to encourage the optimal use of the functions of councils and VBA in terms of building activities they provide.

**Cost efficiency:** fees are to be based on efficient cost.

**Equity:** fees should reflect any differences in the extent of regulatory activity conducted by VBA and councils in relation to different groups.

**Simplicity:** The fee structure should be simple to understand and apply.

These principles have been applied in assessing preferred fee options. Assessment is provided against each option listed below with the preferred option being Option 2 for cost recovery, adjusted to achieve policy objectives of equity.

The department acknowledges the potential trade-offs across objectives including in relation to equity and simplicity. The current lack of data means it is not possible to identify whether differential fee structures (which might improve equity as well as efficiency) are appropriate. The scores assigned in Chapter B4.4.3 Multicriteria Analysis reflect this uncertainty.

The department considers it appropriate to use a simplified fee structure due to this information gap. Improved cost data will enable the department to identify any significant differences in the cost of different activities and to consider the options that better align costs and fees for different permit types or activities (which could improve efficiency and equity).

Any data stakeholders can provide about costs relating to specific permits and fees will help the department frame and begin the fees review outlined in RIS Chapter A3.6 Evidence improvement project.

#### Option 1 – Remake the current Regulations

Under this option, the Regulations would continue to prescribe the existing fee units as shown in **Table 11**, **Table 12** and **Table 13**.The value of a fee unit for 2016–17 is $13.94.[[257]](#footnote-258)

The analysis in **Table 16** and **Table 17** is in relation to council fees only. At this stage, there has been no substantive analysis of VBA or BAB fees, which is explained in Chapter B4.1 Context of fees review.

Table 16: Option 1 fees

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Fee units | Fee  ($2015–16) | Fee  ($2016–17) |
| Maximum fees for report and consent (current reg 312): |  |  |  |
| * demolitions (s29A) | 4.60 | 62.56 | 64.12 |
| * siting, allotments and projections, building work in special areas | 18.43 | 250.65 | 256.91 |
| * protection of the public | 18.43 | 250.65 | 256.91 |
| Stormwater drainage (current reg 610(2)) | 4.60 | 62.56 | 64.12 |
| Lodgement (in relation to works costing $5,000 and above) (current reg 320) | 2.75 | 37.40 | 38.34 |
| Requests for information (current reg 326) | 3.67 | 49.91 | 51.16 |

Note: On 30 March 2017, the Treasurer increased the value of a fee unit for 2017–18 by 2%.[[258]](#footnote-259) The actual fee level will be higher than the fees indicated in the table because the value of a fee unit for 2017-18 ($14.22) will be 2% higher than the 2016-17 fees ($13.94).

###### Costs

The levels of cost recovery have not been determined for VBA or BAB fees for the purposes of the RIS.

Remaking the Regulations would result in the following levels of cost recovery, based on the limited data obtained.

Table 17: Cost and revenue summary

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Costs  ($2016–17) | Revenue ($2016–17)[[259]](#footnote-260) | Level of cost recovery (%) |
| Report and consent (current reg 312): |  |  |  |
| * demolitions (s29) | 145,005 | 115,808 | 80% |
| * siting, allotments and projections, building work in special areas | 2,838,773 | 2,667,091 | 94% |
| * protection of the public | 103,032 | 95,412 | 93% |
| Stormwater drainage (current reg 610(2)) | 1,024,499 | 481,892 | 47% |
| Lodgement in relation to works (current reg 320): |  |  |  |
| * costing $5,000 and above | 2,054,031 | 685,537 | 33% |
| * cost below $5,000 | 218,603 | - | 0% |
| Requests for information (current reg 326) | 922,904 | 1,060,133 | 115% |
| TOTAL | $7,306,846 | 5,105,872 | 70% |

The major cost of regulatory fees is that they add to the cost to the consumer or the producer of participating in the building industry. This may deter consumers from undertaking building work.

Maximum fees being set for providing reports and consents by councils across Victoria may result in overrecovery or underrecovery of costs, depending on the cost structure of particular councils. Analysis of the fees charged by all councils in Victoria for the 2006 RIS indicates that on average the maximum fee level was slightly higher than the current fees charged. Overall, the 2006 RIS found that the proposed maximum fees were likely to improve cost recovery for the majority of councils while limiting the ability to overrecover.

Remaking the current fees would not cover costs associated with councils accepting lodgements in relation to works valued at less than $5,000. According to the MAV, for some councils this is a significant proportion of building permits lodged and the same amount of work is required by councils in the keeping of these records. Costs are borne by a council accepting, lodging and storing permits and documents irrespective of the cost of works. Data indicate however that such lodgements represent 10% of the total on average.

Anecdotal evidence suggests some applicants structure their applications to avoid exceeding the $5,000 threshold (for example by splitting applications into multiple parts).

###### Benefits

The key benefit of collecting fees is that they recover part of the cost of regulating the building industry from parties that directly benefit from or give rise to the Regulation. This means regulatory activities, to the extent that they deliver benefits to particular groups in society, are being funded by those groups rather than being subsidised by the general public through taxation.

Setting fees provides some degree of consistency for building consumers who may be operating across different municipalities, thus increasing certainty. As Avonwood Homes noted in a submission to the Building Commission (cited in the 2006 RIS), there is a 'concern where one municipality can charge $30.00 for the information and another $115.00 ... A set fee ... need[s] to apply immediately. We are a reputable builder trying to fix our contract price to our customer.' This will be an ongoing concern if a maximum fee is not set under the proposed Regulations.

The application of maximum fees for obtaining a report and consent may encourage councils who are operating with higher-than-average costs structures to achieve efficiencies where possible and therefore maximise the level of cost recovery.

#### Option 2 – Council fees reflect full cost recovery and lodgement fees apply to all lodgements

The analysis in **Table 1** and **Table 1** is in relation to council fees only.

The specified fee for site inspections has been removed under this option. Proposed reg 168(2) is considered sufficient as it covers the costs associated with fast-track hearing. It is the department's understanding that site inspections are only conducted in relation to fast-track hearings. At this stage, there has been no substantive analysis of the remaining fees that can be charged by VBA and BAB (as explained in Chapter B4.1 Context of fees review).

Under this option, in line with the requirements in the *Cost Recovery Guidelines*, fees would be set to reflect 100% cost recovery and would apply to all services in relation to which a fee may be set. The 2006 RIS used actual fees being charged by councils as a proxy for costs, to set new maximum fees for the greatest report and consent matters being processed by councils.

Before 2006, the only fee set for report and consent related to demolitions. The results showed a significant range in fees being charged by councils and indicated that some councils were underrecovering.

Under this option, a fee would apply for the first time to lodgements in relation to works costing less than $5,000.

The current Regulations prescribe a fee for lodgement of building permit documentation to a council when the value of the works is greater than $5,000. Therefore, no fee can be collected by a council where documentation relates to a building project of less than $5,000 of building works.

Councils have pointed out that even though work under $5,000 may be low-risk and involve minor building work, the administrative costs associated with receiving and filing the building records were the same as for building works valued at over $5,000. Councils indicated that they were absorbing those costs. Irrespective of the value of building work, the costs of accepting, lodging and storing the permits and documents did not vary by the value of building works.

Anecdotal evidence suggests that some applicants structure their applications to avoid exceeding the $5,000 threshold (for example, by splitting applications into multiple parts).

Analysis of VBA building permit levy data showed that out of all the building permits reported in Victoria between 2010–11 and 2015–16, 10% were for works less than $5,000. It has been assumed that the cost to a council of processing a payment would outweigh the cost to council for retention of such permits. Further analysis of cost evidence would be required to determine if this is the case.

The *Victorian Guide to Regulation* states general government policy is that regulatory fees and user charges should be set on a full cost-recovery basis because it ensures that both efficiency and equity objectives are met. Full cost represents the value of all the resources used or consumed in providing an output or activity.

Full cost recovery promotes the efficient allocation of resources by sending the appropriate price signals about the value of all the resources being used in providing government goods, services and/or regulatory activity. From a horizontal equity point of view, full cost recovery ensures that those that benefit from government-provided goods and services, or those that give rise to the need for government Regulation, pay the associated cost. Parties that do not benefit or take part in a regulated activity do not have to bear the costs.

###### Costs

Under this option, the Regulations would set the proposed fee amounts in **Table 1** for councils. Implementing this option would generate the full cost recovery to councils of the services they provide, as shown in **Table 1**.

Table 18: Option 2 fees

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Existing fees ($2016–17)** | **Proposed fees**  **($2016–17)** | **Proposed fee unit**  **(2017 Regulations)** | **Change %** |
| Maximum fees for report and consent (current reg 312): |  |  |  |  |
| * demolitions | 64.12 | 80.29 | 5.75 | 25% |
| * siting, allotments and projections, building work in special areas | 256.91 | 273.45 | 19.61 | 6% |
| * protection of the public | 256.91 | 277.43 | 19.90 | 8% |
| Stormwater drainage (current reg 610(2)) | 64.12 | 136.33 | 9.77 | 113% |
| Lodgement (in relation to works costing $5,000 and above) | 38.34 | 114.86 | 8.23 | 200% |
| Lodgement (in relation to works costing less than $5,000) |  | 114.86 | 8.23 |  |
| Requests for information (current reg 326) | 51.16 | 44.54 | 3.19 | -13% |

Note: On 30 March 2017, the Treasurer increased the value of a fee unit for 2017–18 by 2%.[[260]](#footnote-261) The actual fee level will be higher than the fees indicated in the table because the value of a fee unit for 2017-18 ($14.22) will be 2% higher than the 2016-17 fees ($13.94).

Table 19: Option 2 costs and revenue summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Costs  ($2016–17)** | **Revenue  ($2016–17)** | **Level of cost recovery (%)** |
| Report and consent (current reg 312): |  |  |  |
| * demolitions | 145,005 | 145,005 | 100% |
| * siting, allotments and projections, building work in special areas | 2,838,773 | 2,838,773 | 100% |
| * protection of the public | 103,032 | 103,032 | 100% |
| Stormwater drainage (current reg 610(2)) | 1,024,499 | 1,024,499 | 100% |
| Lodgement in relation to works (current reg 320): |  |  |  |
| * costing $5,000 and above | 2,054,031 | 2,054,031 | 100% |
| * costing below $5,000 | 218,603 | 218,603 | 100% |
| Requests for information (current reg 326) | 922,904 | 922,904 | 100% |
| TOTAL | 7,306,846 | 7,306,846 | 100% |

There are questions as to whether charging for lodgements in relation to works costing below $5,000 would be proportionate: for example, at a $5,000 threshold it would be 2.02% of the total project cost and 10.1% at $1,000. A fee has been introduced to reduce the costs on councils of receiving and storing records but it is questionable whether the cost of administering these payments would be outweighed by the benefit of collecting them. It is the policy intent that all records on the built environment be retained for a sufficient period of time. This information is important for tracking activity associated with a building and it is evidence of approvals for occupancy (changes of use or structural changes in an existing buildings) and consents from reporting authorities. A sample of the building permit files lodged in relation to building works below $5,000 will be reviewed by the department as part of the midterm evaluation to determine whether building permits should be required for works of this value.

Given that councils incur a significant proportion of the fixed costs related to building permits –irrespective of the cost of works undertaken: that is, either above or below $5,000 – it appears reasonable to recover those costs from industry, as they are raising the need for the cost to be incurred by a council. This would also have the benefit of removing an incentive to create packages of work that would come in just under the threshold.

As councils currently incur costs for administering fees for building permits over $5,000, the additional costs of charging for building permits over $5,000 is unlikely to be significant (relative to the benefit of recovering that revenue), especially given the proportion of permits under that current threshold.

###### Benefits

Under this option, fee revenue is better-aligned with costs, avoiding or minimising cross subsidisation (both in terms of those paying one fee versus another, and in the case of lodgements in terms of no longer requiring taxpayers to subsidise the costs associated with lodgements for works costing less than $5,000) and thereby increasing efficiency.

Cost recovery would generally be set at 100% in line with the *Cost Recovery Guidelines*. Maximum fees for report and consent are likely to limit the ability to overrecover while generally allowing councils to set fees that reflect their costs.

### B4.4.3 Multicriteria analysis

As set out above, the two options are assessed against the following criteria on a scale between 1 (lowest score) and 5 (highest score).

**Support Victoria’s building objectives** – Both options score equally well in relation to supporting Victoria’s building objectives as both provide a basis for certainty regarding fees, support improved health and safety objectives and avoid any unnecessarily inhibiting building investment and activity.

**Optimal use of resources** – Option 2 scores well in relation to optimal use of resources as it ensures the costs of building permits to councils are reflected in the fees to the market. This sends the appropriate signals to the market to result in the optimum number of building permits. It has been given a score less than five because it may not reflect the differential costs of providing some services. Option 1 however sends a signal to the market that building permits for works under $5,000 are free, and this distorts the behaviour of market participants such that optimal outcomes are not achieved. In addition, this situation creates a potential incentive for builders to manipulate projects to come in under $5,000. For instance, where a project is split into two parts both around $4,000, this creates additional work for all parties involved. Therefore Option 1 only scores three out of five.

**Cost efficiency** – Costs are based on only efficient costs.

**Equity** – Option 2 scores higher in relation to equity as it ensures that all industry participants are fully paying for the costs councils incur in relation to their building permits, assuming the cost estimates are accurate. It has been given a score less than five because of the uncertainty about whether the available cost data represent the true relative costs of different processes. However, it avoids the crosssubsidisation that is present under Option 1, shown in **Table 1,** where revenue is both above and below the level of costs for different fees.

**Simplicity** – Option 2 scores higher for simplicity as the same cost is applied irrespective of the cost of works.

Table 20: Multicriteria analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type** |  | **Option 1** |  | **Option 2** |  |
|  | Weighting | Score | Weighted score | Score | Weighted score |
| Support Victoria’s building objectives | 20% | 5 | 1.0 | 5 | 1.0 |
| Optimal use of resources | 20% | 3 | 0.6 | 4 | 0.8 |
| Cost efficiency | 20% | 5 | 1.0 | 5 | 1.0 |
| Equity | 20% | 2 | 0.4 | 4 | 0.8 |
| Simplicity | 20% | 4 | 0.8 | 5 | 1.0 |
| TOTAL |  |  | 3.8 |  | 4.6 |

As demonstrated in the multicriteria analysis above, Option 2 is the preferred option.

# B5 Other topics

#### Bushfire safety

Victoria is one of the most bushfire-prone areas in the world, posing considerable risks to life and property in some areas of the state. The Regulations aid in the identification of bushfire-prone areas and set standards for construction of certain types of buildings.

It may be argued that it is possible for individuals to determine their bushfire risk and build appropriately in the absence of the Regulations. However, without a regulatory framework to support this, it is likely that the costs to individuals of doing so would increase, while it could be inferred that there would be a simultaneous reduction in people constructing buildings to the appropriate standards. This would likely lead to an increase in the risk of damage to property, and loss of life from bushfires.

The Regulations deal with matters relating to building safely in bushfire-prone areas. Some of these Regulations are necessary to ensure national building standards under the BCA can be imposed while others were introduced to respond to specific issues that arose in the aftermath of the Black Saturday bushfires of 2009.

The department’s preferred option is to substantively remake these Regulations and group them together in the proposed Regulations. Proposed changes to the building permit process in relation to information about bushfire matters are discussed in Chapter B1.1 Building permit requirements.

#### Constructing residential dwellings in bushfire zones – regs 810–812

The code imposes construction standards for certain buildings in designated bushfire-prone areas. According to the code [[261]](#footnote-262) a ‘designated bushfire-prone area’ refers to land that has been designated under a power of legislation as being subject, or likely to be subject, to bushfires.

Current reg 810 gives effect to this by enabling the Minister for Planning to designate areas of land subject, or likely to be subject, to bushfires. This Regulation also requires the Minister to prepare a map that describes all areas designated as bushfire-prone and sets out how this map is to be made available to the public.

Current reg 811 requires that if a building is to be constructed in a bushfire-prone area, any ‘bushfire attack level’(BAL)[[262]](#footnote-263) specified either in a planning scheme or site assessment for a planning permit must be accepted by the building surveyor for the purposes of determining applicable construction requirements. Hence, it removes any discretion with respect to the assessment of the BAL of an allotment.

Current reg 812 imposes additional bushfire construction requirements for residential buildings and buildings likely to be used by vulnerable persons, being hospitals, schools, aged care centres and the like (together, ‘specific-use, bushfire-protected buildings’). Where these buildings are to be constructed in a bushfire-prone area and a building surveyor has determined that the BAL is low, the building must nevertheless be constructed to a BAL of 12.5 to better withstand ember attack.[[263]](#footnote-264) In this way, reg 812 effectively modifies what is required under the code by imposing bushfire construction requirements on specific-use, bushfire-protected buildings and by setting a minimum standard for construction for all new buildings and extensions in bushfire-prone areas.

Current reg 810 was introduced to give effect to a recommendation of the Victorian Bushfire Royal Commission which related to the identification and mapping of bushfire-prone areas for the purposes of planning and building controls. The creation and dissemination of information that identifies bushfire-prone areas allows people to be aware of whether their property is in such an area and as a result whether there is a need to build to certain construction standards. Regs 811 and 812 were also introduced to give effect to the commission's recommendations. These Regulations ensure construction standards can be implemented in bushfire-prone areas. The requirement to meet a minimum of BAL12.5 will impose an additional cost of about $5,000 per building permit. As the BAL rating increase, so do the costs of constructing a residential building in a bushfire-prone area. The benefits of BAL 12.5 is that it protects a building from ember attack, and as the BAL rating increases so do construction requirements, to protect against the increased level of radiant heat to which the building may be vulnerable.

Work undertaken for the department, based on building data from 2011–15, suggests the annualised aggregate cost of the requirement to meet minimum BAL 12.5 is about $800,000 a year. This figure varies significantly from year to year depending on the number and type of buildings constructed and/or altered. For example, meeting the requirements could increase construction costs by up to 1% and likely higher for buildings such as kindergartens and childcare centres and lowest for private hospitals.*[[264]](#footnote-265)* Moreover, the cost for significantly modified buildings could be two to three times higher than for existing buildings.

The department considers the average aggregate estimate is broadly representative of the real average annual costs over the next 10 years, because it does not expect the number of buildings or the cost per building (in real terms) to change significantly over the life of the Regulations.

The department considers the benefits of the requirement in Victoria are likely to outweigh the costs because research shows that ember attacks account for most loss of and damage to buildings that may not be in the path of the bushfire. Ignition through windborne embers is the most common way in which buildings are destroyed by bushfire and the threat from embers lasts much longer than the threat from the other two bushfire ignition mechanisms, flame or radiant heat. Burning debris or embers can ignite a building through direct contact, igniting combustible gases, entering through small gaps in the building structure or igniting something near the building.

It is clear from the devastating impacts of previous bushfires in Victoria (such as Black Saturday, Ash Wednesday and the recent Wye River fire) that bushfires pose a significant risk to both buildings and their occupants.

##### Water supply for firefighting and access for emergency vehicles – regs 808, 809 and 309 A

Current reg 808 imposes a requirement (and standards) for providing water supply for firefighting purposes before a building permit may be issued. Current reg 809 imposes a requirement (and standards) for providing space for emergency vehicle access before a building permit may be issued.

Current regs 808 and 809 only apply to the construction of buildings that were rebuilt to replace homes (being houses or those prescribed as Class 1A houses under the code) lost during the 2009 bushfires which are in certain areas and which do not require a planning permit.

A building surveyor must refuse to issue a building permit if it does not meet the requirements of regs 808 or 809, unless a report and consent has been obtained under reg 309A.

Current regs 808 and 809 fill a gap that would otherwise exist as a consequence of the decision to exempt owners seeking to rebuild after the Black Saturday bushfires from obtaining a planning permit which would typically trigger the need to comply with conditions around water supply for firefighting and emergency vehicle access.[[265]](#footnote-266)

Current reg 309A then creates some flexibility in respect of complying with the Regulations while simultaneously ensuring that adequate bushfire safety measures are achieved despite noncompliance with the standards set out in the Regulations.

While over time these Regulation are likely to become increasingly redundant, for the time being they are still necessary as not all owners impacted by the fires have rebuilt and the exemption from the requirement to obtain a planning permit is still in place.

While it is possible that individuals rebuilding after the Black Saturday bushfires would put in place appropriate measures for water supply for firefighting and for emergency vehicle access in the absence of these Regulations, without the Regulations there would be no compulsion to do so. It could be inferred that this would likely lead to an increase in the risk of damage to property and loss of life from bushfire.

##### Private bushfire shelters

Current reg 1222 imposes maintenance obligations in respect of private bushfire shelters including maintenance of paths of travel from the Class 1 building associated with the shelter to the shelter itself. The presence of regulatory offences is intended to ensure a more-robust maintenance regime in Victoria, to increase the likelihood that a private bushfire shelter is fit-for-purpose after installation. Reg 1221 limits the application of this Regulation to a Class 10c building associated with a Class 1 building.

Current reg 115 varies the code so private bushfire shelter building requirements apply not only to shelters associated with Class 1a dwellings (private houses) as required by the BCA, but all Class 1 buildings (boarding houses and the like , as well as private houses). This approach has been taken as there are many small bed and breakfasts, guest houses and boarding houses in rural and regional Victoria. The owners of these properties may also live in them and wish to construct a private bushfire shelter for their own use and as last resort protection for guests. This is because there is a high use of short-stay residential properties in high-risk, bushfire-prone areas in Victoria, especially along the Great Ocean Road and at Wilsons Promontory. These may also be areas that are not easy to leave, to escape a bushfire fire safely.

Acknowledging the expertise of the fire authorities, a report and consent from a chief officer is currently required via reg 309 with respect to fire safety matters that do not meet the deemed-to-satisfy provisions of the BCA. An option considered by the department is whether the report and consent of the fire authorities should be required for a private bushfire shelter to address information asymmetry, so that the fire authorities can identify where shelters are located for monitoring and enforcement purposes and to provide aid or check on occupants' wellbeing after a bushfire. Currently, fire authorities will incur significant search costs when trying to determine the number of shelters being constructed and where they are located.

Current reg 113A sets out requirements for designing private bushfire shelter performance requirements and solutions, as set out under the code. It modifies the assessment process for approving performance solutions for private bushfire shelter performance requirements under the code by defining what expert judgement is needed to approve a performance solution.

Reg 113A controls how a building surveyor can determine whether the private bushfire shelter meets performance requirements. This provides a level of quality assurance by ensuring their designs are approved by persons with the appropriate expertise.

Current regs 1221, 1222 and 115 ensure private bushfire shelters are constructed and maintained appropriately. This is important given the function shelters serve and the consequences of them failing to fulfil that function.

The department has identified potential options for change to the Regulation of private bushfire shelters and invites responses to the consultation questions below.

**Consultation questions**

Should people only be able to construct accredited private bushfire shelters?

What are the costs of maintaining a private bushfire shelter? Should the maintenance requirements be retained?

Where are private bushfire shelters being built? Should the report and consent of a chief officer be required to build a private bushfire shelter?

##### Accreditation

Reg 113A currently permits a building surveyor to rely on a certificate from a fire safety engineer to determine that a private bushfire shelter complies with BCA standards. The department seeks evidence as to how often this occurs in practice. Preliminary research by the department suggests most private bushfire shelters being sold on the market have been accredited through accreditation schemes.

Limiting allowable shelters to those that have been accredited may ensure some manner of consistency of private bushfire shelters. It may also ensure owners will be better-informed about what to expect from their private bushfire shelter, but it may also increase costs.

##### Maintenance

Preliminary research by the department indicates it may not be necessary to require maintenance Regulations because:

* owners are highly motivated to maintain their shelter once it is installed
* other jurisdictions that provide for the installation of a shelter (SA, NSW ) do not require maintenance of a shelter in their equivalent legislation

known manufacturers provide purchasers with a maintenance manual and ongoing support by providing a service where they will come and inspect the shelter at the request of the property owner.

##### Report and consent

Acknowledging the expertise of the fire authorities, a report and consent from a chief officer is currently required via reg 309 with respect to fire safety matters that do not meet the deemed-to-satisfy provisions of the BCA.

An option considered by the department is whether the report and consent of the fire authorities should be required for a private bushfire shelter. Such a requirement would increase compliance costs for property owners and the administrative burden for the fire authorities, particularly CFA. However, such a requirement is also expected to provide some consumer protection for purchasers. The fire authorities are well-placed to assess and advise about the suitability of a private bushfire shelter as part of an overall bushfire management plan for a property.

There are currently no deemed-to-satisfy provisions with respect to private bushfire shelters. This means that if this option were implemented, a report and consent would always required for a private bushfire shelter.

Planning laws currently enable private bushfire shelters to be used to offset lower bushfire construction standards for a home in a bushfire management overlay. They also enable a council to refer a planning permit application to the relevant fire authority, where the application is to develop land with a dwelling in a bushfire management overlay.

#### Approved forms

In the proposed Regulations, various information is to be provided in a form approved by VBA. These Regulations specify VBA can make approved forms in relation to a:

* building permit levy return
* building work commencement, completion or permit lapse return
* certificate of compliance design

certificate of compliance inspection.

The forms are intended to allow practitioners to address the information provision requirements of the Act and Regulations and to do so consistently. The underlying objective of using approved forms is to address the potential for data creep in terms of asking for an increased amount of data over time. This helps ensure that permit requirements under the Act are streamlined, leading to savings of time and money for practitioners conforming with regulatory requirements.

The forms also enable VBA to receive information in a format that facilitates its monitoring and enforcement duties. This is particularly true for forms relating to the building permit levy return, the requirements of which are set out in pt 12 div 2 sub-div 4 of the Act. The determination of a building permit levy to be paid requires some calculations, and the receipt of data in a format preferred by VBA helps it process the information.

The cost of approved forms is expected to be insignificant as the underlying requirement for the information has been included in other chapters of the RIS.

#### Combined allotments

The Regulations allow a MBS to determine that two or more contiguous allotments be treated as one allotment for the purpose of the Regulations. This Regulation reduces building costs for owners (for example, fire-source features required on intervening boundaries no longer apply where two allotments are combined) and reduces administrative burden: an owner can apply for one building permit instead of two.

The proposed Regulations revise the current requirement by setting out a process to determine whether allotments may be combined. The intent is not to introduce substantive changes but to provide clarity about what steps need to be taken. Under the proposed Regulations, an applicant will be required to use the prescribed form and provide the specified information. Currently, applications are made using the forms available from councils' websites.

As the department considers that no substantive costs are imposed by these Regulations, it is not subject to a detailed cost-benefit analysis for the purpose of the RIS.

#### Exemptions for buildings and building work

The Regulations set out instances in which certain buildings and building work are exempt from particular requirements including obtaining a permit, complying with the Regulations and paying permit application fees. By definition, these exemptions reduce the scope of the Regulations and therefore do not apply a significant burden on consumers, practitioners or other industry stakeholders.

To the extent that exemptions reduce the costs and benefits of particular Regulations, these will be accounted for in the relevant policy topic.

As regards building work exemptions not covered elsewhere, the department’s preferred option is to retain the current exemptions, with minor changes and updated legislative references.

Initial stakeholder consultations did not raise major issues with the current exemptions listed in pt 18 div 1 sch 8. In response to this feedback, the following minor changes are proposed in the draft Regulations:

* modify the exemption for freestanding Class 10a buildings to cover some Class 10a buildings which are not pertinent to other buildings and to ensure that siting requirements apply

clarify the exemption in relation to signs.

**Consultation questions**

Some matters were raised by stakeholders in relation to exemptions. However, in the absence of further evidence, the department has not formed a position and seeks further information on the following matters.

**Shipping containers**

Noting the planning laws in place, how are shipping containers used as freestanding buildings for storage currently treated by building surveyors and councils?

**Decks**

If a building permit exemption were introduced for decks, what dimensions or restrictions would be appropriate, having regard to safety issues? Stakeholders suggested a range of dimensions, with suggested heights ranging from under 0.3 m to under 1 m and floor areas ranging from less than 20 m2 to no floor area limit at all. What is appropriate and why?

**Retaining walls used as landscaping features**

The current building permit exemption (item 15 sch 8) applies to retaining walls less than 1 m in height not associated with other building work or protection of adjoining property. How many permits annually are issued for standalone retaining walls greater than 1 m? How are such walls currently treated and have there been any issues in relation to them?

**Low-value building work**

For some minor building work, the cost of administration (that is, building permit costs and the like) may form a large percentage of the cost of the building work. The department has received feedback from some stakeholders suggesting that permit exemptions be introduced for building work below a certain cost threshold.

The Building Regulations 1994 included a building permit exemption for building work less than $5,000. This exemption was removed from the current Regulations due to the difficulties associated with its application, and the exemptions were reformulated to target types of building work which were low-risk.

What type of building work is commonly considered low-cost and low-risk and should therefore form the basis of an exemption from permit or other requirements? Is there any building work that should not be exempted despite the cost of that work? Why? If a cost threshold were to be re-introduced, to what scopes of work should it apply and why?

#### Owner-builder requirements

Genuine owner-builders are allowed to perform domestic building work on their own land in Victoria provided the building work is:

* consistent with safety considerations
* undertaken in accordance with minimum building standards and other applicable laws and Regulations

not undertaken to carry on the business of building.

The intent of the legislation relating to owner-builders is to limit the ability of unregistered builders to operate as owner-builders for work that is in fact a business undertaking.

The current Regulations for owner-builders are administrative only, with all substantive compliance requirements contained in the Act. These administrative requirements include prescribed information for an application for a certificate of consent to carry out work as an owner-builder (issued by VBA), the prescribed application fee, information to be contained in the certificate of consent and information required to be retained by VBA.

New Regulations for owner-builders were introduced in 2016 to reflect changes introduced by the *Building Legislation Amendment (Consumer Protection) Act 2016*. These included:

* requiring applications for a certificate of consent to be made in an approved form
* updating information to be included in and accompany an application for a certificate of consent including amending the time allowable between owner-builder jobs from the current three years to five years
* updating information to be included in a certificate of consent
* requiring additional information to accompany an application for a certificate of consent where land is held in trust or owned by a body corporate
* prescribing the duties and responsibilities of owner-builder applicants as the basis for VBA-administered knowledge requirements

introducing the requirement for VBA to keep a register of certificates of consent.

As all requirements are administrative in nature and apply to a relative small population (7,730 certificates of consent were issued in 2013–14), the department did not consider a detailed analysis of costs and benefits was necessary.

#### Building product accreditation

Building product accreditation refers to a means of verifying a construction method, design component or system connected with building work (collectively termed a ‘building product’) satisfies relevant performance requirements of the BCA.

The Victorian building control system recognises accreditation by certain bodies provides acceptable proof of compliance of a building product with the BCA.[[266]](#footnote-267) These bodies are BRAC and third-party certification bodies approved by the CodeMark scheme managed by the Australian Building Codes Board (the ABCB).

The BRAC is a statutory body established under the Act.[[267]](#footnote-268) Its key functions are to advise the Minister for Planning about draft building Regulations and any other matter required by the Minister, and also to accredit building products.[[268]](#footnote-269) The BRAC consists of representatives of industry, local government, fire authorities and consumers, and a legal representative.[[269]](#footnote-270) Members are primarily selected for their technical knowledge and experience in building and building-related matters.

The CodeMark scheme is managed by the ABCB and the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) accredits certification bodies. These third-party certification bodies are responsible for evaluating applications for accreditation in line with CodeMark Rules, for compliance with the BCA (and relevant state and territory modifications of the BCA).

Evidence of accreditation of a building product by the BRAC is demonstrated by means of a certificate of accreditation.[[270]](#footnote-271) The equivalent evidence of accreditation under the CodeMark scheme is a certificate of conformity. These certificates should contain detail necessary to identify the building product accredited and the scope of the accreditation, being the approved use of the building product, any conditions or restrictions on that use and the specific requirements of the BCA that are satisfied by the product.

Importantly, a building surveyor is prohibited from refusing to approve building work on the ground that any building product used in that building work is unsatisfactory, if the product is accredited by the BRAC or under the CodeMark scheme and complies with that accreditation.

The CodeMark scheme of accreditation is governed by a framework that is independent of the Victorian building regulatory framework. The *CodeMark Scheme Rules* is the governing document of the CodeMark Scheme.[[271]](#footnote-272) It is supported by separate JAS-ANZ procedure documents that are incorporated by reference into the CodeMark rules where appropriate. The only connection between the CodeMark scheme and the Victorian building regulatory framework are provisions in the Act and the current Regulations which recognise this form of accreditation as acceptable evidence of a building product’s compliance with specified requirements of the BCA, for the purposes of approving building work in Victoria.[[272]](#footnote-273)

Conversely, the BRAC building product accreditation scheme is governed by the Regulations and includes administrative requirements for:

* making an application[[273]](#footnote-274)
* setting accreditation fees[[274]](#footnote-275)
* providing for the issue of a certificate of accreditation[[275]](#footnote-276)
* empowering BRAC to revoke accreditation in certain circumstances[[276]](#footnote-277)
* prescribing registration and record-keeping requirements in relation to the accreditation process[[277]](#footnote-278)

making it an offence for BRAC to disclose confidential information provided to it in an application for accreditation and for a person to claim a building product is accredited if a current certificate of accreditation has not been issued for that product.[[278]](#footnote-279)

The department is considering, and is seeking stakeholder feedback about, three options in relation to the accreditation of building products:

Option 1 is to remake current regs 1401 to 1411.

Option 2 is to make minor amendments to the current Regulations:

* update current reg 1402 to reflect the CodeMark product certification scheme, under which a certification body accredited by JAS-ANZ may certify products comply with the BCA for the purposes of s 14 and 15 of the Act
* for ease of reference and clarity, group all Regulations relating to building product accreditation together in the one part of the Regulations[[279]](#footnote-280)
* update information requirements for an application for building product accreditation to reflect other application processes under the Act and Regulations, by prescribing an application form (which is substantially the same as the current BRAC application form) and a power for BRAC to request additional information necessary to accredit a product which was not provided with the initial application
* for transparency and consistency and to ensure accredited building products are used in a manner consistent with the purpose for which they are accredited, strengthen the post-accreditation measures used to communicate the nature, purpose and conditions on which an accreditation has been granted including by:
  + introducing a requirement to insert in a certificate of accreditation the minimum necessary information required to demonstrate accreditation and the basis on which accreditation was granted
  + formalising a list of accredited building products currently on VBA’s website into a register of accredited building products, on which the minimum necessary information required to demonstrate accreditation and the basis on which accreditation was granted is available to the public, to allow verification of accreditation and the purpose and conditions in respect of which an accreditation authorises a building product to be used
  + require a notice of accreditation to be published in the *Victorian Government Gazette*, containing the minimum necessary information to demonstrate accreditation and the basis on which accreditation was granted.

The rationale for these minor amendments is to provide clarity, especially in relation to the CodeMark product certification scheme. The changes also aim to codify the current process to improve the correct completion of applications: BAB often need to ask for further information from applicants. In relation to certificates of accreditation, key pieces of information have been prescribed to ensure consistency in relation to the certificates that are issued and a notice in the Gazette verifies that certification. A process has also been clarified for the holder of a certificate of accreditation to revoke their accreditation.

Option 3 is the provision of new and improved guidance material for the benefit of building practitioners, developers and councils to facilitate the successful implementation of the BRAC building product accreditation system.

Option 2 in conjunction with Option 3 is the department’s preferred option, because it provides more transparency and consistency in respect of communicating to the public that a building product has been accredited by BRAC and communicating the purpose and conditions in respect of which an accreditation authorises a building product to be used. This encourages accredited building products to be used in a manner which is fit-for-purpose, thereby minimising later potential safety and construction issues. The certificate of accreditation is now required to contain prescribed information, which ensures that the scope of the accreditation is clear and transparent. Under the current Regulations, because the information to be recorded on a certificate was not prescribed, the certification was not always clear.

Combining options 1 and 2 equates to a remake of the current Regulations with minor amendments to strengthen the current BRAC accreditation process by making it more transparent. As such, the department’s view is that there will be no significant costs imposed by Option 2 above the current requirements of Option 1. An applicant is already required to complete a form and provide information before an application for accreditation will be decided by BAB. The proposed Regulations codify those requirements to provide greater certainty and clarity in relation to the accreditation process.

#### Existing buildings

The Regulations regulate when an existing building must be bought into compliance with current building standards. The purpose of the Regulations is to ensure current societal expectations of safety, especially in older buildings accessible to the public, are maintained before they are allowed to be occupied.

In Victoria, buildings are considered compliant if they complied with Regulations at the time of construction, unless the building is subject to change. Over time, building components gradually fatigue, exceeding their useful lifespan. While this does not generally result in catastrophic failure (that is, collapse) and may never result in any noticeable safety consequence, it does over time cause parts of the building to become noncompliant.

The current Regulations apply when an existing building is altered, subdivided or changes use. In these circumstances, the building may be required to be upgraded to meet current building standards. The Regulations specify that the entire building must be upgraded in accordance with current-day standards when:

* an existing building is subdivided into separate sellable lots, requiring each building resulting from the subdivision to comply with the current building standards (see proposed reg 129)
* an alteration of a building meets the quantum specified, which is when the proposed alteration together with any other alterations completed or permitted in the previous three years represent more than half the original volume of the building (see proposed reg 131)

there is a change of use and the building must be upgraded to comply with the new use, because the regulatory standards that apply to buildings are largely determined by use[[280]](#footnote-281)(see proposed reg 127).

There may be times where these requirements are likely to require significant expenditure for limited safety benefits. There may also be cases where retrofitting an existing building to bring it into compliance with current requirements may be higher than the costs of achieving compliance in a new build. Bringing older buildings up to meet today’s fire, structural safety, energy efficiency and accessibility requirements can present a financial burden for building owners. In these circumstances, the building owner always has the option to demolish the building, or a RBS may consent to partial compliance.

The proposed Regulations provide for a RBS to consent to partial compliance when considering specific matters (such as structural adequacy, amenity, health and safety and fire spread). A RBS will usually consent to partial compliance if full compliance will likely require significant expenditure for limited safety or other benefits. This approach accommodates older buildings in the appropriate circumstances. In accordance with the Regulations, a RBS may consent to partial compliance. This decision-making power enables flexibility, where:

* there are other building solutions that can achieve the same outcome

health, safety and amenity aspects of the existing building are not unjustifiably compromised.

While upgrading a building in relation to change of use and subdivisions is straightforward in the proposed Regulations, alterations are regulated differently (volume of building).[[281]](#footnote-282) This is to enable small alterations to be undertaken, however the approach also ensures that that small incremental changes are not undertaken to avoid bring the remainder of the building into compliance with current building standards.

Existing buildings make up the majority of buildings in a city (about 98%) and they are replaced very slowly (about 2% a year).[[282]](#footnote-283) In the absence of these Regulations, building owners are generally not required to upgrade an existing building. If the Regulations are not remade at sunset, there is little incentive for older buildings to be demolished or upgraded to make way for safer, modern buildings. In many cases, if it is deemed economically infeasible to upgrade an older building, it might be best to demolish and replace it. This is because a building may undergo numerous changes or alterations during its lifespan that could impact critical structural components or safety features, increasing occupants' exposure to health and safety risks, which can result in injury or loss of life.

Also, building design (through current standards) seeks to take account of the lifetime stresses and resulting wear on the structure over time, based on the design's working life. The working life varies depending on the type and significance of the structure and the relative ease of maintenance or replacement (of the whole or part) but generally speaking for a building is 50 years.[[283]](#footnote-284)

In parallel to the gradual wear on buildings, building standards are continually evolving to take account of:

* greater understanding of the performance of buildings and their individual components and the reliability of their manufacture
* changes in and improved awareness of climatic factors (such as bushfires, flooding, erosion and salinity)
* technological improvements

changing social expectations including a greater focus on occupant safety (such as loss of life from fire, detrimental health effects of long-term occupation arising from things like light and ventilation, and quality of life outcomes).

The department’s preferred option is therefore to remake the general provisions applying to existing buildings and strengthen the penalties for change-of-use and subdivision offences to provide a further incentive for compliance.

The department notes the degradation of buildings over time and the evolutionary nature of the standards act to make assessment of old buildings against the current performance standards increasingly more complex. Some components of a building can be readily tested or assessed for compliance after construction including components of active systems (such as sprinkler system and lighting) and passive but readily accessible systems (such as glazing and access and egress components), but others are difficult if not impossible to assess (such as structural elements including beams, joists and bearers).

Due to this, the department will evaluate these Regulations and how they are used in practice as part of its midterm evaluation strategy of the proposed Regulations. This will be enabled by improved record-keeping (clarified in the proposed Regulations) and the proposed evidence improvement project.

#### Fire safety requirements in certain existing residential buildings

The Regulations impose retrospective requirements on some building classes in relation to fire safety requirements (such as self-contained smoke alarms, automatic fire sprinkler systems and hardwired smoke alarms). The required date of compliance for these Regulations has passed, and it is therefore assumed that the regulatory burden has already been imposed and absorbed, and any ongoing burden is assumed to be minimal.

These Regulations will no longer be infringement offences. They were retrospective Regulations introduced before the current Regulations and noncompliance with them needs to be treated seriously, either through an emergency order or building order, especially due to the vulnerability of the occupants of these buildings.

#### Building in hazard areas

The Regulations currently enable councils to designate land that is liable to flooding, or on which buildings are likely to be subject to attack by termites, or are likely to be subject to significant snowfalls. Additional building requirements may be triggered for building work in these areas (relating to specific BCA construction standards and requirements) to obtain a report and consent (see Chapter B1.2 Reporting authority approvals).

People moving into a community will not necessarily know where hazard areas are located. Mapping ensures new buildings are built to the appropriate standard to withstand a natural hazard and consumers buying existing buildings are fully aware of all risks with the location.

Recent media attention has highlighted termite attacks on Melbourne homes. The department analysed the situation and concluded a statewide declaration is not necessary. This is because:

* the proposed Regulations retain the ability for councils to declare areas termite-prone

people should consider all parts of Victoria as potentially termite-prone, whether they are or are not declared: cases of termite infestation have occurred due to the presence of vegetation, firewood or older buildings, and individual cases do not necessarily justify an area being declared a termite-risk area.

VBA provides online consumer resources about precautions to minimise the incidence of termite attack on homes and how to identify termite activity. It is important physical barriers or chemical barriers are regularly inspected or maintained so they are effective.

**Consultation question**

Do you have evidence that would support the designation of undeclared termite areas within Victoria?

The department therefore proposes to remake these Regulations with minor structuring revisions.

#### Appeals and reviews

Pt 10 of the Act provides that certain building-related decisions may be reviewed by BAB. These include RBSs' decisions about permit applications and MBSs' decisions about emergency orders. Pt 10 of the Act also enables certain of VBA's decisions to be reviewed by VCAT.

Pt 16 (Appeals and Reviews) of the Regulations supports the operation of pt 10 (BAB and Jurisdiction) of the Act. Pt 16 prescribes the:

* appeals periods during which a decision is stayed
* time limits after which BAB may dismiss an application for an appeal
* fees for referrals and applications to BAB

the waiver or refund of fees in certain circumstances.

These provisions provide certainty as to the finality of decisions and enable BAB to recover costs for the services it provides.

The department is proposing to remake pt 16 of the Regulations with minor changes to improve their clarity and to reflect current practice.

Fee amounts under pt 16 are not proposed to be altered at this stage. A fees review is proposed as part of the department’s midterm evaluation strategy of the proposed Regulations.

# Appendix A: Cost-benefit analysis assumptions and workings

## General assumptions

| Assumption | Value | Source |
| --- | --- | --- |
| Discount rate | 4.0% | Department of Treasury and Finance *Economic evaluation for business cases – Technical guidelines 2013* (http://www.dtf.vic.gov.au/Publications/Investment-planning-and-evaluation-publications/Lifecycle-guidance/Technical-guides) |
| Hourly rate (PBS) | $215 per hour | PBS survey (average response) – hourly rate charged to clients and therefore assumed to be inclusive of oncosts and overheads |
| Hourly rate (administrative tasks) | $50 per hour | MBS survey (average response) – this rate aligns with the hourly rate of general clerical staff published by the ABS (Cat no 6306.0, May 2014) for full-time, non-managerial staff inclusive of overtime ($28.60) multiplied by the overhead and on-cost multiplier (1.75) = $50.05 |
| Value of a statistical life | $4.2 million | *Best Practice Regulation Guidance Note - Value of statistical life* (https://www.dpmc.gov.au/sites/default/files/publications/Value\_of\_Statistical\_Life\_guidance\_note.pdf) |
| Total number of PBSs | 350 | VBA's estimate |
| Total number of MBSs | 74 | VBA's estimate |

## Topic-specific assumptions and workings

### Building permit requirements

#### Option 1 – Remake current Regulations

##### Costs – Option 1

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owners / applicants** | | | |
| Cost of providing copies of building permit applications to RBSs and approved permits to builders | | | |
| Total number of building permits issued in a year | 105,431 | | VBA building permit data 2014–15, available at: http://www.vba.vic.gov.au/a-z-information/VBA-data; building permit data for 2014–15 has been selected as representative of a standard year for application over the period of the Regulations |
| *Multiplied by* |  | |  |
| Time to compile permit information | 4 hours | | PwC consultation with building practitioner, October 2015 (average estimate) |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff |
| **Total (annual)** | **$21.1 million** | |  |
| **Total (NPV over 10 years)** | **$177.9 million** | |  |
| **RBSs** | | | |
| Cost of forwarding levy information to VBA | | | |
| Total number of building surveyors that forward levy information | 350 | | Assumed that the burden largely falls on PBSs as they handle the vast majority of building permit applications |
| *Multiplied by* |  | |  |
| Total time required to prepare information each year | 26.4 hours | | Weighted average of time estimates for PBSs preparing information manually (estimated to be 40% based on consultation with PBSs, taking half a day per month) and those using automated systems (60% of PBSs, estimated to take one hour per month, based on PBS consultations) |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff |
| **Total cost (annual)** | **$462,000** | |  |
| **Total cost (NPV over 10 years)** | **$3.9 million** | |  |
| Total costs | | | |
| **Annual** | **$21.5 million** | | |
| **NPV over 10 years** | **$181.8 million** | | |

#### Option 1.1 – Increase administrative efficiencies

##### Costs (relative to Option 1 – remake the Regulations)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owners / applicants** | | | |
| Reduction in cost to compile hardcopies when submitting applications electronically | | | |
| Total number of building permits issued in a year | 105,431 | | As above |
| *Multiplied by* |  | |  |
| Proportion of building permit applications current submitted electronically | 20–50% | | PwC consultations with PBSs and MBSs, October 2015 |
| Time to print documentation to support a building permit application | 5 minutes | | PwC assumption |
| Number of hardcopies currently required | 3 | | Current Regulations |
| Time saving under current Regulations | 0.66 | | Proposed option (a two-thirds reduction in current costs as only one hardcopy is required) |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff |
| **Total reduction in costs relative to Option 1 (annual)** | **$176,000–$439,000** | |  |
| **Total (NPV over 10 years)** | **$1.5–$3.7 million** | |  |
| Cost description | | Value | Source |
| **Building owners / applicants** | | | |
| Reduction in cost to compile documentation | | | |
| Total number of building permits for which reduced documentation is required | 7,381 | | VBA building permit data 2014–15, work valued at less than $5,000 |
| *Multiplied by* |  | |  |
| Reduction in time to compile documentation | 50% | | PwC assumption |
| Current time to compile documentation | 4 hours | | PwC consultation with building practitioner, October 2015 (average estimate) |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff |
| **Total reduction in costs relative to Option 1 (annual)** | **$738,000** | |  |
| **Total (NPV over 10 years)** | **$6.2 million** | |  |

#### Option 1.2 – Increase informational requirements

##### Costs (Option 1.2 in addition to Option 1)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBS** | | | |
| Cost of additional time to forward information | | | |
| Total number of building surveyors that forward levy information | 350 | | Assumed that the burden largely falls on PBSs as they handle the vast majority of building permit applications |
| *Multiplied by* |  | |  |
| Proportion of RBSs that compile information manually | 40% | | PwC consultations with PBSs, October 2015 |
| Increase in time required to prepare information each year compared to remaking Regulations (hours) | 72 | | PwC consultations with PBSs (October 2015) indicates manual process takes half a day per month currently. Additional information estimated by PwC to increase this by 2.5 times (from 48 hours to 120 hours, an increase of 72 hours) |
| Cost of time associated with the task | $50 per hour | | Consultations with PBSs indicate that this task is generally performed by administrative staff, thus the estimated hourly rate for administrative staff is applied |
| **Total increase in costs relative to Option 1 (annual)** | **$504,000** | |  |
| **Total (NPV over 10 years)** | **$4.3 million** | |  |

### Reporting authority approvals

#### Option 2 – Remake current Regulations

##### Costs (Option 2)

| Cost description | Value | | Source |
| --- | --- | --- | --- |
| **Building owners / applicants** | | | |
| Cost of applying for report and consent | | | |
| Estimated number of report and consent applications made a year | 37,037 | | PwC calculation using survey data provided by the department. Reports and consents to three reporting authorities are considered: councils, the chief officer and service authorities.  For councils, the department collected report and consent data from 19 councils covering the five years between 2009–13. These figures were annualised and two approaches were used to extrapolate this figure across all Victoria. |
|  |  | | The first was using the share of building permits across these 19 councils as a percentage of all Victorian building permits (providing an estimate of 21,969). The second was using the 19 councils' share of total building approvals (by value) in Victoria in 2014–15 (based on ABS 8731.0) which provided an estimate of 19,301. This gave an average figure of 20,635.  For chief officer reports and consents, the department provided a figure of 2,062 a year for MFB and CFA. For service authorities (in relation to building over easements), based on the department's advice it is assumed that 20% of urban properties have a sewer mains easement. This proportion is applied to the total number of metropolitan building permits for 2014–15 (71,703), providing an estimate of 14,341. |
| *Multiplied by* | |  |  |
| Time to compile a report and consent application | 2 hours | | PwC assumption based on consultations with councils and building practitioners. There is significant variance in the time taken depending on the project and nature of the report and consent. |
| Cost of time associated with the task | $215 per hour | | Assume that a professional (such as an architect or draftsperson) is engaged to complete a report and consent application; the average hourly rate estimated for PBSs is used as a proxy for this cost. |
| **Total (annual)** | **$15.9 million** | |  |
| **Total (NPV over 10 years)** | **$134.3 million** | |  |

### Siting

#### Option 3 – Remake current Regulations

##### Costs

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owner / applicant** | | | |
| Reduction in applications by avoiding the need for planning permission | | | |
| Number of single-dwelling building permit applications not requiring planning permission | 28,753 | | ABS (Building work Australia) and MAV Planning Permit Activity Work |
| *Multiplied by* |  | |  |
| Estimated proportion of current building applicants avoiding a planning application that would require planning permission without building Regulations | 10% | | PwC assumption applied as a conservative estimate of likely uplift. Currently, data are not available to determine the number of building permits that would require siting assessment under the planning provisions if building Regulations were not in place. However, the department considers this would likely be more than the 10% assumed, thus the estimate is conservative. |
| Cost of obtaining a planning permit | 7,033 | | *The Cost of Planning and Building Regulation Administered or Imposed at the Local Level in Victoria. Final Report.* Allen Consulting Group 2010.  RIS Attachment A, Planning and Environment (Fees) Regulations 2016 and Subdivision (Fees) Regulations 2016. A development value of between $100,000–$500,000 is assumed for the analysis as this is considered by the department to be most representative of the average value of a single-dwelling development in Victoria. |
| **Total reduction in costs relative to no Regulations** | **$20.2 million** | |  |
| **Total (NPV over 10 years)** | **$170.6 million** | |  |

### Satisfactory completion of building work

#### Option 5 – Remake current Regulations

##### Costs

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBSs** | | | |
| Cost of lapsed permits (with no notice of imminent lapse received) | | | |
| Total number of building permits issued in a year | 105,431 | | As above |
| *Multiplied by* |  | |  |
| Proportion of permit holders that do not currently receive a notice of imminent lapse | 50% | | PwC consultations with PBSs and councils (October 2015) indicated that at present, notices of imminent lapse are already commonly issued by surveyors. As the approach differs from surveyor to surveyor, it is difficult to estimate the true proportion of permit holders that receive this notice. Based on consultations, a conservative assumption of 50% is applied, which likely overstates costs attributable to the Regulations as most RBSs consulted already issue notices. |
| Lapse rate of permit holders that do not receive a notice | 10% | | Based on PwC consultations with PBSs and MBSs (October 2015). PBSs that do not issue notices of imminent lapse reported a lapse rate of 10%. Two MBSs and one PBS that do currently issue notices of imminent lapse average a lapse rate of 6%. |
| Time to compile documents for building permit application | 4 hours | | PwC consultations with building practitioners, October 2015. |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff. |
| **Decrease in cost relative to Option 1 (annual)** | **$1.1 million** | |  |
| **Total (NPV over 10 years)** | **$8.9 million** | |  |
| Cost of lapsed permits (with notice of imminent lapse received) | | | |
| Total number of building permits issued in a year | 105,431 | | As above |
| *Multiplied by* |  | |  |
| Proportion of permit holders that do currently receive a notice of imminent lapse | 50% | | PwC consultations with PBSs and councils (October 2015) indicated that notices of imminent lapse are commonly issued by surveyors. As the approach differs from surveyor to surveyor, it is difficult to estimate with certainty the true proportion of permit holders that receive this notice. Based on consultations, a conservative assumption of 50% is applied, which likely overstates costs attributable to the Regulations as most RBSs consulted already issue notices. |
| Lapse rate of permit holders that do not receive a notice | 6% | | Based on PwC consultations with PBSs and MBSs (October 2015). A PBS that does not issue notices of imminent lapse reported a lapse rate of 10%. Two MBSs and one PBS that currently issue notices of imminent lapse average a lapse rate of 6%. |
| Time to compile documents for a building permit application | 4 hours | | PwC consultation with building practitioner, October 2015. |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff. |
| **Decrease in cost relative to Option 1 (annual)** | **$600,000** | |  |
| **Total (NPV over 10 years)** | **$5.3 million** | |  |

#### Option 5.1 – Address issues surrounding lapsing building permits

##### Costs

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBSs** | | | |
| Cost to issue notices of imminent lapse three months before permit expiries | | | |
| Total number of building permits issued in a year | 105,431 | | As above |
| *Multiplied by* |  | |  |
| Proportion of permits not finalised three months before expiry | 15% | | PwC assumption based on consultations with councils and PBSs (October 2015). |
| Proportion of permit holders that already receive a notice of imminent lapse | 50% | | PwC consultations with PBSs and councils (October 2015) indicated that notices of imminent lapse are commonly issued by surveyors. As the approach differs from surveyor to surveyor, it is difficult to estimate with certainty the true proportion of permit holders that receive this notice. Based on consultations, a conservative assumption of 50% is applied, which likely overstates costs attributable to the Regulations as most RBSs consulted already issue notices. |
| Time required to issue a notice of imminent lapse | 15 minutes | | PwC assumption based on consultations with councils and PBSs (October 2015). |
| Cost of time associated with issuing a notice of imminent lapse | $50 per hour | | Task assumed to be undertaken by administrative staff. |
| **Increase in cost relative to Option 1 (annual)** | **$99,000** | |  |
| **Total cost (NPV over 10 years)** | **$834,000** | |  |
| Avoided cost of re-applications due to fewer lapsed permits | | | |
| Total number of building permits issued in a year | 105,431 | | As above |
| *Multiplied by* |  | |  |
| Proportion of permit holders that do not currently receive a notice of imminent lapse | 50% | | As above |
| Percentage decrease in the permit lapse rate where a notice of imminent lapse is issued | 4% | | Based on PwC consultations with PBSs and MBSs (October 2015). A PBS that does not issue notices of imminent lapse reported a lapse rate of 10%. Two MBSs and one PBS that do currently issue notices of imminent lapse average a lapse rate of 6%. |
| Time to compile documents for a building permit application | 4 hours | | PwC consultation with a building practitioner, October 2015. |
| Cost of time associated with the task | $50 per hour | | Task assumed to be undertaken by administrative staff. |
| **Decrease in cost relative to Option 1 (annual)** | **$422,000** | |  |
| **Total (NPV over 10 years)** | **$3.6 million** | |  |

### Protection work (building site)

#### Option 6 – Remake current Regulations

##### Costs (Option 6)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owner** | | | |
| Cost of serving notices of proposed building work – domestic building permits | | | |
| Total number of domestic building permits (2014–15) | 86,675 | | VBA building permit data 2014–15. |
| *Multiplied by* |  | |  |
| Proportion of permits requiring protection work | 20% | | Average response based on VBA survey of building surveyors (May 2014) and PwC consultations with PBSs (October 2015). |
| Time to prepare and serve notices on adjoining owners (hours) | 1 | | Assumption based on PwC consultations with building practitioners (October 2015). This will vary significantly from project to project based on the number of adjoining owners and the complexity of protection work required. |
| Cost of time associated with the activity | $50 per hour | | Assumed to be undertaken by administrative staff. The cost estimate is based on the expectation that a building surveyor's costs are captured by the estimated time required to issue a notice of determination. |
| **Total (annual)** | **$866,750** | |  |
| **Total (NPV over 10 years)** | **$7.3 million** | |  |
| Cost of serving notices of proposed building work – all other work (for example, commercial, apartments and retail) | | | |
| Total number of building permits (2014–15) | 18,756 | | VBA building permit data 2014–15 (total permits less domestic permits). |
| *Multiplied by* |  | |  |
| Proportion of permits requiring protection work | 40% | | Assumption based on PwC consultations with PBSs (October 2015). |
| Time to prepare and serve notice on adjoining owners | 2 hours | | PwC consultations with building practitioners (October 2015) and an assumption that larger projects will take double the time to consult with adjoining owners due to more-complex work being required, and potentially a larger number of adjoining properties requiring consultation. |
| Cost of time associated with activity | $50 per hour | | Assumed to be undertaken by administrative staff. |
| **Total (annual)** | **$750,200** | |  |
| **Total (NPV over 10 years)** | **$6.3 million** | |  |
| Adjoining owners | | | |
| Cost to respond to notices of proposed building work | | | |
| Total number of adjoining owners required to respond to notice of proposed building work | 64,680 | | PwC assumption that on average two adjoining owners are required to respond to a domestic project requiring protection work, and four adjoining owners are required to respond to all other work. |
| *Multiplied by* |  | |  |
| Time to respond to notice of protection work | 30 minutes | | PwC assumption. This cost is related to the administrative burden imposed on adjoining owners of completing the required form. It is assumed that the time costs incurred by adjoining owners will be to consider the information provided, seek advice and provide a response to the owner. |
| Cost of time associated with activity | $50 per hour | | Assumed cost of time for adjoining owner |
| **Total (annual)** | **$1.6 million** | |  |
| **Total (NPV over 10 years)** | **$13.6 million** | |  |
| **RBS** | | | |
| Cost to issue notices of determination | | | |
| Total number of adjoining owners required to respond to notice of proposed building work | 64,680 | | As above. |
| *Multiplied by* |  | |  |
| Percentage of owners that do not agree to protection work | 25% | | Average response provided in consultation with PBSs and building practitioners (October 2015). |
| Time for RBS to issue notice of decision | 2.5 hours | | Average response provided in consultation with PBSs (October 2015). |
| Cost of time associated with activity | $215 per hour | | Average response provided in consultation with PBSs (October 2015). |
| **Total (annual)** | **$8.7 million** | |  |
| **Total (NPV over 10 years)** | **$73.3 million** | |  |
| Total costs | | | |
| **Annual** | **$11.9 million** | |  |
| **NPV over 10 years** | **$100.6 million** | |  |

### 

### Requirements for inspections, directions, notices and orders

#### Option 7 – Remake current Regulations

##### Costs (Option 7)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBS** | | | |
| Cost to undertake mandatory inspections | | | |
| Number of mandatory inspections undertaken a year in Victoria | 421,724 | | Assumed that all four mandatory inspection stages are undertaken for each building permit issued (105,431). |
| *Multiplied by* |  | |  |
| Average time per mandatory inspection | 1.5 hours | | Average based on PwC consultation with PBSs (October 2015). Inspection times will be higher for more-complex commercial jobs, and final inspections tend to take longer than earlier inspections. |
| Cost of time associated with the task | $215 per hour | | Assumed that the majority of inspections are undertaken by PBSs. |
| Low-cost scenario – proportion of inspections that would still occur in the absence of Regulations | 90% | | PwC assumption. |
| High-cost scenario – proportion of inspections that would still occur in the absence of Regulations | 50% | | PwC assumption. |
| **Total (annual) – low-cost** | **$13.6 million** | |  |
| **Total (annual) – high-cost** | **$68.0 million** | |  |
| **Total (NPV over 10 years) – low-cost** | **$114.7 million** | |  |
| **Total (NPV over 10 years) – high-cost** | **$573.6 million** | |  |
| Cost to write up building notices | | | |
| Number of building notices issued a year | 9,241 | | 2011 Pulse survey of building surveyors provided by the department to PwC. PwC calculations and assumptions were applied to extrapolate data across all RBSs. |
| *Multiplied by* |  | |  |
| Time required to write up a notice | 0.5 hours | | PwC assumption based on a review of the prescribed information required to be included in a notice. |
| Cost of time | $162.30 | | Weighted average of PBSs' and MBSs' time, based on the estimated share of notices issued by each (taken from the Pulse survey). |
| **Total (annual)** | **$750,000** | |  |
| **Total (NPV over 10 years)** | **$6.3 million** | |  |
| Cost to write up building orders | | | |
| Number of building orders issued a year | 4,469 | | 2011 Pulse survey of building surveyors provided by the department to PwC. PwC calculations and assumptions were applied to extrapolate data across all RBSs. |
| *Multiplied by* |  | |  |
| Time required to write up a notice | 0.5 hours | | PwC assumption based on a review of the prescribed information required to be included in a notice. |
| Cost of time | $138 | | Weighted average of PBSs' and MBSs', time based on the estimated share of orders issued by each (taken from the Pulse survey). |
| **Total (annual)** | **$309,000** | |  |
| **Total (NPV over 10 years)** | **$2.6 million** | |  |
| Total costs | | | |
| **Annual (low)** | **$14.7 million** | |  |
| **Annual (high)** | **$69.1 million** | |  |
| **NPV over 10 years (low)** | **$123.7 million** | |  |
| **NPV over 10 years (high)** | **$582.6 million** | |  |

#### Option 7.1 – Addressing common building defects through additional mandatory notification stages

##### Costs (relative to Option 7 – Remake the Regulations)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBS** | | | |
| Cost (in addition to Option 6) from extra mandatory stage for Scope 1 work | | | |
| Number of building permits related to Scope 1 work | 75,910 | | VBA – building permits for new buildings and alterations to existing buildings (Scope 1 work) for all building work (domestic and commercial). |
| *Multiplied by:* |  | |  |
| Number of additional inspection stages | 3 | | Proposed option. |
| Cost per inspection | $322.50 | | Average based on PwC consultations with PBSs (October 2015). Inspection times will be higher for more-complex commercial jobs, and final inspections tend to take longer than earlier inspections. It is assumed the majority of inspections are undertaken by PBSs. |
| **Total increase in costs relative to Option 6 (annual)** | **$73.4 million** | |  |
| **Total (NPV over 10 years)** | **$619.5 million** | |  |

#### Option 7.2 – Limit the mandatory inspection regime to domestic building work only

##### Costs (relative to Option 7 – remake the Regulations)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBS** | | | |
| Reduction in the number of mandatory inspections for nondomestic work | | | |
| Number of nondomestic building permits | 18,756 | | VBA building permit data. The number of non-domestic building permits is estimated by subtracting the number of building permits related to domestic work from the total number of permits. |
| *Multiplied by:* |  | |  |
| Reduction in number of mandatory inspections for nondomestic work | 3 | | Proposed option. |
| Cost per inspection | $322.50 | | Average based on PwC consultations with PBSs (October 2015). Inspection times will be higher for more-complex commercial jobs and final inspections tend to take longer than earlier inspections. It is assumed the majority of inspections are undertaken by PBSs. |
| **Total reduction in costs relative to Option 6 (annual)** | **$18.1 million** | |  |
| **Total (NPV over 10 years)** | **$153.1 million** | |  |

#### Option 7.3 – Provide additional information regarding inspections

##### Costs (relative to Option 7 – Remake the Regulations)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **RBS** | | | |
| Cost (in addition to Option 6) to provide reports to owners | | | |
| Number of mandatory inspections undertaken a year | 421,724 | | VBA data (number of building permits) multiplied by number of mandatory inspections per permit (four). |
| *Multiplied by:* |  | |  |
| Assumed time to issue a report | 5 minutes | | PwC assumption it is a simple administrative task. |
| Cost of time associated with activity ($ / hour) | $50 | | Assumed to be undertaken by administrative staff. |
| **Total increase in costs relative to Option 6 (annual)** | **$1.8 million** | |  |
| **Total (NPV over 10 years)** | **$14.8 million** | |  |

### Occupancy permits and certificates of final inspection

#### Option 8 – Remake current Regulations with amendments

##### Costs (Option 8)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owner / applicant** | | | |
| Cost to compile information for occupancy permit applications | | | |
| Estimated number of occupancy permit applications a year | 57,164 | | VBA building permit data 2014–15, available at: http://www.vba.vic.gov.au/a-z-information/VBA-data.  Estimated by taking the number of building permits finalised in 2014–15 (105,431) and subtracting the permits that do not require an occupancy permit under the Regulations (Class 10 buildings and alterations to Class 1a, 2 and 3 buildings). |
| *Multiplied by* |  | |  |
| Time to compile relevant information for each application | 4 hours | | Based on PwC consultations with building practitioners (October 2015), it is assumed that the time taken to compile occupancy permit information is similar to a building permit application. |
| Cost of time associated with the task | $50 per hour | | Task of compiling documents is largely administrative in nature and therefore assumed to be undertaken by administrative staff. |
| **Total (annual)** | **$11.4 million** | |  |
| **Total (NPV over 10 years)** | **$96.4 million** | |  |

### Places of public entertainment

#### Option 9 – Remake current Regulations

##### Costs (Option 9)

| Cost description | | Value | Source |
| --- | --- | --- | --- |
| **Building owner / applicant** | | | |
| Cost of applications for basic events | | | |
| Number of ‘basic’ PoPE events held a year | 225 | | Extrapolated from PwC consultations with councils (October 2015), using population shares. |
| *Multiplied by* |  | |  |
| Time required to prepare a basic PoPE application | 40 hours | | PwC assumption that one week of full-time work is required to prepare a basic PoPE application, based on consultations with councils in October 2015. |
| Cost of time associated with the task | $50 | | Consultation with councils indicated PoPE applications were generally handled by administrative staff. |
| **Total (annual)** | **$450,000** | |  |
| **Total (NPV over 10 years)** | **$3.8 million** | |  |
| Training costs for basic events | | | |
| Number of basic PoPE events held a year | 225 | | Extrapolated from PwC consultations with councils (October 2015), using population shares |
| *Multiplied by* |  | |  |
| Number of safety officers required to undergo training a year | 2 per event | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment. |
| Financial cost of training | $1,624 | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment, escalated to current dollars. |
| Training time | 27 hours | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment (3 days). |
| Cost of time associated with the task | $50 | | Assumed to be undertaken by volunteers, administrative cost assumption applied. |
| **Total (annual)** | **$610,000** | |  |
| **Total (NPV over 10 years)** | **$5.2 million** | |  |
| Cost of applications for complex events | | | |
| Number of ‘complex’ PoPE events held a year | 35 | | Extrapolated from PwC consultations with councils (October 2015), using population shares. |
| *Multiplied by* |  | |  |
| Time required to prepare a complex PoPE application | 160 hours | | PwC assumption that one month of full-time work is required to prepare a complex PoPE application, based on consultations with councils (October 2015). |
| Cost of time associated with the task | $50 | | Consultations with councils indicated PoPE applications were generally handled by administrative staff. |
| *Divided by* |  | |  |
| Average term of a complex PoPE permit | 4 years | | Consultation with councils indicated for more-complex PoPEs the average term of a permit is around four years, therefore the annual cost is one quarter of the cost. |
| **Total (annual)** | **$70,000** | |  |
| **Total (NPV over 10 years)** | **$590,000** | |  |
| Training costs for complex events | | | |
| Number of ‘complex’ PoPE events held a year | 35 | | Extrapolated from PwC consultations with councils (October 2015), using population shares. |
| *Multiplied by* |  | |  |
| Number of safety officers required to undergo training a year | 2 per event | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment. |
| Financial cost of training | $1,624 | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment, escalated to current dollars. |
| Training time | 27 hours | | Based on assumptions applied to estimate regulatory savings associated with the 2013 PoPE amendment (three days). |
| Cost of time associated with the task | $50 | | Assumed to be undertaken by volunteers, administrative cost assumption applied. |
| **Total (annual)** | **$100,000** | |  |
| **Total (NPV over 10 years)** | **$825,000** | |  |
| Cost of PoPE applications for Class 9b buildings | | | |
| Number of Class 9b PoPE applications submitted a year | 226 | | Based on 2014–15 building permit data, the number of new and change-of-use Class 9b building permits with a floor area in excess of 500 m2 plus Class 9b permits that are missing floor area information with a value of building work in excess of $1 million (assuming projects of this magnitude will have floor area in excess of 500 m2). |
| *Multiplied by* |  | |  |
| Time required to compile documents for a Class 9b PoPE application | 4 hours | | Assumed that time required for a building PoPE will be similar to the time to prepare documents for an occupancy permit application. |
| Cost of time associated with the task | $50 | | Consultations with MBSs indicated that preparing a PoPE application does not require specialist skills and can be undertaken by administrative staff. |
| **Total (annual)** | **$45,000** | |  |
| **Total (NPV over 10 years)** | **$380,000** | |  |
| Cost of PoPE applications for temporary structures | | | |
| Number of temporary structure applications submitted a year | 95 | | VBA internal data, average of temporary structure applications over the past five years. |
| *Multiplied by* |  | |  |
| Time required to compile documents for a Class 9b PoPE application | 4 hours | | Assuming a prescribed temporary structure application will incur similar time costs as an occupancy permit application. |
| Cost of time associated with the task | $50 | | Assumed to be undertaken by administrative staff. |
| **Total (annual)** | **$19,000** | |  |
| **Total (NPV over 10 years)** | **$160,000** | |  |
| Total costs | | | |
| **Annual** | **$1.3 million** | |  |
| **NPV over 10 years** | **$10.9 million** | |  |

#### Option 9.1 – Reduce scope of Regulations to buildings and structures only

##### Benefits (Option 9.1)

| Benefit description | | Value | Source |
| --- | --- | --- | --- |
| **Applicant** | | | |
| Reduction in applications in relation to PoPEs for events | | | |
| Current application costs avoided in relation to simple events | $1.1 million | | Calculations for Option 9. |
| *Plus* |  | |  |
| Current application costs avoided in relation to complex events | 170,000 | | Calculation for Option 9. |
| **Total (annual)** | **$1.2 million** | |  |
| **Total (NPV over 10 years)** | **$10.4 million** | |  |

### Essential safety measures

#### Estimated existing building stock

| Building class | Estimated building stock | Source |
| --- | --- | --- |
| Class 1b (boarding houses not exceeding 300 m2 with less than 12 persons) | 313 | *Yellow Pages* search for accommodation homes and hostels in Victoria |
| Class 2 (apartment buildings) | 3,868 | Number of apartment dwellings in 4+ storey buildings approved between July 1991 (beginning of series) and September 2015 (based on ABS 8731.0 – Building Approvals, Australia), divided by the average number of dwellings per new Class 2 building permit (based on VBA building permit data between 2009–15). |
| Class 3 (hostels, hotels, motels, backpackers) | 814 | ABS 8635.0 – Tourist Accommodation, Australia – number of hotels, motels and serviced apartment buildings with 15 or more rooms in Victoria. |
| Class 5 (office buildings) | 27,579 | Davis Langdon Australia 2013, *The Next Wave Retrofitting Victoria’s Office Buildings*, p.4. Figure from 2010 extrapolated to estimate 2015 figure based on assumption of 2.2% growth in new buildings per year (based on VBA building permit data for new Class 5 buildings). |
| Class 6 (retail buildings) | 23,869 | Assumption applied that the same relationship between existing building stock and new buildings (taken from VBA permit data) exists as for office buildings. |
| Class 7a (car parks) | 273 | *Yellow Pages* search of car park listings in Victoria. |
| Class 7b (storage and wholesalers buildings) | 339 | *Yellow Pages* search of warehouses in Victoria. |
| Class 8 (industrial buildings) | 13,639 | Assumption applied that the same relationship between existing building stock and new buildings (taken from VBA permit data) exists as for office buildings. |
| Class 9a (hospitals) | 316 | Australian Institute of Health and Welfare 2015, *Hospital resources 2013–14*, p 9. |
| Class 9b (schools / child care / kindergartens) | 4,441 | Department of Education and Training (Victoria), Statistics for Victorian schools and Early Childhood Services. |
| Class 9c (aged care) | 943 | Average of two Victorian aged care facility databases: agedcareonline.com.au and agedcareguide.com.au |

#### Estimated ESM maintenance costs by class of building

| Building class | Estimated annual ESM maintenance costs | Source |
| --- | --- | --- |
| Class 1b (boarding houses not exceeding 300 m2 with less than 12 persons) | $1,500–$2,000 | PwC assumption that Class 1b costs are half that of Class 3b due to the smaller scale of buildings. |
| Class 2 (apartment buildings) | $3,230–$5,730 | Assume the same costs as those applied to Class 5 buildings. A high degree of uncertainty is applied to the estimate as costs will vary significantly from building to building based on a range of factors including the size and age of the building. |
| Class 3 (hostels, hotels, motels, backpackers) | $3,000–$4,500 | Estimate after consultation with an ESM contractor. The high range represents the ESM contractor's estimate. The low range represents a 50% downward adjustment to reflect the contractor's feedback on average industry costs.[[284]](#footnote-285) |
| Class 5 (office buildings) | $3,230–$5,730 | See next section for detailed calculations. |
| Class 6 (retail buildings) | $3,000–$4,500 | The ESM contractor consulted noted ESM costs for Class 6 buildings vary significantly depending on the building type (for example, small retailer vs large metropolitan shopping centre). A simplifying assumption is made that costs are similar to Class 3 buildings. |
| Class 7a (car parks) | $1,667–$2,500 | PwC assumed that Class 7 ESM costs are comparable to Class 8 costs. |
| Class 7b (storage and wholesalers buildings) | $1,667–$2,500 | PwC assumed that Class 7 ESM costs are comparable to Class 8 costs. |
| Class 8 (industrial buildings) | $1,667–$2,500 | Estimate after consultation with an ESM contractor. The high range represents the ESM contractor's estimate. The low range represents a 50% downward adjustment to reflect the contractor's feedback on average industry costs. |
| Class 9a (hospitals) | $45,781–$68,670 | Estimate after consultation with an ESM contractor. The high range is the weighted average of a public hospital estimate of $100,000 and a private hospital estimate of $40,000. The low range represents a 50% downward adjustment to reflect the contractor's feedback on average industry costs. |
| Class 9b (schools / child care / kindergartens) | $3,333–$5,000 | Estimate after consultation with an ESM contractor. The high range represents the ESM contractor's estimate. The low range represents a 50% downward adjustment to reflect the contractor's feedback on average industry costs. |
| Class 9c (aged care) | $6,000–$9,000 | Estimate after consultation with an ESM contractor. The high range represents the ESM contractor's estimate. The low range represents a 50% downward adjustment to reflect the contractor's feedback on average industry costs. |

#### Estimating ESM costs for office and apartment buildings (Class 5 and Class 2)

Consultations regarding ESM maintenance found significant variance in costs for ESM maintenance of office and apartment buildings, based on a range of factors including the size and age of the building. For office buildings, costs can vary from $3,000 a year for a smaller building up to $100,000 a year for a major inner-city building.

In order to derive an average cost to apply across all office buildings, a cost per m2 of floor area is estimated for both large and small buildings, shown in the table below.

##### ESM maintenance cost per m2 of floor area calculations

| Building description | Estimated floor area (m2) | Estimated annual cost for ESM maintenance | Estimated maintenance cost /m2 | Sources |
| --- | --- | --- | --- | --- |
| Large office building | 63,500 | 100,000 | $1.60 | Consultation with an ESM contractor provided an indicative cost of about $100,000 a year for ESM maintenance for a major inner-city building. The average of eight major inner-city building floor areas is used as an estimate for a major inner-city building.[[285]](#footnote-286) |
| Small office building | 243 | 3,000 | $12.40 | Consultation with an ESM contractor provided an indicative estimate for a small office building of $3,000 a year. The average floor area for an office building in regional Victoria is used as an indicative estimate of the floor area of a small office building.[[286]](#footnote-287) |

This provides a range of costs between $1.60–$12.40 per m2 of floor area. The average of this figure ($7.00/m2) is used as the lower bound[[287]](#footnote-288) and multiplied by the average floor area for office buildings in Victoria (464 m2) to provide an average cost of $3,230 per building. For the upper bound estimate, the cost per m2 of floor area for a small building ($12.40) is applied to the average floor area for an office building, resulting in an average cost of $5,730 per building.

While it is acknowledged there may be differences between Class 5 and Class 2 buildings in terms of ESM costs incurred, given data limitations an assumption is applied that costs are comparable.

#### Option 10 – Remake current Regulations

##### Costs (Option 10)

| Building class | Number of buildings | Cost of ESM maintenance a year ($) | Costs if all buildings were to comply ($m) | Proportion of full costs incurred[[288]](#footnote-289) | Total costs incurred ($M) |
| --- | --- | --- | --- | --- | --- |
| Class 1b | 313 | $1,500–$2,000 | 0.5–0.7 | 22.38% | 0.1–0.2 |
| Class 2 | 3,868 | $3,230–$5,730 | 12.5–22.2 | 22.38% | 2.8–5.0 |
| Class 3 | 814 | $3,000–$4,500 | 2.4–3.7 | 22.38% | 0.5–0.8 |
| Class 5 | 27,579 | $3,230–$5,730 | 89.1–158.0 | 22.38% | 19.9–35.4 |
| Class 6 | 23,869 | $3,000–$4,500 | 71.6–107.4 | 22.38% | 16.0–24.0 |
| Class 7a | 273 | $1,667–$2,500 | 0.5–0.7 | 22.38% | 0.1–0.2 |
| Class 7b | 339 | $1,667–$2,500 | 0.6–0.8 | 22.38% | 0.1–0.2 |
| Class 8 | 13,639 | $1,667–$2,500 | 22.7–34.1 | 22.38% | 5.1–7.6 |
| Class 9a | 316 | $45,781–$68,670 | 14.5–21.7 | 22.38% | 3.2–4.9 |
| Class 9b | 4,441 | $3,333–$5,000 | 14.8–22.2 | 22.38% | 3.3–5.0 |
| Class 9c | 943 | $6,000–$9,000 | 5.7–8.5 | 22.38% | 1.3–1.9 |
| **Total** | **76,394** |  | **234.8–380.0** | **22.38%** | **52.4–85.2** |

Note that an assumption is applied that 50% of owners would still complete ESM maintenance in the absence of Regulations, thus the costs associated with the regulatory burden of ESM maintenance are estimated to be between $26.3–$42.5 million a year, or $221.5–$358.6 million NPV over 10 years.

Assumptions to calculate the cost of reporting:

* the number of building owners required to comply with ESM reporting requirements: 76,394
* *multiplied by:*
  + time required to complete reporting: 2 hours[[289]](#footnote-290)
  + cost of time associated with reporting requirements: $50 per hour[[290]](#footnote-291)
  + current level of compliance with reporting requirements: 12%.[[291]](#footnote-292)

This produces a cost of reporting of $917,000 a year, or $7.7 million NPV over 10 years.

Total costs associated with Option 10 are estimated to be between $27.2–$43.4 million a year, or $229.3–$366.3 million NPV over 10 years.

#### Option 10.1 – Improve drafting and introduce approved forms for an annual report and maintenance determination

The costs of maintaining ESMs are assumed to be the same as under Option 10 - Remaking the Regulations.

There is assumed to be a reduction in reporting costs resulting from the introduction of a prescribed form that clearly sets out reporting requirements. The costs of reporting are estimated to be:

* the number of building owners required to comply with ESM reporting requirements: 76,394
* *multiplied by:*
  + time required to complete reporting with a prescribed form: between 1–1.8 hours[[292]](#footnote-293)
  + cost of time associated with reporting requirements: $50 per hour
  + current level of compliance with reporting requirements: 12%.[[293]](#footnote-294)

This produces a cost of reporting between $460,000–$830,000 a year, or $3.9–$7.0 million NPV over 10 years.

Total costs associated with Option 10.1 are estimated between $26.7–$43.3 million a year, or $225.4–$365.5 million NPV over 10 years.

#### Option 10.2 – Introduce a standalone maintenance schedule and display requirements

##### Costs (Option 10.2)

The one-off cost of engaging a building surveyor to produce a maintenance schedule is estimated by:

* the number of building owners required to obtain a maintenance schedule: 76,394[[294]](#footnote-295)
* *multiplied by:*
  + time required for a building surveyor to produce a schedule: 4.65 hours[[295]](#footnote-296)
  + cost of time associated with activity: $215 per hour.[[296]](#footnote-297)

This produces a one-off cost estimate of $76.4 million.

Total costs associated with producing and forwarding a maintenance schedule are estimated at $76.4 million (or $9.1 million NPV over 10 years).

To provide an illustrative estimate of costs associated with higher compliance, we assume:

* full compliance with maintenance obligations increases by 1%–10.1%
* partial compliance with maintenance obligations increases by 1%–33.3%

Reporting compliance increases by 1%–12.12%

This results in total maintenance and reporting costs that are between $500,000–$900,000 higher a year, or $4.5–$7.2 million NPV higher over 10 years.

### Swimming pool barriers

#### Total pools/spas

| Period | Census and permit data[[297]](#footnote-298) | Source |
| --- | --- | --- |
| Before 1991 | 90,000 | It is very difficult to determine how many pre-1991 swimming pools and spas have upgraded to the current Regulations and installed a compliant barrier but the department is aware there is a proportion of pools from this era that had no barrier or only an internal window and door locks that had been installed a compliant barrier. |
| 1991–2010 | 50,000 | The department relied on ABS data to inform estimates of the population of pools/spas in Victoria for pre-1991 and 1991–2010 pools. |
| 2011–2016 | 30,000[[298]](#footnote-299) | As above. (6 years by 5,000 pools/spas) |
| **Total** | **170,000[[299]](#footnote-300)** |  |

Source: These estimates were based on several sources and the department’s estimates of the most appropriate figures.

#### Weighted costs of barrier upgrades

The full cost of a barrier installation and the removal of an existing fence is estimated to be $4,873.

| Proportion of costs incurred | Pre-1991 pools | 1991–2010 pools |
| --- | --- | --- |
| Full costs incurred | 70% | 20% |
| Partial costs incurred | 20% (partial costs are assumed to range between 20%–50% of full costs) | 70% (partial costs are assumed to range between 10%–25% of full costs) |
| No costs incurred | 10% | 10% |
| **Weighted cost of upgrade** | **$3,606–$3,898** | **$1,316–$1,827** |

It is assumed that all barrier upgrades occur in year one of the analysis.

#### Break-even analysis for remaking the Regulations (Option 11)

A break-even analysis was undertaken to estimate the reduction in drownings and near-drownings required from the Regulations in order for costs to equate with benefits. The key inputs to obtain this break-even analysis were:

* an estimated 1.7 drownings each year of children aged under five in Victorian swimming pools on average

an estimated 13.3 hospital admissions and emergency department presentations of children aged under five each year in Victoria on average, with an estimated 10% resulting in severe neurological deficit and 20% resulting in some form of long-term impairment (an estimated 1.3 and 2.7 incidents each year on average respectively).

The table below summarises the assumptions applied to underpin the break-even analysis. Three compliance scenarios are considered: estimated current compliance, 50% compliance and 80% compliance.

The analysis shows that depending on the level of compliance achieved, the Regulations would need to be responsible for a reduction in drownings and immersion-related injuries of 1.6%– 16.3% a year in order for costs to equate with benefits. Put another way, this is equal to:

* 0.02–0.2 drownings avoided every year
* 0.02–0.15 near-drowning incidents resulting in a severe neurological deficit every year

0.03–0.31 near-drowning incidents resulting in some form of long-term impairment each year.

Given the minor required reduction that these estimates represent, the department considers that benefits associated with current Regulations are likely to outweigh costs.

|  |  |  |  |
| --- | --- | --- | --- |
| Inputs into break-even analysis (annual figures) | Current compliance (estimated 7.8%) | 50% compliance | 80% compliance |
| a. Costs associated with drownings[[300]](#footnote-301) | $7.1 m | $7.1 m | $7.1 m |
| b. Costs associated with severe neurological deficit from near-drownings[[301]](#footnote-302) | $7.8 m | $7.8 m | $7.8 m |
| c. Costs associated with long-term impairment from near-drownings[[302]](#footnote-303) | $8.1 m | $8.1 m | $8.1 m |
| d. Total costs associated with drownings and injuries under current Regulations (a + b + c) | $23.0 m | $23.0 m | $23.0 m |
| e. Downward adjustment to exclude drownings and near-drownings not associated with barriers[[303]](#footnote-304) | 71% | 71% | 71% |
| f. Total costs associated with drownings and injuries under current Regulations (d x e) | $16.5 m | $16.5 m | $16.5 m |
| g. Administrative costs associated with current Regulations | $260,000 | $1.7 m | $2.7 m |
| h. Break-even cost under no Regulations (f + g) | $16.7 m | $18.1 m | $19.1 m |
| i. Percentage reduction in drownings and injuries required from current Regulations to meet break-even point ( (h–f) / f) ) | 1.6% | 10.2% | 16.3% |

#### Estimated costs associated with barrier upgrades (Option 11.1)

| Barrier upgrade costs (NPV, 10 years) | | Expected cost of partial upgrade | |
| --- | --- | --- | --- |
| **Low** | **High** |
| Expected compliance rate | 50% | $195.2 m | $221.1 m |
| 80% | $312.2 m | $353.8 m |

#### Estimated costs associated with barrier maintenance (Option 11.1)

| Expected compliance rate | Total additional maintenance cost (NPV, 10 years) |
| --- | --- |
| 50% | $26.2 m |
| 80% | $42.0 m |

The total costs to implement Option 11.1 are estimated to be between $221.4–$395.8 million NPV over 10 years.

The table below summarises the assumptions applied to estimate the expected benefits associated with barrier upgrades. These estimates differ based on the level of compliance achieved, and the ratio of near-drownings to drownings.

| Input | 50% compliance | | | 80% compliance | | |
| --- | --- | --- | --- | --- | --- | --- |
| Drownings | Severe injury | Ongoing impairment | Drownings | Severe injury | Ongoing impairment |
| a. Number of incidents under current Regulations | 1.7 | 1.3 | 2.7 | 1.7 | 1.3 | 2.7 |
| b. Estimated percentage attributable to noncompliance with latest barrier | 71% | 71% | 71% | 71% | 71% | 71% |
| c. Potential reduction in incidents due to barrier upgrade–full compliance (a x b) | 1.2 | 0.9 | 1.9 | 1.2 | 0.9 | 1.9 |
| d. Estimated compliance rate achieved | 50% | 50% | 50% | 80% | 80% | 80% |
| e. Expected reduction in incidents due to barrier upgrades (c x d) | 0.60 | 0.47 | 0.94 | 0.97 | 0.75 | 1.51 |
| f. Estimated cost associated with incident | $4.2 m | $5.9 m | $3.1 m | $4.2 m | $5.9 m | $3.1 m |
| g. Annual estimated benefit as a result of barrier upgrade (e x f) | $2.5 m | $2.8 m | $2.9 m | $4.1 m | $4.4 m | $4.6 m |

This results in total benefits of between $115.6–$185.0 million NPV over the analysis period.

The estimated costs and benefits are used to calculate the NPV associated with specifying uniform fencing requirements. The resulting values are driven by the following factors:

* the assumed cost of upgrading existing barriers (which affects estimated costs)
* the number of avoided drowning deaths and near-drowning incidents which result in permanent traumatic brain injury and long-term behavioural and learning impairment (which affects estimated benefits)

the assumed compliance rate with barrier upgrade requirements (which affects both costs and benefits)

The table below summarises NPV results under the various assumptions outlined above. This shows that based on quantifiable costs and benefits, the proposed option results in a negative NPV. However, it is important to note that there are additional benefits associated with the Regulations that have not been captured in the analysis, as follows.

* The number of emergency department presentations is estimated from the Victorian Emergency Minimum Dataset which captures presentations to public hospitals with 24-hour emergency departments only. There may be additional presentations to hospitals that do not meet this criteria that have not been captured in the analysis. Therefore the potential number of avoided incidents resulting from the Regulations is likely higher than estimated.
* Cost estimates have been limited to near-drownings where a severe neurological deficit or ongoing impairment is incurred (for 30% of near-drowning incidents). There will still be costs associated with the remaining 70% of incidents (which may potentially be significant) that have not been captured due to data limitations. The value of avoided costs is therefore likely to be higher than estimated.

The analysis has been limited to incidents relating to those under five. While this is the main age group targeted by the Regulations, the department expects that improved barrier standards will also contribute to avoided incidents (at least to some extent) for those five and older.

| Barrier upgrade costs (NPV, 10 years) | | Expected cost of partial upgrade | |
| --- | --- | --- | --- |
| Low | High |
| Expected compliance rate | 50% | -$105.8 | -$131.7 |
| 80% | -$169.2 | -$210.8 |

# Appendix B: Consultation summary

The table below summarises consultations undertaken by PwC as part of the RIS process in order to identify relevant costs and benefits associated with the Regulations. The names and details of private operators that were consulted have been withheld to maintain confidentiality.

Table 21: PwC consultation with building industry stakeholders

| Contact | Position | Date of interview |
| --- | --- | --- |
| City of Greater Dandenong | MBS | 12 October 2015 |
| Glen Eira City Council | MBS | 19 October 2015 |
| City of Stonnington | MBS | 20 October 2015 |
| Hume City Council | MBS | 21 October 2015 |
| Latrobe City Council | MBS | 22 October 2015 |
| Brimbank City Council | MBS | 26 October 2015 |
| Building practitioner #1 | Managing Director | 6 October & 12 October 2015 |
| Building practitioner #2 | Managing Director | 15 October 2015 |
| PBS #1 | Managing Director | 6 October 2015 & 30 November 2015 |
| PBS #2 | Director | 9 October 2015 |
| PBS #3 | Director | 9 October 2015 |
| ESM contractor #1 | Service Manager | September 2015 and 1 December 2015 |
| Swimming pool barrier supplier and installer #1 | Unknown | 2 February 2016 |
| Swimming pool barrier supplier and installer #2 | Unknown | 2 February 2016 |
| Swimming pool barrier supplier and installer #3 | Unknown | 2 February 2016 |
| Swimming pool barrier supplier and installer #4 | Unknown | 7 October 2016 |

# Appendix C: State-specific variations in the National Construction Code

#### Building Code of Australia

The BCA contains technical provisions for the design and construction of buildings and other structures, covering such matters as structure, fire resistance, access and egress, services and equipment, and energy efficiency as well as certain aspects of health and amenity. The BCA is produced and maintained by ABCB on behalf of the Australian Government and State and Territory Governments, and subsequently adopted by each of the States and Territories of Australia.

The ABCB is established by, and operates under the ABCB Intergovernmental Agreement (IGA).[[304]](#footnote-305) In the IGA, States and Territories agreed, via the IGA, to:

* adopt the NCC through their legislation;
* limit any variations in their legislation, as far as practicable; and

take reasonable steps to consolidate all of their mandatory provisions affecting the design, construction and performance of buildings into the consolidated version of the NCC.

#### Adoption of the Building Code of Australia

The BCA has been adopted by each of the States and Territories. Within Victoria, the BCA is called up by reg 109 of the current Regulations. By reason of reg 105 of the current Regulations the Building Code of Australia means and is referred to throughout the Regulations as the BCA.

In reliance of s 8(1)(f) of the *Subordinate Legislation Act 1994*,*[[305]](#footnote-306)* the BCA provisions will not be subject to further analysis in the RIS. S 8(1)(f) allows for an exemption of a proposed statutory rule if the proposed statutory rule is required under a national uniform legislation scheme and an assessment of costs and benefits has been undertaken under that scheme.[[306]](#footnote-307)

The adoption of the BCA in Victoria is part of national uniform legislation scheme (see IGA, in particular Recitals A, B and C)[[307]](#footnote-308) and the costs and benefits of the performance requirements in the BCA are assessed in accordance with cl 6.5 of the IGA. [[308]](#footnote-309)

##### State-specific variations

The IGA acknowledges that there will be legitimate circumstances for variations to occur and commits each party, as far as practicable to:

* Remove variations to the NCC in its legislation; and

Where variations are deemed necessary, that any new variations be subject to a regulatory impact assessment (subject to any other required regulatory impact assessment processes in each State’s jurisdiction) and that all new variations are approved by the relevant Minister.

#### Victorian variations contained in the BCA

Most of the Victorian variations in the NCC were introduced in, or before, 1997. Some were subsequently incorporated in the NCC and adopted in all jurisdictions.

Since 2006, there have only been two Victorian variations added as a result of government policy decisions. These variations are set out below:

* Flood hazards definitions (2013): this is a burden reduction variation, as the NCC definition requires water velocity to be measured. This was assessed by the department as a burden reduction at the time of its inception.

Sprinklers on balconies (2016): this variation seeks to mitigate risks associated with fire spreading vertically in high-rise residential buildings due to unmanaged fuel loads on balconies. This variation is discussed in more detail below.

The energy efficiency amendments from 2005 have been incorporated into the BCA and Plumbing Code of Australia (now called the NCC Volumes One to Three), however due to that variation being interlinked with water efficiency requirements in Victoria and supported by the Plumbing Regulations 2008, that variation will be considered as part of the plumbing sunset project.

The current plumbing Regulations sunset in 2018 and the department have begun engaging with stakeholders on that process.

##### Water and energy efficiency measures

When the 5 Star Building Standard was proposed, a cost-benefit analysis was prepared by covering the choice between solar hot water and rainwater tank. This was followed by the RIS in May 2004 for the Plumbing (Water and Energy Savings) Regulations 2004 covering the solar hot water and rainwater tank components. Those Regulations were in response to two issues:

* increasing water savings to ensure sufficient potable water supply for urban uses; and

increasing energy demand and its economic, social and environmental impacts.

As part of the national harmonisation process for building standards, the 5 Star and later 6 Star[[309]](#footnote-310) requirements were added into all three volumes of NCC series. The NCC was the appropriate legal instrument to use as it is the technical code for both building and plumbing standards. The actual transfer of regulatory requirements from the Regulations to the NCC did not require any further regulatory impact assessment as there was no change to the requirements, rather just the legal instruments used.

##### Sprinklers on balconies

The BCA deemed-to-satisfy provision E1.5 – requires all classes of buildings higher than 25 metres (‘high-rise’ buildings) to be sprinkler protected in accordance with AS 2118.1–1999 Automatic Fire Sprinkler Systems (AS 2118.1–1999). AS 2118.1–1999 exempts covered balconies less than 6 m2 in area or that are less than 2 m deep from the requirement to be sprinkler protected.

Victoria introduced a variation to this requirement in response to recommendations made MFB following a fire at the Lacrosse building in Docklands on 25 November 2014.

This modification resulted in the removal of the exemption, in AS 2118.1–1999, for buildings of Class 2 (building containing two or more sole occupancy units), Class 3 (residential building for long-term or transient living for unrelated persons), Class 4 (sole dwelling in a commercial building), Class 9a (health care building) and Class 9c (aged care building). These buildings were selected because of their residential nature, which increases the risks related to fire safety, and the fact that other classes of buildings are unlikely to have balconies. This requirement is not retrospective.

The variation is designed to mitigate the risks associated with fire spread in high-rise residential buildings due to unmanaged fuel loads, arising from storage of furniture and other flammable goods, on small covered balconies. Although many high-rise residential buildings have internal rules about storage on balconies, in practice these are not effective in preventing such storage from occurring. Therefore, the variation seeks to address the risk by requiring sprinkler protection to be extended to all covered balconies, regardless of size, in buildings that are already required to be sprinkler protected. Factors which the government took into consideration in introducing this variation include:

* the changing of use of balconies for storage of a range of flammable items including tables, chairs, barbeques and air-conditioning appliances. The increased use of balconies as a makeshift storage area was noted in MFB's post-incident analysis report.[[310]](#footnote-311) Increased fuel loads on balconies increase the risk of vertical fire spread with consequent risks for the health and safety of building occupants.
* the changing nature of habitation – there is a significant increase in the proportion of the population moving from detached to apartment living
* the potential risk of injury or death due to fire increases as the number of occupants per unit increases.
* the inability of residential building managers to enter and monitor balconies (maintenance of private spaces) and their inability to control individual behaviour (how they use balconies);
* the number of high-rise residential buildings that have been constructed over the last 10 years and the Victorian Civil and Administrative Tribunal Annual Report 2015/16 notes that over the past two years, there has been an increase in applications relating to high-rise apartment buildings in the Victorian Civil and Administrative Tribunal;[[311]](#footnote-312) and

challenges in evacuating high-rise buildings.

The variation was introduced by the Building and Plumbing (Balcony Sprinkler Protection) Interim Regulations 2015. A RIS was not undertaken at that time because of the perceived urgency to address the identified gap in fire safety in residential settings. Instead, costings were provided to the Premier and to Scrutiny of Acts and Regulations Committee in accordance with ss 9 and 15A of the *Subordinate Legislation Act 1994*.

The department’s costings were based on an analysis of the population affected and the costs of installing a sprinkler and drew on a consultation process, in which the department engaged directly with:

* architects, building designers, engineers, and fire safety practitioners, including Architects Australia, Australian Institute of Architects, Building Designers Association of Victoria, Engineers Australia, and Fire Protection Association Australia; and
* building and construction industry, including Australian Institute of Building Surveyors, Housing Industry Association, Master Builders Association of Victoria, Property Council of Australia (Victorian Division); and

fire, municipal and statutory authorities including CFA, Melbourne Fire Brigade, Melbourne City Council, MAV, members of BRAC, Building Advisory Council, Plumbing Advisory Council, and VBA.

The department applied the cost base adopted by the ABCB as part of the national final decision RIS to the affected Victorian population. Based on the Commonwealth estimated cost base, the cost of the Victorian variation is about $5 million a year in 2016, which reflects a per unit cost of around $634 for each occupancy unit or dwelling, rising to $6.6 million a year or $646 per dwelling by 2019.

In terms of the benefits of the variation, the department considers that these relate to:

* decreasing incidence of death and serious injury;
* the avoidance of the cost of emergency response and relief arising from the displacement of a potentially large number of people involved in a high-rise fire event;
* the avoidance of costs associated with the destruction of buildings and property that would require rectification following a fire event; and

the avoidance of indirect costs arising from business disruption including loss of rent, the need for tenants to be relocated and additional costs for owners and tenants related to seeking alternative accommodation.

The department considers that these benefits are likely to outweigh the costs related to the variation, even though:

* it has not been able to accurately quantify these benefits at this point in time; and

the national RIS prepared to consider whether to adopt this variation nationwide concluded that the benefits of the variation were unlikely to outweigh the costs, so it was decided not to adopt the Victorian approach nationally.

The national RIS did not however consider in its analysis other benefits referred to above, but did note that if the Victorian variation was applied nationally, the variation would break even if 0.18 fatalities were avoided nationally per year.[[312]](#footnote-313)

The department also notes that similar outcomes to the Victorian variation may be achieved indirectly in New South Wales, not through building Regulations but through a planning instrument. The NSW *State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development* (SEPP 65) mandates minimum dimensions for balconies so that the exemption in the relevant sprinkler standard does not apply to most balconies constructed in residential buildings that are already required to be sprinkler protected.

Victoria has recently introduced a similar planning instrument, the Victorian Better Apartments Design Standards, which will come into effect in March 2017. The Victorian Better Apartments Design Standards include guidelines for minimum balcony areas and dimensions. The standards are not mandatory and the effect they will have in practice, in terms of sprinkler protection of small covered balconies in residential buildings, is unclear.

Therefore, in light of the evidence of the changing use of balconies in high-rise buildings in Victoria, and until the risk factors associated with exempting small balconies from sprinkler protection are further considered by Standards Australia or the ABCB, it is Victoria’s preferred option to continue not to exempt small balconies in high-rise residential buildings from applying AS 2118.1–1999.

The Victorian variation will be subject to a mid-cycle review in 2022, as part of the usual review process. In regard to reviewing the effectiveness of this variation, the department will examine:

* behavioural change in the use of balconies arising from increased prevalence of apartment living and the extent to which this has increased the risk of fire-related harm;
* the incidence of fire affecting balconies;
* different types and level of risk associated with different classes of building;
* the nature and type of harm arising from fires affecting balconies; and

the costs and benefits of the variation, including any unintended consequences.

This will be considered in the context of the effect of the Victorian Better Apartments Design Standards on the construction and sprinkler protection of small covered balconies.

#### Victorian variations to the NCC contained in the building Regulations

The current Regulations, regarding the NCC, are set out in pt 1 div 2 of the current Regulations. Most of these Regulations are of an administrative nature. There are limited modifications to the application of the NCC in Victoria contained in regs 115, 115A and 116 (see summary table).

Reg 116 on alternations to existing buildings is exempt from the need to undertake a RIS. This Regulation results from the Commonwealth's 2010 request to make the Regulations consistent with the *Disability (Access to Premises – Buildings) Standards 2010 (the Premises Standards)*. These Premises Standards were subject to a national RIS process led by ABCB. They released the final RIS in October 2009 which assessed that the Premises Standards provided net benefits ((refer ABCB *Final Regulation Impact Statement for Decision: Proposal to Formulate Disability (Access to Premises - Buildings) Standards and Amend the Access Provisions of the Building Code of Australia*, page v).

The other modifications were assessed as not posing a significant burden and were therefore exempt from the RIS requirement under s 8(1)(a) of the SLA. S 8(1)(a) allows for an exemption of a proposed statutory rule if the proposed statutory rule will not impose a significant economic or social burden on a sector of the public.

There are a limited number of state-specific variations contained in the Appendices of Volume One and Additions to Volume Two of the NCC. These variations are incorporated into and form part of the NCC as a whole, in accordance with the terms of the IGA.

These variations, in addition to the variations contained in the current Building Regulations 2006 are subject to an annual reporting process via the ABCB. A summary of the variations contained in the NCC are is out below.

This Regulation will improve administrative efficiency and reduces delays. Requires additional information to be submitted with an application to ensure the RBS has all the correct details to make a decision on whether to authorise occupation of a building.

| Substantive policy matters resulting in state-specific variations contained in the appendices of Volume One and additions to Volume Two of the NCC | | |
| --- | --- | --- |
| **Date variation introduced** | **NCC reference** | **Policy rationale /explanation** |
| Pre-1997  Fire safety in Class 2 and 3 buildings | BCA Volume One: A1.1 and H103 | *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a State/Territory:* Provides an exemption for Class 2 and 3 buildings from fire service and egress requirements where there is a sprinkler system and an automatic smoke detection and alarm system. |
| 1997  Aged care buildings | BCA Volume One: A1.1, D1.6, F3.102, F3.103, F4.2 and Part H101 | *Additions arising from consolidation of non-NCC building requirements that alter the NCC (such as occupational health or safety matters):* Policy led by human services and relates to the Victorian Supported Services Guidelines. For Class 3, 9 a, 9c residential aged care buildings requires additional accommodation standards for circulation, room sizes, windows, handrails, water temperature and communications systems.  *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a State/Territory:* Varies the unobstructed width of doorways for Class 9c aged care buildings and exempts Class 9c aged care buildings from certain natural lighting requirements. |
| 1997  Monitoring of smoke detection systems | BCA Volume One: Spec E2.2 a, cl 4 and cl 7 | *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a state/Territory:* Policy led by emergency health. Cl 4 varies the requirements for how activation of the smoke detection and alarm system is communicated for Class 9c aged care buildings. Cl 7 provides a concession from the requirement for remote monitoring of a smoke detection system if a Class 9c aged care building or a Class 9a health care building has a sprinkler system. |
| 1997  Laundry facilities | BCA Volume One: F2.3 | Refer to explanation for variations in relation to early childhood centres. |
| 1997  Room sizes | BCA Volume One: F03, FF3.1, FP3.1, F3.101, F3.102 and F3.103. | Refer to explanation for variations in relation to early childhood centres and aged care buildings. |
| 1997  Early childcare centres | BCA Volume One: A1.1, D1.4, D2.21, FP2.2, F2.3, F2.5, F3.0, F3.101, F4.1  F4.2 and H104 | *Additions arising from consolidation of non-NCC building requirements that alter the NCC (such as occupational health or safety matters):* Policy led by early childhood development. Victoria has varied from national laws relating to children’s services. The variation adds a definition for ‘children’s service’ and ‘restricted children’s service’ and adds requirements for room sizes and egress for children with a disability.  *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a State/Territory:* Policy decision to vary the national construction requirements for certain children’s services buildings for egress, operation of latches, laundering and sanitary facilities, light and ventilation and swimming pool barriers. |
| 1997  Fire sprinklers | BCA Volume One: E1.5 | *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a state/Territory:* Policy based on building portfolio decision to manage fire risk in buildings following various fires in shared accommodation buildings. The variation extends the requirements for sprinklers in Class 9c aged care buildings to cover all shared accommodation buildings where occupants are at risk. The variation applies to buildings defined as ‘residential care building’ where occupants need assistance to evacuate and ‘shared accommodation building’ which include boarding houses and backpacker accommodation among other things. |
| 1997  PoPEs | BCA Volume One: F2.101 and Part H102 | *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a state/Territory:* Requirement for a first aid room in an assembly building or PoPE. Requirements for seating, racing car barriers and sanitary facilities. |
| 2003  Fire sprinklers in shared accommodation |  | Refer to explanation of fire sprinklers. |
| 2005  Energy efficiency | BCA Volume Two: O2.6, F2.6, P2.6.1, P2.6.2, V2.6.1 and 3.12.0(a) | *Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a State/Territory:* Requirement for a rainwater tank or a solar hot water system to a Class 1 dwelling. |
| 2007  Fire sprinklers in residential care buildings |  | Refer to explanation of fire sprinklers. |
| 2013  Flood Hazard | BCA Volume One: A1.1 and B1.6  BCA Volume Two: 1.1.1 | Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a state/Territory: Varies the definition of ‘flood hazard area’, ‘freeboard’ and ‘defined flood level’ in the ABCB handbook Construction of buildings in flood hazard areas. It is necessary because there is no authority responsible for measuring velocity, which forms part of the NCC assessment. |
| 2015  Sprinklers on balconies | BCA Volume One: Spec E1.5 | Variations based on traditional practices, cost effectiveness, community expectations, policy decisions or alternative regulatory responsibility within a state/territory: All new multistorey residential buildings, hotels, healthcare buildings and aged care buildings that are required to install sprinklers designed to AS 2118.1, must extend that sprinkler protection to include all covered balconies, regardless of size. |

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1. S 16 of the *Building Act 1993*. [↑](#footnote-ref-2)
2. Under cl 2 of sch 2 to the Act. [↑](#footnote-ref-3)
3. For example, in contravention of s 24 or s 24A of the *Building Act 1993*. [↑](#footnote-ref-4)
4. Building Commission, *Regulatory Impact Statement – Building Regulations 2006*, January 2006, pp.132-133. [↑](#footnote-ref-5)
5. S 24(1)(c) and (d) of the *Building Act 1993* [↑](#footnote-ref-6)
6. <http://www.audit.vic.gov.au/reports_and_publications/latest_reports/2011-12/20111207-building-permits.aspx> [↑](#footnote-ref-7)
7. S 78(1)(a) of the *Building Act 1993*. [↑](#footnote-ref-8)
8. Victoria’s Consumer Protection Framework for Building Construction, Victorian Auditor General Office, May 2015 [↑](#footnote-ref-9)
9. S 30A and s 30B of the *Building Act 1993*. [↑](#footnote-ref-10)
10. <http://www.audit.vic.gov.au/reports_and_publications/latest_reports/2011-12/20111207-building-permits.aspx> [↑](#footnote-ref-11)
11. The department considers this to be a conservative estimate given the average length of building permit applications. [↑](#footnote-ref-12)
12. The application of $5,000 as a measure of ‘minor’ work is based on similar approaches elsewhere in the Regulations. For example, builders are exempt from registration requirements for carrying out work valued at less than $5,000, and councils do not charge lodgement fees for building work valued at less than $5,000. In 2014–15 about 7,400 building permits related to work valued at $5,000 or less (about 7% of all permits). [↑](#footnote-ref-13)
13. The additional information that is proposed to be required to be reported by the RBS to VBA includes:

    Whether the building work that is the subject of the building permit requires an occupancy permit or certificate of final inspection.

    Any extension granted under current reg 215(4) in relation to the commencement date of building work determined under current reg 215(1)(a) and the provision of any new commencement date.

    Actual commencement date of building work.

    Any extension granted under current reg 215(4) in relation to the required completion date of proposed building work determined under current reg 215(1)(b) and the provision of any new completion date.

    Mandatory notification stages.

    Dates of actual inspections at mandatory notification stages.

    Whether or not the building work is in a bushfire prone area, and if it is, the Bushfire Attack Level.

    Whether or not the building work triggers requirements in: current reg 1011 – change of use (including whether or not an exemption is granted under current reg 1011(2)); current reg 608(3) – significant modification requiring entire building to be brought into conformity with the Regulations (including whether or not partial compliance is granted under current reg 608(4)).

    Whether or not protection work is required.

    Whether or not it is subject to a determination regarding combined allotments.

    Whether it requires a Hazardous Substances Management Plan.

    Whether or not the building work involves: the construction of a swimming pool and approved barrier; the construction of an approved barrier only (when replacing an existing barrier for an existing swimming pool); and the construction of a private bushfire shelter. [↑](#footnote-ref-14)
14. S 16 of the *Building Act 1993*. [↑](#footnote-ref-15)
15. Based on PwC consultation with PBSs. [↑](#footnote-ref-16)
16. EY Sweeney (2016), Australian Consumer Survey 2016. Available at: http://consumerlaw.gov.au/files/2016/05/ACL-Consumer-Survey-2016.pdf [↑](#footnote-ref-17)
17. http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0008/25586/VBA-Building-Permit-Audit-Industry-Report.pdf [↑](#footnote-ref-18)
18. This position is not modified by the application of the Electronic Transactions (Victoria) Regulations 2010. [↑](#footnote-ref-19)
19. For example, a building permit that proposes a complex alternative solution for a fire safety matter (that does not meet requirements under the NCC) requires a report and consent from the chief officer (as defined in the *Building Act* 1993) to ensure that the design is safe. Not only does this ensure that the safety of occupants is appropriately considered, but also that first responders (i.e. the MFB or CFA) are able to undertake their responsibilities effectively and as safety as possible in the event of a fire. [↑](#footnote-ref-20)
20. PwC calculation using survey data provided by the department. The number of report and consent matters assessed by nineteen councils between 2009 and 2013 was provided by the department. An average annual figure is estimated and extrapolated using two approaches - the councils’ share of building approvals (by value) in Victoria in 2014–15 (based on ABS 8731.0), and the councils’ share of building permits lodged in Victoria (average between 2009 and 2013). These estimates provide roughly similar figures of 19,300 and 22,000 – the average of 20,635 is applied. [↑](#footnote-ref-21)
21. The department's advice based on consultation with MFB and CFA. [↑](#footnote-ref-22)
22. Estimate calculated applying assumption that 20% of urban properties having a sewer mains easement thereby requiring the report and consent of a service authority (advice provided by the department). An estimated 71,700 building permits for metropolitan areas were lodged in 2014–15, providing an estimated number of report and consents of 14,300. [↑](#footnote-ref-23)
23. Final Report: Standing Advisory Committee Review of the Good Design Guide and VicCode 1 – March 2000. Page 42 [↑](#footnote-ref-24)
24. These measures are also commonly known as ResCode: <http://www.dtpli.vic.gov.au/planning/planning-applications/more-information-on-permits/residential-development> [↑](#footnote-ref-25)
25. Victorian Government Solicitor’s office, Planning and Environment law Client Newsletter: ‘What is Amenity?’ August 2008 [↑](#footnote-ref-26)
26. Allen Commercial Constructions Pty ltd v North Sydney Municipal Council (1970) 123 CL 490 [↑](#footnote-ref-27)
27. Macedon Ranges Shire council v Romsey Hotel Pty Ltd (2008) 29 VPR 271 [↑](#footnote-ref-28)
28. Law Commission 2014 ‘Rights to Light’, p.81. [↑](#footnote-ref-29)
29. Exchange rate of 1 AUD per 0.48 British Pound applied (based on prevailing exchange rate on 30 November 2015). [↑](#footnote-ref-30)
30. 1. Regs 403, 409(1), 410(1), 411(1), 412(1), 414(1), 415(2), 421(1) and 424(1) all refer to variations set out in schedules to the planning schemes.

    [↑](#footnote-ref-31)
31. When the planning schemes change, this is reflected automatically in the Regulations if the existing planning scheme is already listed in sch 5. If not, the Regulations need to be amended to add the planning scheme that varies those Regulations. [↑](#footnote-ref-32)
32. http://www.dtpli.vic.gov.au/planning/planning-applications/more-information-on-permits/residential-development/residential-development-provisions/one-dwelling-on-a-lot [↑](#footnote-ref-33)
33. http://www.dtpli.vic.gov.au/planning/planning-applications/more-information-on-permits/residential-development [↑](#footnote-ref-34)
34. Due to s 11 of the Act, consistency between the performance-based approach of the VPP and the prescriptive approach of the Building Regulations is of key importance. If any inconsistency were to arise by any proposed amendment, then the approach of the department is to ensure that the building Regulations are not be amended unless concurrent amendment occurred in the VPP. [↑](#footnote-ref-35)
35. ABS Cat no 8731, Building Approvals, Australia. [↑](#footnote-ref-36)
36. MAV, Planning permit activity report [↑](#footnote-ref-37)
37. Victorian Government Data provided as part of the Planning Permit Activity Reports does not detail what proportion of single dwellings that require a planning permit have had a siting assessment undertaken. [↑](#footnote-ref-38)
38. Available data are not able to provide an indication of the number of single-dwelling building permits that would be required to be assessed under siting provisions in the planning system in the absence of siting Regulations in the building system. [↑](#footnote-ref-39)
39. The Allen Consulting Group 2010, The cost of planning and building regulation administered or imposed at the local level in Victoria [↑](#footnote-ref-40)
40. Attachment A of the RIS, Planning and Environment (Fees) Regulations 2016 and Subdivision (Fees) Regulations 2016. A development value of between $100,000 - $500,000 is assumed for the analysis as this assumed to capture the average cost of construction for a single dwelling. [↑](#footnote-ref-41)
41. VBA – Complaints Case File Review (Draft) [↑](#footnote-ref-42)
42. Refer to item 1 in sch 8 to the Building Regulations 2006. [↑](#footnote-ref-43)
43. A dwarf wall is an adjective used to describe the practice of building a part of the boundary fence at a lower height in order to comply with reg 415. The section of the fence that is built at a lower height has the effect of lowering the calculation of the average height of the entire fence. [↑](#footnote-ref-44)
44. Based on PwC analysis of report and consent data from 8 councils, about 20% of applications to council regarding reg 409 relate to balconies and carport, of which 73% of applications are granted. [↑](#footnote-ref-45)
45. By excluding Class 10 buildings from the assessment, carports and sheds that may otherwise encroach into the front setback do not form part of the calculation of the neighbourhood character. [↑](#footnote-ref-46)
46. Data provided by the Department of Environment, Land, Water and Planning. These councils represent a mix of inner metropolitan, outer metropolitan and regional councils, and are thus considered to be generally representative of Victorian councils. [↑](#footnote-ref-47)
47. Incomplete building work, for the purpose of this analysis, is building work authorised under a building permit that has not been completed in accordance with the Act, the Regulations or the plans and specifications approved and endorsed by the RBS when issuing the relevant building permit. [↑](#footnote-ref-48)
48. There is no single process that is automatically triggered where a building permit lapses. Building work cannot continue lawfully once a permit lapses- subject to a building order being issued (and no permit being required by the RBS) a new permit needs to be obtained. There are likely cases where nothing happens in the case of a lapsed permit- what, if anything, happens may depend on the circumstances. It is arguable s 16 is breached where a permit lapses because the building work has not been carried out in accordance with the building permit. This is because it must contain a completion date (reg 212) which has not been complied with- it is, for example, the view of the Australian Institute of Building Surveyors that s 16 has been breached in these circumstances. Both Council and VBA have power to prosecute for breach of s 16. The person prosecuted is the person carrying out the building work other than in accordance with the permit. There could also be grounds for the RBS to issue a building notice under s 106 to be followed by a building order. These are issued to the owner. An order for minor work can be issued without going through the notice process. A MBS can issue an emergency order if there is a risk to life or property emergency orders and do not require the notice process either. Under s 119 a building permit is not required to complete building work in compliance with a building order unless the RBS so directs. In some (most) circumstances where a building permit lapses an occupancy permit will not have been issued and an offence may be committed if the building is occupied without an occupancy permit. [↑](#footnote-ref-49)
49. See Option 5.1 for a brief discussion on time frames as regards the construction of pools and spas. [↑](#footnote-ref-50)
50. Current reg 215(3) of the Building Regulations 2006. [↑](#footnote-ref-51)
51. S 16(1) of the *Building Act 1993*. [↑](#footnote-ref-52)
52. S 16(1) of the *Building Act 1993*. [↑](#footnote-ref-53)
53. Current reg 215(4) of the Building Regulations 2006. [↑](#footnote-ref-54)
54. Reg 315(4) of the Building Regulations 2006. [↑](#footnote-ref-55)
55. Reg 323 of the Building Regulations 2006 [↑](#footnote-ref-56)
56. Reg 323(2)(a) of the Building Regulations 2006 [↑](#footnote-ref-57)
57. Reg 323(2)(b) of the Building Regulations 2006 [↑](#footnote-ref-58)
58. VBA Practice Note 2016-10 [↑](#footnote-ref-59)
59. These illustrative costs are estimated by applying an interest rate of 5% to 2014–15 building permit data. For demolitions, the median value of a project is used ($10,000) as this is lower than the product of the median floor area (112 m2) and $100 (as stipulated by the Regulations). For removals, the product of the median floor area (12 m2) and $100 is used as it is lower than the median value of work ($3000) for domestic work. For re-erections, a figure of $5,000 is used as this is lower than the median value of work ($15,000) for a domestic project. Multiplying these figures by the interest rate provides an annual cost of between $60 and $500. [↑](#footnote-ref-60)
60. Current reg 215(3) of the Building Regulations 2006. [↑](#footnote-ref-61)
61. S 16(1) of the *Building Act 1993.* [↑](#footnote-ref-62)
62. S 16(1) of the *Building Act 1993*. [↑](#footnote-ref-63)
63. See definition of protection work in s 3(1) of the *Building Act 1993*. [↑](#footnote-ref-64)
64. Due to the commercial nature of the industry (that is that they are engaged directly by the property owner), some landowners may feel that building practitioners, who have all the relevant information and knowledge to assess the potential impacts on adjoining properties, may not always give appropriate weight to all of the impacts on adjoining properties. [↑](#footnote-ref-65)
65. Depending of the circumstance, civil action in trespass, nuisance and/or negligence may result in consequence of the impacts of construction on neighbouring property. Construction may also infringe other rights conveyed by easements and restrictive covenants. [↑](#footnote-ref-66)
66. Pt 7 of the *Building Act 1993.* [↑](#footnote-ref-67)
67. Reg 1.1.3(c) of the Occupational Health and Safety Regulations 2007 [↑](#footnote-ref-68)
68. S 93(2) of the *Building Act 1993* [↑](#footnote-ref-69)
69. VBA analysis of protection work data from FY2008-09 – FY2013-14. BAB Database, completed in 2014. [↑](#footnote-ref-70)
70. Sources: ABC News, 16 July 2015, accessed at: http://mobile.abc.net.au/news/2015-07-17/pit-collapse-could-have-been-avoided-if-regulations-adhered-to/6627048. The Age, 10 September 2015, accessed at: http://www.theage.com.au/victoria/collapsing-mt-waverley-pit-refilled-with-truckloads-of-rock-20150910-gjjdj1.html. The Age, 15 October 2015, accessed at: http://www.theage.com.au/victoria/emergency-works-for-townhouse-damaged-in-mount-waverley-pit-collapse-20151015-gka86g.html. Herald Sun, 21 November 2016, accessed at: http://www.heraldsun.com.au/leader/east/applicant-request-to-add-extra-storey-on-mixeduse-mt-waverley-development/news-story/8c10aa74bb960bc8d9c4a4d4f6ea6e37. [↑](#footnote-ref-71)
71. Reg 104 – 606 of the Building Regulations 2006 [↑](#footnote-ref-72)
72. Note that these calculations do not take into account the value of any of the other benefits of the protection work requirements of the Regulations, and so the actual break-even points are likely to be lower than shown here. [↑](#footnote-ref-73)
73. The RBS may rely on a certificate issued by other registered practitioner in accordance with s 238 of the *Building Act 1993*, when determining if proposed or completed building work complies with the Act and Regulations. [↑](#footnote-ref-74)
74. S 37C *Building Act 1993* [↑](#footnote-ref-75)
75. S 37H(1) *Building Act 1993* [↑](#footnote-ref-76)
76. PwC consultation with PBSs, October and November 2015. See RIS Part B Appendix B. [↑](#footnote-ref-77)
77. EY Sweeney (2016), Australian Consumer Survey 2016. Available at: <http://consumerlaw.gov.au/files/2016/05/ACL-Consumer-Survey-2016.pdf> [↑](#footnote-ref-78)
78. Georgiou, J., Smith, J., and Love, P. E. D. 2002 “Quality improvement through builder registration.” Proc., 8th Int. Conf. on ISO 9000 & TQM (Change Management) [↑](#footnote-ref-79)
79. Notwithstanding the age of the data, the department still considers that the findings remain relevant for the purposes of the RIS given that the study represents one of the most comprehensive benchmarking reviews undertaken in relation to building defects in Victoria. [↑](#footnote-ref-80)
80. Georgiou, J., Smith, J., and Love, P. E. D. 2002 “Quality improvement through builder registration.” Proc., 8th Int. Conf. on ISO 9000 & TQM (Change Management) [↑](#footnote-ref-81)
81. VCAT Annual Report 2015/16, page 31 [↑](#footnote-ref-82)
82. Reg 901, Building Regulations 2006 [↑](#footnote-ref-83)
83. VBA 2016 [Failures in the built environment]. Unpublished research data [↑](#footnote-ref-84)
84. <http://www.vba.vic.gov.au/a-z-information/vba-research>: in relation to the VBA's research on Failures in the Built Environment [↑](#footnote-ref-85)
85. VBA 2016 *Water Damaged Buildings – Domestic Building inspection Case File Analysis.* Unpublished report [↑](#footnote-ref-86)
86. VBA 2016 [Failures in the built environment]. Unpublished research data [↑](#footnote-ref-87)
87. In the BCA Volume One and the BCA Volume Two to mean an area within a building supplied with water from a water supply system, which includes bathrooms, showers, laundries and [sanitary compartments](javascript:BrowserLink('#Sanitary_compartment');) and excludes kitchens, bar areas, kitchenettes or domestic food and beverage preparation areas. [↑](#footnote-ref-88)
88. http://magellancompany.com.au/water-leakages-in-high-rise-buildings/ [↑](#footnote-ref-89)
89. http://www.level.org.nz/wet-areas/wet-area-design/ [↑](#footnote-ref-90)
90. VBA 2016 analysis of data provided by the Insurance Statistics Australia Ltd. (ISA). Insurance Statistics Australia Ltd does not take any responsibility for the accuracy or completeness of the analysis of this data. [↑](#footnote-ref-91)
91. ISA definition of the category that includes damage from water [↑](#footnote-ref-92)
92. VBA 2016 analysis of data provided by the Insurance Statistics Australia Ltd. Insurance Statistics Australia Ltd does not take any responsibility for the accuracy or completeness of the analysis of this data. [↑](#footnote-ref-93)
93. Environmental Planning and Assessment Regulation 2000 (NSW), r 162A. [↑](#footnote-ref-94)
94. VBA 2016 [Failures in the built environment]. Unpublished research data [↑](#footnote-ref-95)
95. Environmental Planning and Assessment Regulation 2000 (NSW), r 162A. [↑](#footnote-ref-96)
96. Sources: Simon Johanson, ‘Grossly negligent builder fined $65,000 and banned’, The Sydney Morning Herald, 10 February 2016, accessed at: http://www.smh.com.au/business/property/grossly-negligent-builder-fined-65000-and-banned-20160208-gmoyzk.html. Brittany Shanahan, ‘New homeowners in Melbourne’s north-east battling builders on defective homes’, Leader Community News, 7 July 2015, accessed at: http://www.heraldsun.com.au/leader/north/new-homeowners-in-melbournes-north-east-battling-builders-on-defective-homes/news-story/eb4e4972030f5d34a210b17b33b7df48. VBA, ‘Builder fined $45,500 for negligence and incompetence’, Media Release, 3 February 2016, accessed at: http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0008/38780/Builder-fined-$45,500-for-negligence-and-incompetence-the Authority.pdf. Brittany Shanahan, ‘Rangeview estate builder’s penalty reduced after his financial situation was taken into account by VCAT’, Leader Community News, 15 June 2016, accessed at: http://www.heraldsun.com.au/leader/north/rangeview-estate-builders-penalty-reduced-after-his-financial-situation-was-taken-into-account-by-vcat/news-story/0ccb0b5ae0b4cca8649a38d1831e28fe. [↑](#footnote-ref-97)
97. Sources: VBA, ‘More Lacrosse Building Practitioners to Face Disciplinary Action’, Media Release, 29 June 2016, accessed at: http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0020/44435/290616-Lacrossse-Media-Release-.pdf. VBA, ‘the Authority Releases External Wall Cladding Audit Report’, Media Release, 17 February 2016, accessed at: http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0015/39102/the Authority-External-Wall-Cladding-Report-the Authority-Media-Release.pdf. Nick Toscano and Rania Spooner, ‘Docklands apartment tower fire fuelled by material in building's walls, says MFB’, The Age, 28 April 2015, accessed at: http://www.theage.com.au/victoria/docklands-apartment-tower-fire-fuelled-by-material-in-buildings-walls-says-mfb-20150427-1mukhx.html. [↑](#footnote-ref-98)
98. S 1(c) of the Act and s 4(1)(a) of the Act. The date of issue of an occupancy permit is also used as a tool to set time periods in the Act, and related legislation, for liability, insurance and other matters. [↑](#footnote-ref-99)
99. S 134 of the *Building Act 1993* states that a building action cannot be brought more than 10 years after the date of the issue of the occupancy permit or certificate of final inspection. [↑](#footnote-ref-100)
100. Ss 38 and 134 of the *Building Act 1993*. [↑](#footnote-ref-101)
101. Ss 38(2) and 46(2) of the *Building Act 1993*. [↑](#footnote-ref-102)
102. Pt 3 of the *Building Act 1993*. [↑](#footnote-ref-103)
103. Pt 4 of the *Building Act 1993*. [↑](#footnote-ref-104)
104. Pt 8 of the *Building Act 1993*. [↑](#footnote-ref-105)
105. See s 21(2) of the *Building Act 1993* and regs 1001(2) and 1801 and sch 8 to the Regulations. [↑](#footnote-ref-106)
106. Ss 39, 49 and 50 of the *Building Act 1993*. [↑](#footnote-ref-107)
107. By issuing an occupancy permit. [↑](#footnote-ref-108)
108. S 72(a) of the Act. [↑](#footnote-ref-109)
109. S 72(c) of the Act. [↑](#footnote-ref-110)
110. S 106(c) of the Act. [↑](#footnote-ref-111)
111. S 106(d) of the Act. [↑](#footnote-ref-112)
112. S 118 of the Act. [↑](#footnote-ref-113)
113. S 40(1) of the *Building Act 1993*. [↑](#footnote-ref-114)
114. S 40(1) and s 51 of the *Building Act 1993*. [↑](#footnote-ref-115)
115. S 72(a) of the Act. [↑](#footnote-ref-116)
116. Reg 1011(2) of the Building Regulations 2006. [↑](#footnote-ref-117)
117. Reg 1011(1) of the Building Regulations 2006. [↑](#footnote-ref-118)
118. S 70 of the *Building Act 1993*. [↑](#footnote-ref-119)
119. S 72(b) of the *Building Act 1993*. [↑](#footnote-ref-120)
120. Reg 1001(2) of the Building Regulations 2006. Reg 1001(2)(a) exempts Class 10 buildings from the operation of the occupancy permit system. This has the effect of excluding Class 10 buildings from all controls exercised through the occupancy permit system. The effect of reg 1reg 1001(2)(b) is to exempt building work that comprises an alteration to a Class 1a building or within a Class 2 or 3 building from the requirement to have an occupancy permit. [↑](#footnote-ref-121)
121. Regs 1002, 1005 and 1006 of the Building Regulations 2006. [↑](#footnote-ref-122)
122. Regs 1007 to 1009 of the Building Regulations 2006. [↑](#footnote-ref-123)
123. Class 1a building. [↑](#footnote-ref-124)
124. Reg 1001(2)(b) of the Building Regulations 2006. [↑](#footnote-ref-125)
125. Reg 1801 of the Building Regulations 2006. [↑](#footnote-ref-126)
126. Item 7 of sch 8 to the Regulations. [↑](#footnote-ref-127)
127. Item 14 of sch 8 to the Regulations. [↑](#footnote-ref-128)
128. S 21(2)(b) of the *Building Act 1993*. [↑](#footnote-ref-129)
129. S 41 and s 53 of the *Building Act 1993*. [↑](#footnote-ref-130)
130. In relation to the refusal of an occupancy permit see s 44 of the *Building Act 1993*, in relation to a request or requests for additional information see s 42 and cl 2 of sch 2 to the Act and in relation to an occupancy permit issued before a building is suitable for occupation, this is a breach of s 44 of the Act. [↑](#footnote-ref-131)
131. Pt 3 Div 1 of the Building Regulations 2006. [↑](#footnote-ref-132)
132. Sch 2 Cl 2 to the *Building Act 1993*. [↑](#footnote-ref-133)
133. Form 6 in sch 2 to the Building Regulations 2006. [↑](#footnote-ref-134)
134. S 3, Act. [↑](#footnote-ref-135)
135. NCC, BCA Volume 1: Class 9: a building of a public nature including healthcare buildings (Class 9a), assembly buildings (Class 9b) and aged care buildings (Class 9c). [↑](#footnote-ref-136)
136. S 3, Act and current Reg 1104. [↑](#footnote-ref-137)
137. Current reg 1104 (a) – (d). [↑](#footnote-ref-138)
138. Current reg 1102(b). [↑](#footnote-ref-139)
139. Current reg 1102(b)(i) and (ii). [↑](#footnote-ref-140)
140. Places of Public Entertainment Definitions, Policy and Enforcement Guideline, June 2010, Hoeys Lawyers on behalf of Victorian Municipal Building Surveyors’ Group. [↑](#footnote-ref-141)
141. Second Reading Speech, 11 November 1993, the Hon Mr Maclellan, Minister for Planning. [↑](#footnote-ref-142)
142. **S 49: Public entertainment not to be conducted at place without occupancy permit**: a person must not conduct a public entertainment in a PoPE unless an occupancy permit has been issued under this division which permits its use for the entertainment. Penalty: 240 penalty units, in the case of a natural person. 1500 penalty units, in the case of a body corporate.   
     **S 50: Place not to be used for public entertainment without occupancy permit:** The owner or occupier of a PoPE must not, for fee or reward, permit the place to be used for the purpose of providing public entertainment unless an occupancy permit has been issued under this division which permits its use for the entertainment. Penalty: 240 penalty units, in the case of a natural person. 1500 penalty units, in the case of a body corporate. [↑](#footnote-ref-143)
143. http://whitenightmelbourne.com.au/ [↑](#footnote-ref-144)
144. http://www.thatsmelbourne.com.au/Moomba [↑](#footnote-ref-145)
145. http://www.grandprix.com.au/ [↑](#footnote-ref-146)
146. http://2015.mmf.com.au/ [↑](#footnote-ref-147)
147. Op cit, n.13 at p.1. [↑](#footnote-ref-148)
148. Ibid at p.2 [↑](#footnote-ref-149)
149. Vcglr.vic.gov.au/home/resources/data+and+research/data [↑](#footnote-ref-150)
150. <https://www.fallsfestival.com/lorne/news/> 1 January 2017 [↑](#footnote-ref-151)
151. <http://www.theaustralian.com.au/news/two-jailed-15-murdered-in-a-fire-that-engulfed-the-whiskey-au-go-go-club-in-1973/story-e6frg6n6-1226532179006>, 19 December 2012. [↑](#footnote-ref-152)
152. <http://www.dailytelegraph.com.au/news/nsw/the-burning-desire-that-left-15-people-dead/story-e6freuzi-1225865732386>, 13 May 2010. [↑](#footnote-ref-153)
153. <http://www.courts.qld.gov.au/__data/assets/pdf_file/0004/86647/cif-childers-palace-hostel-fire-20060707.pdf>, 7 July 2006. [↑](#footnote-ref-154)
154. <http://themusic.com.au/news/all/2013/12/09/fans-offered-refunds-after-taylor-swift-stage-collapse/>, 9 December 2013. [↑](#footnote-ref-155)
155. <http://www.businessinsider.com/ap-a-look-at-some-of-the-worlds-worst-nightclub-fires-2015-10?IR=T>, 31 October 2015 and <http://www.cbsnews.com/news/massive-loss-of-life-in-brazil-nightclub-fire/>, 27 January 2013. [↑](#footnote-ref-156)
156. <http://www.chicagotribune.com/news/opinion/editorials/ct-e2-nightclub-stampede-deaths-edit-1130-20151127-story.html>, 30 November 2015. [↑](#footnote-ref-157)
157. <http://www.cbsnews.com/news/a-look-at-past-deadly-nightclub-fires/>, 27 January 2013. [↑](#footnote-ref-158)
158. Committee of Inquiry into Crowd Safety and Control at Sports Grounds, Interim Report, Popplewell J, July 1985: <http://bradfordcityfire.co.uk/wp-content/uploads/2012/09/popplewell-inquiry-interim-report-bradford-city-fire.pdf>. [↑](#footnote-ref-159)
159. <http://hillsborough.independent.gov.uk/>. [↑](#footnote-ref-160)
160. In August 2011, during an outdoor concert at the Indiana State Fair, Indianapolis, United States, a wind gust from an approaching severe thunderstorm hit the stage's temporary roof structure, causing the stage to collapse. The structure landed among a crowd of spectators, killing seven people and injuring 58 others. A post incident study determined that the stage had been poorly designed, <http://www.wsj.com/articles/SB10001424052702304356604577339923897959492>, 12 April 2012 and <http://www.cbc.ca/news/canada/toronto/toronto-stage-collapse-kills-man-ahead-of-radiohead-concert-1.1189584>, 16 June 2012.

     In June 2012, a massive outdoor stage collapsed at Toronto's Downsview Park prior to a Radiohead concert, crushing and killing one person working at the event and injuring 3 others. A post-incident investigation report alleged that the stage was not constructed and monitored in a way that ensured the safety of workers at the event, Ibid and <http://www.spin.com/2013/06/live-nation-charged-radiohead-stage-collapse/>, 10 June 2013. [↑](#footnote-ref-161)
161. The entire festival area was fenced (and henceforth fell moved the responsibility for the event to the building regulatory agency) and there was only one way to enter and exit the festival site: via a deep, high-walled tunnel. The number of people attempting to enter the tunnel (at any one time) to gain access to the event greatly exceed the event organiser’s expectations, combined with inadequate crowd control in an unfamiliar environment, resulted in the crowd stampede, op cit, n.14 at p.3-6. [↑](#footnote-ref-162)
162. Design stage requirements (such as number of exits/entrances) are a relevant consideration where a building is being designed and built as a PoPE, which occurs before the occupancy permit is issued. However, occupancy permits are used to regulate existing buildings (that may or may not have been originally designed for use as a PoPE). [↑](#footnote-ref-163)
163. http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0006/49704/VBA-Annual-Report-2015-16.pdf [↑](#footnote-ref-164)
164. The reports provided by MFB are not a random sample and therefore may be biased. [↑](#footnote-ref-165)
165. Escalated to 2015 dollars using ABS 6401.0 – Consumer Price Index, Australia, September 2015 – All groups CPI, Australia. This cost relates to structural damage only – costs associated with loss of life are not included. [↑](#footnote-ref-166)
166. Registered shipping containers are managed under separate legislation. [↑](#footnote-ref-167)
167. Discussed in Chapter A2.2 [↑](#footnote-ref-168)
168. Reg 1201(1) prescribes Classes 1b, 2, 3, 5,6,7,8 or 9; and a class 4 part of a building; and a place of entertainment. [↑](#footnote-ref-169)
169. Data obtained from the CFA and MFB shows over the last 10 years in Victoria, where an ignition factor could be determined, the most common causes of fire incidents in buildings are: unattended fire sources such as heaters and cooking appliances, suspicious causes, electrical failure. [↑](#footnote-ref-170)
170. S 40 of the *Building Act 1993.* [↑](#footnote-ref-171)
171. Employers are responsible for ensuring the safety of everyone in their workplace (especially during emergencies such as a fire). This includes employees, contractors, visitors and customers. Under S 21 of the *Occupational Health and Safety Act 2004* the employer has a duty to provide and maintain a healthy and safe working environment. Under S 26, persons who manage or control workplaces must ensure that the workplace and the means of entering and leaving it are safe and without risks to health. [↑](#footnote-ref-172)
172. Under pt 8B of the *Liquor Control Reform Act 1998*, a licensed premises can be temporarily shut down and evacuated if they do not meet fire safety standards . The licensee is required to know which fire standards apply to their venue under the *Building Act 1993*. Building Regulations and the Building Code of Australia. Examples of what might constitute a serious fire threat include locked and blocked exit doors, obscured exit signage and faulty alarm systems [↑](#footnote-ref-173)
173. Under s 52 of the Retail Leases Act 2003, the landlord is obligated to repair and maintain the premises in a condition consistent with the condition of the premises when the retail premises lease was entered into. [↑](#footnote-ref-174)
174. Building Regulations 2006, reg 1203. [↑](#footnote-ref-175)
175. Building Regulations 2006, reg 1204. [↑](#footnote-ref-176)
176. Building Regulations 2006, reg 1208 and reg 1214. [↑](#footnote-ref-177)
177. Building Regulations 2006, reg 1206. [↑](#footnote-ref-178)
178. This figure is based on data reporting in MFB Annual Reports. [↑](#footnote-ref-179)
179. This figure was provided directly to the department from the CFA. [↑](#footnote-ref-180)
180. This is an estimate based on data in the fire authorities’ annual reports and data provided to the department by the CFA and the MFB. The data sets that were available to use by the department were not identical and the numbers of structural fires from 2012/13 to 2015/16 was not available from the MFB. [↑](#footnote-ref-181)
181. The CFA and the MFB have different ways of defining incidents. Fires that required a large number of fire brigade resources to respond (these are defined as ‘significant’ incidents by the MFB and ‘major’ incidents by the CFA) are being treated as high impact for the purpose of the RIS. [↑](#footnote-ref-182)
182. Source: Gregory, M. & Scholfield, K. Royal Melbourne Institute of Technology, *Warrnambool Exchange Fire: Consumer and Social Impact Analysis*, Australian Communications Consumer Action Network, 2014. [↑](#footnote-ref-183)
183. Source: MFB Investigation and analysis unit - *Post-Incident Summary Report*, Lifestyle Classics. [↑](#footnote-ref-184)
184. Source: MFB Investigation and analysis unit - Post-Incident Summary Report, Fire in a building involving dangerous goods: 8 July 2005, retrieved from: https://www.engineersaustralia.org.au/sites/default/files/shado/Learned%20Groups/Technical%20Societies/Society%20of%20Fire%20Safety/Publications/07%201525%20ds%20chemport.pdf [↑](#footnote-ref-185)
185. Informed by discussion with ESM contractor. [↑](#footnote-ref-186)
186. Survey conducted by VBA in 2014. Average response for full compliance was 10%, average response for partial compliance (adhere to at least some form of ESM maintenance) was 33%. This survey was directed at MBS only therefore results may not be indicative of behaviour of all building owners. Therefore caution should be applied in interpreting results. [↑](#footnote-ref-187)
187. Consultation with ESM contractor indicated partially compliant owners incurred 25%–50% of full costs. A mid-point of 37.5% is assumed. [↑](#footnote-ref-188)
188. Informed by VBA (19/5/2015). [↑](#footnote-ref-189)
189. Issued following data request to MFB [↑](#footnote-ref-190)
190. Cost estimates have been escalated to 2014–15 dollars using CPI. [↑](#footnote-ref-191)
191. Note that these are costs incurred with the Regulations in place. The analysis assumes that the severity of fires would be greater (though to what extent is unknown) in the absence of Regulations. [↑](#footnote-ref-192)
192. Best Practice Regulation Guidance Note - Value of statistical life. [↑](#footnote-ref-193)
193. Based on consultation with ESM contractor. [↑](#footnote-ref-194)
194. Interviews with CFA and MFB and from early submissions from CFA, MFB, Swan Hill Rural Council, Australian Institute of Building Surveyors, Property Council of Victoria [↑](#footnote-ref-195)
195. Consultation indicates that there is confusion among building owners as to what ESMs they have installed in their buildings and the building standards that ESM maintenance needs to be carried out in accordance with – the latest version, or the one in effect when the ESM was installed. For example, early submissions have been made in regard to AS 1851 –the technical standard available to address routine servicing of fire protection systems and equipment in Australia. Over time some buildings will have a ‘layering’ of ESM conditions. This occurs because a building may have multiple occupancy permits and maintenance determinations that call up different versions of AS 1851 making it difficult for building owners to manage maintenance requirements. [↑](#footnote-ref-196)
196. Assuming a 1% increase to the rate of full compliance with maintenance requirements, partial compliance with maintenance requirements, and compliance with reporting obligations [↑](#footnote-ref-197)
197. On 1 May 2015, VCAT President Justice Garde issued an advisory opinion on landlords’ and tenants’ maintenance obligations, For further information, see *Small Business Commissioner: reference for advisory opinion (Building and Property) [2015] VCAT 478*, available at <http://www.vsbc.vic.gov.au/news-publication/vcat-advisory-opinion-essential-safety-measures/>. [↑](#footnote-ref-198)
198. See proposed reg 212 [↑](#footnote-ref-199)
199. Sub-div 1 does not apply to a smoke alarm installed in a sole occupancy unit in a Class 1b or 2 building or a Class 4 part of a building (reg 1201(2)). [↑](#footnote-ref-200)
200. Currently pt 12 sub-div 2 does not apply to a Class 4 part of a building [↑](#footnote-ref-201)
201. National Coronial Information System (NCIS) via Coroners’ Court of Victoria, Coroners Prevention Unit, November 2016 report to Department of Environment, Land, Water and Planning. This represents a rounded figure. The precise estimate is 1.7, which is applied in the cost-benefit analysis. [↑](#footnote-ref-202)
202. 32 hospital admissions and 17 emergency department presentations: Victorian Injury Surveillance Unit data (Victorian Admitted Episodes Dataset and Victorian Emergency Minimum Dataset). Average values for 2001 to 2013 [↑](#footnote-ref-203)
203. Ibid. [↑](#footnote-ref-204)
204. Op cit at *n.183*. [↑](#footnote-ref-205)
205. The factors that contributed to the drowning death were unknown in one case. [↑](#footnote-ref-206)
206. Ibid. [↑](#footnote-ref-207)
207. Victorian Injury Surveillance Unit, Monash University, 2015; Victorian Admitted Episodes Dataset and Victorian Emergency Minimum Dataset, Department of Health and Human Services (Victoria), 2015. [↑](#footnote-ref-208)
208. Kreisfled, R. & Henley, G. (2008). *Deaths and hospitalisations due to drowning, Australia 1999-00 to 2002-04.* Injury Research and Statistics Series Number 39. (Cat. No. INJCAT 109) Adelaide: AIHW. [↑](#footnote-ref-209)
209. The CTCPER and Kids Health. *The NSW Study of Drowning and Near Drowning in Children (0-16)*. The Children’s Hospital at Westmead, 2015. [↑](#footnote-ref-210)
210. Ibid, at p.2. [↑](#footnote-ref-211)
211. ABS 4387.2 Safety in the Home, Victoria, October 1998, ABS 4602.2, Household Water, Energy Use, and Conservation Victoria, October 2009. [↑](#footnote-ref-212)
212. Reproduced with permission from Knox City Council, Building Services: https://www.knox.vic.gov.au/Files/Building/HandoutPoolsandSpas.pdf [↑](#footnote-ref-213)
213. Consultation with a pool maintenance business suggested that the average cost would be around $132 (including callout and around half an hour of work). According to Choice, pool gates tend to last between 5-10 years, and therefore we have assumed that this work would be undertaken every 7.5 years. <https://www.choice.com.au/outdoor/pools/fences-and-safety/reviews-and-tests/pool-fence>. [↑](#footnote-ref-214)
214. Total number of swimming pools assumed to be 170,000 as at end 2015. This is calculated based on ABS 4387.2 Safety in the Home, Victoria, October 1998, ABS 4602.2, Household Water, Energy Use, and Conservation Victoria, October 2009 and VBA permit levy data for the period 2010-2015. Compliance with currently requirements taken from survey of four councils with an average compliance rate of 7.8%. [↑](#footnote-ref-215)
215. Op cit at *n.2*. [↑](#footnote-ref-216)
216. This represents a rounded figure. The precise estimate is 1.7, which is applied in the cost-benefit analysis. [↑](#footnote-ref-217)
217. Victorian Injury Surveillance Unit, Monash University, 2015; Victorian Admitted Episodes Dataset and Victorian Emergency Minimum Dataset, Department of Health and Human Services (Victoria), 2015. [↑](#footnote-ref-218)
218. Applying the 2015 CTCPER study to Victoria’s drowning and near-drowning statistics for the period 2000-01 to 2013-14. [↑](#footnote-ref-219)
219. These figures are rounded. The precise estimates are 1.3 and 2.7 respectively, which are applied in the cost-benefit analysis. [↑](#footnote-ref-220)
220. Consultation with stakeholders suggests that the useful life of a new pool barrier is likely to exceed the 10 year period that the Regulations will operate and is more likely to be in the range of twenty years. Therefore for Option 11.1, as agreed with OCBR, the NPV relates to the costs and benefits of fences erected during the 10-year operation of the Regulations, with the latter accruing up to 20 years after the construction date. [↑](#footnote-ref-221)
221. ABS 4387.2 Safety in the Home, Victoria, October 1998, ABS 4602.2, Household Water, Energy Use, and Conservation Victoria, October 2009. [↑](#footnote-ref-222)
222. Quotes were sought from two pool barrier installers, the average of which was used as an estimated cost of installation. Further consultation with an additional installer was undertaken to obtain the cost to remove an existing fence. [↑](#footnote-ref-223)
223. Estimate provided to PwC by Swimming Pool and Spa Association (Victorian chapter), [October 2015]. [↑](#footnote-ref-224)
224. Based on PwC consultation with swimming pool barrier installers. Cost estimates were provided for a 22m barrier – these estimates were scaled up by a factor of 1.36 to obtain an estimate for a 30 metre barrier. [↑](#footnote-ref-225)
225. See RIS Part B Appendix A for approach to estimating costs. [↑](#footnote-ref-226)
226. Department of Infrastructure and Planning, Queensland (2010) *Swimming pool safety improvement strategy regulatory impact statement*. Available at: https://www.legislation.qld.gov.au/LEGISLTN/SLS/RIS\_EN/2010/10SL309R.pdf [↑](#footnote-ref-227)
227. Ibid. [↑](#footnote-ref-228)
228. Annual Report: *Deaths of children and young people*, Queensland, 2014–15, at p.44. [↑](#footnote-ref-229)
229. Ibid, at p.44. [↑](#footnote-ref-230)
230. Op cit, *n.242*, at p.6 and Deputy State Coroner Lock, Inquest into the death of William Chase Corben, 2015/860, at p.9. [↑](#footnote-ref-231)
231. The Department of Local Government. (2008). *Review of The Swimming Pools Act 1992*. August 2008. [↑](#footnote-ref-232)
232. Lambert, Michael, Independent Review of NSW Swimming Pool Barrier Requirements – Discussion Paper, September 2015 at page 8. [↑](#footnote-ref-233)
233. Op cit, *n.242* at p.20. [↑](#footnote-ref-234)
234. Ibid. [↑](#footnote-ref-235)
235. Queensland Injury Surveillance Unit, Injury Bulletin, No.104, December 2008, http://www.qisu.org.au/ModCoreFilesUploaded/Bulletin\_10486.pdf [↑](#footnote-ref-236)
236. Thompson, D.C., Rivara, F. Pool fencing for preventing drowning of children. Cochrane Database of Systematic Reviews 1998, Issue 1. Art. No.: CD001047. DOI: 10.1002/14651858. CD001047.

     The objective of the review was to determine if pool fencing prevents drowning in children (under 14 years of age). In order to be selected for review, a study had to be designed to evaluate pool fencing in a defined population and provide relevant and interpretable data that objectively measured the risk of drowning or near-drowning or provided rates of these outcomes in fenced and unfenced pools. Three case control studies met the selection criteria. The results of these studies indicate that pool fencing significantly reduces the risk of drowning. The odds ratio (OR) for the risk of drowning or near drowning in a fenced pool compared to an unfenced pool is 0.27 (95% confidence intervals (CI) 0.16 to 0.47). Isolation fencing (enclosing pool only) is superior to perimeter fencing (enclosing property and pool); the OR for the risk of drowning in a pool with isolation fencing compared to a pool with three-sided fencing is 0.17 (95% CI 0.07 to 0.44). Authors’ conclusion: Pool fences should have a dynamic and secure gate and should isolate the pool from the house (that is, four-sided fencing). See further, pp.1 & 2. [↑](#footnote-ref-237)
237. Ibid at p.6. [↑](#footnote-ref-238)
238. Intergovernmental Working Party on Swimming Pool Safety. Preschool drowning in private swimming pools. Health Department of Western Australia 1988. [↑](#footnote-ref-239)
239. https://www.hume.vic.gov.au/Building\_Planning/Building\_Renovations\_Extensions/Swimming\_Pools\_Spas [↑](#footnote-ref-240)
240. https://www.campaspe.vic.gov.au/assets/media-news/513/attachments/pool-fence.pdf [↑](#footnote-ref-241)
241. http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0013/20380/PN-63-2014-Alternative-Solutions-Procedures-and-Documentation.pdf [↑](#footnote-ref-242)
242. [↑](#footnote-ref-243)
243. http://www.vba.vic.gov.au/\_\_data/assets/pdf\_file/0019/21088/PN-39-2014-Building-Appeals-Board-Guide-to-Applications-for-Modification-and-Compliance.pdf See further references *n.26* to *n.31* inclusive above. [↑](#footnote-ref-244)
244. Stakeholders did not generally express a need for additional fee making powers in the Building Act, however this was not the main focus of the consultations undertaken. [↑](#footnote-ref-245)
245. Local Government Victoria 2015, Victorian Local Government Comparator Groups, LGPRF PRACTICE NOTE NO.5. [↑](#footnote-ref-246)
246. Further assumptions made in the report to calculate the costs incurred include: The volume for 2015–16 is assumed to be the same as the volume for 2014–15 in the absence of any information that would suggest volumes would change dramatically year on year across these two periods; For Lodgements in relation to works (reg 320), the proportion of lodgements costing $5,000 and above is assumed to 10% reflecting data from the department. [↑](#footnote-ref-247)
247. S 169(1)(d) and s 172(2)(a) of the *Building Act 1993*. [↑](#footnote-ref-248)
248. S 25b of the *Building Act 1993.* [↑](#footnote-ref-249)
249. The fee for site inspections has been removed because proposed reg 268(2) is considered sufficient as it covers the costs associated with fast track hearing. It is the department's understanding that site inspections are only conducted in relation to a fast track hearing. [↑](#footnote-ref-250)
250. Staff costs include the standard salary for the staff grade, on-costs and overheads. Salary was calculated as an average of council EBAs by staff band. On-costs were estimated as 16.5% of staff salary, in line with Government of Victoria (2011), Victorian Guide to Regulation Appendices, Department of Treasury and Finance, Melbourne, p13. This is the most recent version of the guide that includes guidance on an appropriate on-cost multiplier. Where provided, overheads were attained from the data request to councils. Where overheads were not provided, an average of information provided from other councils was applied to the council. [↑](#footnote-ref-251)
251. Non-staff costs included costs associated with stationery, photocopying/printing, scanning, archive boxes and archive retrieval. [↑](#footnote-ref-252)
252. From sample of seven councils. As mentioned above, this is not necessarily representative. [↑](#footnote-ref-253)
253. Councils were not asked to separately cost lodgements above and below $5,000. Discussions with councils highlighted that the cost of processing the lodgements did not depend on the cost of works, and as such, this has been assumed in our analysis. [↑](#footnote-ref-254)
254. From sample of seven councils. As mentioned above, this is not necessarily representative. [↑](#footnote-ref-255)
255. Assumed to be the same as the volume in 14-15. From sample of seven councils. As mentioned above, this is not necessarily representative. [↑](#footnote-ref-256)
256. Proportion of lodgements costing $5,000 and above is assumed to be 90% of total lodgements. This is based on data provided by the department on cost of work estimates by council. [↑](#footnote-ref-257)
257. http://www.dtf.vic.gov.au/Victorias-Economy/Economic-policy-and-guidelines/Indexation-of-fees-and-penalties [↑](#footnote-ref-258)
258. The Victorian Government has a policy of automatically indexing certain fees and fines each year for inflation, so that the value of those fees and fines is maintained. [↑](#footnote-ref-259)
259. The maximum fee was assumed. [↑](#footnote-ref-260)
260. The Victorian Government has a policy of automatically indexing certain fees and fines each year for inflation, so that the value of those fees and fines is maintained. [↑](#footnote-ref-261)
261. Cl A1.1 of NCC Volume 1 and cl 1.1.1 of NCC Volume 2 [↑](#footnote-ref-262)
262. A bushfire attack level reflects the different bushfire intensity levels that a home may experience during a bushfire. These levels are set out in the Australian Standards As 3959. There are 6 levels based on location, vegetation around a property, the distance from a home to individual vegetation types and the slope of a property. [↑](#footnote-ref-263)
263. AS 3959-2009 construction level of BAL-12.5 [↑](#footnote-ref-264)
264. Smaller buildings such as kindergartens tend to have a higher external wall:floor area ratios than large buildings. Therefore, as most of the additional costs associated with BAL ratings relate to external walls and windows, smaller buildings like kindergartens incur a higher % increase than other larger buildings. [↑](#footnote-ref-265)
265. In April 2015, the Minister for Planning approved an amendment to the VPP to extend the operation of clauses exempting those affected by the 2009 bushfires from needing a planning permit (and therefore from compliance with standards in respect of the provision of water for fire fighting and access for emergency vehicles). The rationale for extending the exemption clauses was that at the time there were still residents in the process of rebuilding. [↑](#footnote-ref-266)
266. S 14 and 15 of the *Building Act 1993*. [↑](#footnote-ref-267)
267. S 209 of the *Building Act 1993*. [↑](#footnote-ref-268)
268. S 211 of the *Building Act 1993*. [↑](#footnote-ref-269)
269. S 210 of the *Building Act 1993*. [↑](#footnote-ref-270)
270. S 15(1) of the *Building Act 1993*. [↑](#footnote-ref-271)
271. Rule 1.7 of the CodeMark Rules. [↑](#footnote-ref-272)
272. S 14 and 15 of the *Building Act 1993* and current reg 1402 of the Building Regulations 2006. [↑](#footnote-ref-273)
273. Reg 1404 of the Building Regulations 2006. [↑](#footnote-ref-274)
274. Reg 1405 of the Building Regulations 2006. [↑](#footnote-ref-275)
275. Reg 1406 of the Building Regulations 2006. [↑](#footnote-ref-276)
276. Reg 1408 of the Building Regulations 2006. [↑](#footnote-ref-277)
277. Reg 1407 and reg 1409 of the Building Regulations 2006. [↑](#footnote-ref-278)
278. Reg 1410 of the Building Regulations 2006 [↑](#footnote-ref-279)
279. This proposed change involves moving current reg 110 which provides that, in Victoria, the BCA definition of a State or Territory accreditation authority means the BRAC, into the part of the new building Regulations which deals exclusively with building product accreditation. [↑](#footnote-ref-280)
280. The building standards applied relate to the classification of a buildings, as specified in the National Construction Code. [↑](#footnote-ref-281)
281. See current reg 608(3) of the Building Regulations 2006, which require the entire building to be brought into conformity with current building standards if alterations undertaken within a three year period represent more than half the original volume of the building. [↑](#footnote-ref-282)
282. ABS, 2012, *Year Book Australia*, cat. No. 1301.0 [↑](#footnote-ref-283)
283. Durability in Buildings Guideline ABCB 2006 – Table 1 Design life of buildings and components - p 6 [↑](#footnote-ref-284)
284. The ESM contractor that was consulted as part of the development of the cost-benefit analysis noted that they provided a higher standard of service relative to the rest of the industry, and as such were more costly. An adjustment factor is applied to better reflect average industry costs. [↑](#footnote-ref-285)
285. The eight buildings selected were 120 Collins St, 101 Collins St, Rialto Towers, Bourke Place, Telstra Corporate Centre, 35 Collins St, 55 Collins St and Nauru House. [↑](#footnote-ref-286)
286. Davis Langdon 2013. ‘The Next Wave, Retrofitting Victoria’s Office Buildings’ p.4 [↑](#footnote-ref-287)
287. The lower bound figure of $1.60 per square metre, when applied to the average building, provides a cost estimate below the ESM contractor’s lower bound estimate of $3,000. Thus the average is instead selected as the lower bound estimate. [↑](#footnote-ref-288)
288. Equal to the 10% rate of full compliance, plus an additional 33% of building owners that are assumed to be partially compliant and incur 37.5% of full costs (10% + (33% x 37.5%) = 22.375%). [↑](#footnote-ref-289)
289. PwC assumption informed by the department's surveys with MFB and CFA staff that indicated reporting requirements for owners were not onerous. [↑](#footnote-ref-290)
290. The department's surveys with MFB and CFA indicate that annual ESM reports are relatively simple to complete and as such it is assumed that a cost associated with administrative staff is appropriate. [↑](#footnote-ref-291)
291. Based on VBA survey with building surveyors, average response was 12% compliance with annual ESM reporting requirements. [↑](#footnote-ref-292)
292. The time saving associated with the introduction of a prescribed form is uncertain. Thus a range of 10%–50% is applied to capture the uncertainty of the time saving [↑](#footnote-ref-293)
293. It is assumed that the prescribed form has no impact on reporting compliance rates. [↑](#footnote-ref-294)
294. While there are some building owners that already have a standalone maintenance schedule, we understand that there has been relatively low take-up to date and therefore assume this number to be negligible. [↑](#footnote-ref-295)
295. Consultation with ESM contractor indicated that building owners incurred a cost of about $1,000 to engage a building consultant to upgrade an ESM to a new standard. We assume this approximate cost is incurred to have a maintenance schedule produced (at $215 per hour this equates to 4.65 hours of time). [↑](#footnote-ref-296)
296. Assumed to be undertaken by a PBS. [↑](#footnote-ref-297)
297. We also attempted to determine the number of pools/spas within each period based on scaling up the three survey results from councils (based on their share of the Victoria population in 2015). However, as the resulting total (86,782) was far less than the census suggested, we disregarded this approach. [↑](#footnote-ref-298)
298. For the about 30,000 pools constructed between 2010 and 2015, the department has calculated this estimate based on building permit data supplied by VBA. There have been about 5,000 building permits for new pools/spas each year since 2010. [↑](#footnote-ref-299)
299. By way of context, OLG NSW estimates that there were 320,000 backyard swimming pools in NSW as at 26 February 2015. [↑](#footnote-ref-300)
300. Department of Prime Minister and Cabinet, Office of Best Practice Regulation (2014) Best Practice Regulation Guidance Note Value of a statistical life [↑](#footnote-ref-301)
301. Access Economics (2009) *The economic cost of spinal cord injury and traumatic brain injury in Australia.* Severe traumatic brain injury used as a proxy. Cost escalated using ABS 6401.0 – Consumer Price Index, Australia. [↑](#footnote-ref-302)
302. Access Economics (2009) *The economic cost of spinal cord injury and traumatic brain injury in Australia.* Moderate traumatic brain injury used as a proxy. Cost escalated using ABS 6401.0 – Consumer Price Index, Australia. [↑](#footnote-ref-303)
303. National Coronial Information System (NCIS) via Coroners’ Court of Victoria, Coroners Prevention Unit, May 2015 report to Department of Environment, Land, Water and Planning. Based on this information it appears that 20 of the 28 drownings were related to, apart from a lack of adult supervision, the lack of or condition of a barrier or gate or the propping open of a gate. [↑](#footnote-ref-304)
304. <http://www.abcb.gov.au/Resources/Publications/Corporate/Inter-Governmental-Agreement> [↑](#footnote-ref-305)
305. http://www.austlii.edu.au/au/legis/vic/consol\_act/sla1994250/s8.html [↑](#footnote-ref-306)
306. http://www.ocpc.vic.gov.au/CA2572B3001B894B/WebObj/sla26Guidlines20110818/$File/sla26Guidlines20110818.pdf [↑](#footnote-ref-307)
307. See ABCB IGA, Recitals, page 2 [↑](#footnote-ref-308)
308. See ABCB IGA, cl 6.5, page 10 [↑](#footnote-ref-309)
309. http://www.vba.vic.gov.au/consumers/6-star-standard [↑](#footnote-ref-310)
310. MFB, *Post Incident Analysis Report, Lacrosse Docklands 673-675 La Trobe Street, Docklands 25 November 2014, pp. 29, 32-33* [↑](#footnote-ref-311)
311. VCAT Annual Report 2015/16, page 31 [↑](#footnote-ref-312)
312. Australian Building Codes Board, *Automatic Fire Suppression Systems for Covered Balconies in Residential Buildings – Final Decision RIS,* June 2016, p. 14 [↑](#footnote-ref-313)