Queensland

Building Amendment Regulation (No. 5) 2010

Regulatory Impact Statement for SL 2010 No. 309

made under the

Building Act 1975

Department of Infrastructure and Planning

Swimming pool safety improvement strategy

Regulatory impact statement

This regulatory impact statement has been prepared in accordance with the requirements of the Queensland Government's *Regulatory impact statement procedures and requirements, 2009*.

April 2010

Toward Q2 Tomorrow's Queensland

Queensland Government

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Glossary

BAU	business as usual
BCA	Building Code of Australia
CCYPCG	Commission for Children and Young People and Child Guardian, Queensland
CPR	cardiopulmonary resuscitation
DIP	Department of Infrastructure and Planning
MP	mandatory part
QDC	Queensland Development Code
QISU	Queensland Injury Surveillance Unit
RIS	regulatory impact statement
WPM	with proposed measures
VISAR	Victorian Injury Surveillance and Applied Research System

1 Introduction

1.1 Proposed legislative measures for swimming pool safety

Following recommendations from the independent swimming pool safety committee (the 'committee'), which was established in December 2008, the Queensland Government is proposing measures to improve swimming pool safety in private residences and in non-private dwellings such as hotels, motels, caravan parks, staff and student accommodation. They will be implemented by amending the following subordinate regulation:

- Building Regulation 2006
- Mandatory Part 3.4 of the Queensland Development Code (MP 3.4—Swimming pool barriers).

The proposal will also require changes to the *Building Act 1975*. These documents can be viewed on the department's website at www.dip.qld.gov.au

1.2 Purpose of a regulatory impact statement

Under the *Statutory Instruments Act 1992*, if a proposed regulation is likely to impose appreciable costs on the community or part of the community, a regulatory impact statement (RIS) must be prepared before the regulation is made.

A regulatory impact statement (RIS) is designed to determine whether or not a proposed regulation is the most efficient and effective way of achieving desired policy objectives. It does this by providing a mechanism by which the government's policy deliberations are clearly documented and subject to public scrutiny.

The purpose of this document is therefore to explain the need for the proposed subordinate regulation and to present an evaluation undertaken of the likely costs and benefits that would flow from its adoption in comparison with other options explored.

All members of the community are invited to comment on the information presented in this RIS.

1.3 How to respond to this regulatory impact statement

The closing date for providing comment on this RIS is 5 pm 16 May 2010.
Written submissions should be sent to:

Mail	PO Box 15009, City East, QLD 4002
Fax	+61 7 3237 1248
Email	buildingcodes@dip.qld.gov.au

Public access to submissions

If your submission contains information that you do not wish to be disclosed to others, please mark it 'Confidential'. Respondents wishing to make confidential submissions should be aware of the *Right to Information Act 2009*. Under the Right to Information Act, the Department of Infrastructure and Planning ('the department' hereafter) must, on application, grant access to documents in its possession unless an exemption provision applies. For example, if a submission contains information about a person's affairs (his or her experiences relevant to a matter covered by this regulatory impact statement), and it is in the public interest to protect that person's privacy, the 'personal' information in that submission will not be accessible under the Right to Information Act.

Consideration of issues raised in response to the RIS

After the public comment period closes, the government will consider issues raised by members of the community.

Further consultation may occur to address any concerns raised by the community before the development of a final position by the government.

Further inquiries

Further inquiries can be made by calling Building Codes Queensland on telephone number (07) 3239 6369 or free call 1800 153 262.

1.4 Background

1.4.1 Deaths and serious injuries to young children from immersion incidents

Swimming pools pose a serious threat to young children. This section outlines the incidence of drowning deaths, however many more children suffer brain injuries from immersion incidents.

According to the Queensland Commission for Children and Young People and Child Guardian (CCYPCG) and referring to the last five years:

- drowning is the leading cause of accidental death for children aged 1 to 4 years, accounting for 15.7 per cent of external cause paediatric deaths and occurring at an average rate of 5.2 deaths per 100 000 children in this age group in Queensland per year. Approximately half drown in pools with known fencing defects. This compares with an average annual rate of 3.8 per 100 000 children aged 1–4 years in Queensland as a result of transport incidents.
- deaths from fire and other non-intentional injury occurred at an average annual rate of 3.1 per 100 000 children aged 1–4 years.

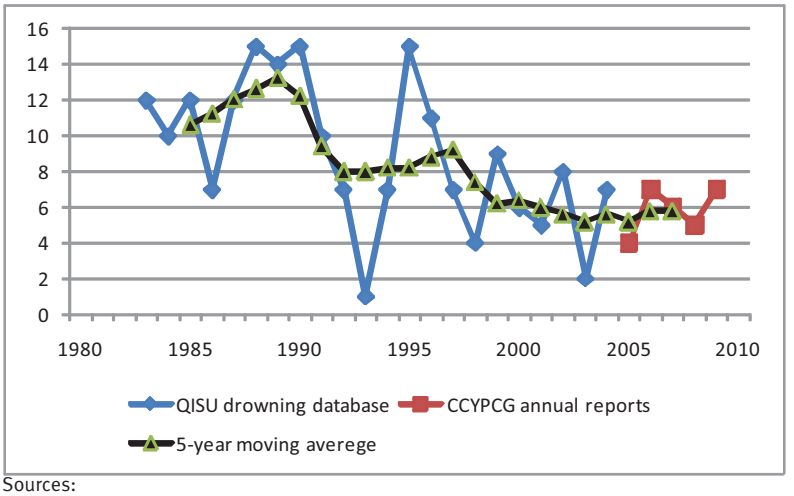
Figure 1.1 reports the number of children aged 0–4 years who drowned in Queensland's domestic pools since 1983. There was a significant decline when statewide pool fencing legislation was introduced in 1991, then further reductions throughout the 1990s before seeming to stabilise at 6–7 deaths per year over the last several years.

In the six years from 1 January 2004 and 31 December 2009, a total of 35 children drowned in residential swimming pools. All except one 5 year old were aged 1–4 years. Nineteen were male and sixteen female. Of these 35 deaths, 31 occurred in in-ground pools (88.6 per cent), one occurred in an above-ground pool, while two occurred in a wading pool/other structure intended for swimming. One death occurred in a homemade in-ground structure that met the definition of a swimming pool as per Department of Infrastructure and Planning guidelines.

The 35 deaths occurred in the following council areas.

- Logan City—6 deaths
- Brisbane City—5 deaths
- Sunshine Coast region—4 deaths
- Gold Coast City—3 deaths
- Ipswich City—3 deaths
- Moreton Bay region—3 deaths
- Cairns region—2 deaths
- Rockhampton region—2 deaths
- Townsville City—2 deaths
- Cassowary Coast region—1 death
- Bulloo Shire—1 death
- Lockyer Valley region—1 death
- Somerset region—1 death
- South Burnett region—1 death

Figure 1.1 Immersion deaths of children aged 0–4 years in Queensland's residential pools: 1983 to 2009



Sources:
Queensland Injury Surveillance Unit (QISU) drowning database, reported by Barker *et al* 2008
Annual reports of the Commission for Children and Young People (CCYPCG)

The proposed measures are designed to complement parental and carer supervision and they are aimed at addressing the fact that most children drown in unfenced pools or in pools with defective fencing. However, several other aspects of the threat to young children have informed the design of the proposed regulations, particularly the proposal for inspections at sale and lease.

The first of these is the enhanced vulnerability of young children in new homes. The committee also noted research indicating that a child is at greater risk of drowning in the first six months of using a new pool. The Royal Life Saving Society provides the following advice in this respect.

> *When a family moves into a new home with a pool, the risk of drowning or near drowning is higher than at other times for two main reasons:*
>
> 1. The surroundings are unfamiliar, so if there is a weakness in the fence, a gate that doesn't always shut automatically or a foothold available allowing excited and inquisitive toddlers to access the pool area, parents are unaware of the additional risk.
> 2. Coupled with the excitement of trying out the new backyard, adults are often distracted by everything else that has to be done to settle into a new home. Therefore supervision—the number one must for children around water—can be compromised.

Second, families with young children are still relatively mobile and, compared with families with older children or empty nesters, are more likely to be purchasing a new home or entering new rental agreements.

Finally, according to fatal immersion data recorded on a national register maintained by Queensland's Hannah's Foundation, 10 of the 14 drowning deaths of young Queensland children between 2007 and 2009 occurred in swimming pools on rental properties. Given that most tenancies are relatively short, it is considered that the vast majority of rental properties will be inspected at least once in the first five years and a sizeable minority will be inspected two or more times.

Non-fatal injuries to young children

It is estimated that for every young child who drowns, seven are presented to emergency departments for immersion injuries. Of the children admitted to hospital, one in five suffers brain damage due to lack of oxygen.

1.4.2 How the proposal was developed

The proposed measures outlined below follow the Queensland Government's receipt of recommendations from the committee that included 23 improvement ideas to the existing pool safety laws. The government responded with a two-stage implementation plan.

Stage one has been implemented. It has applied to newly constructed pools from 1 December 2009 and included provisions to:

- adopt new pool fencing requirements based on the most recent Australian Standard
- allow temporary fencing for pools under construction
- ensure all new swimming pools undergo mandatory final inspections
- update the mandatory cardiopulmonary resuscitation (CPR) signage to meet best practice
- obtain better reporting of immersion incidents from Queensland Police
- triple the Queensland Government's expenditure on its pool safety campaign.

Stage two is the subject of this RIS and section 2 of this document explains the proposal in detail. In brief it is proposed to:

- require existing pool fences to comply with the pool fencing laws that now apply to new pool fences
- require non-complying pool fences to be upgraded over a five-year phase-in period
- extend pool safety laws to class 3 and class 4 buildings (e.g. hotels, motels and caretaker residences) and caravan parks
- remove the exemption for indoor pools and reduce the maximum depth of portable pools that are exempt from 450 mm to 300 mm
- establish a mandatory swimming pool register
- remove existing local government exemptions, other than exemptions for disability
- establish a new class of swimming pool inspectors
- require pool safety certification at the sale and lease of class 1–4 buildings and caravan parks.

1.4.3 The problem that needs to be addressed

Variation in pool fencing standards within Queensland

Queensland's pool fencing requirements are now complex and confusing. The department's pool fencing guidelines (DIP 2008) explain how pool fencing requirements vary with the date of pool construction. Allowing for subsequent changes, there are now six main variations, depending on when the pool was constructed:

- before 1 February 1991
- between 1 February 1991 and 29 April 1998
- between 30 April 1998 and 30 September 2003
- between 1 October 2003 and 31 August 2006
- between 1 September 2006 and 1 December 2009
- on or after 1 December 2009.

There are lesser variations within these periods, to the point where 12 different safety standards can now apply to swimming pools, depending on a pool's age. Additionally, some local governments have exercised options to override the state laws, creating geographic variation.

Variation in pool fencing standards between Queensland and other states

There is also national inconsistency in pool fencing standards.

Queensland's pool fencing laws have been restricted to buildings with pools that are private dwellings—such as houses, flats and apartment buildings.

Most other states extend fencing requirements to non-private dwellings such as boarding houses, hostels, hotels, motels, welfare accommodation and the residential parts of schools and health care buildings and caretaker dwellings.

2 Legislative analysis

2.1 Existing legislative framework

2.1.1 State laws

The Building Act and its subordinate legislation

Section 261 of the *Building Act 1975* provides for the making of regulations with respect to:

- building work
- the occupation of buildings
- building certification
- fees and penalties
- record keeping.

The Building Regulation 2006 is made under section 261 and references the Queensland Development Code (QDC), which consolidates Queensland-specific building standards into a single document. The code covers Queensland matters outside the scope of, and in addition to, the Building Code of Australia (BCA). The QDC prevails in the event of any inconsistency between the QDC and the BCA.

Pool fencing provisions in the Building Act and its subordinate legislation

Chapter 8 of the *Building Act 1975* defines the obligations of pool owners to install pool fencing at the time of construction, how fencing standards are determined and when they apply and how exemptions may be granted and revoked. It provides for fencing standards to be prescribed in a regulation for pool fencing.

Section 237 deals with the replacement of an entire fence that complies with an earlier version of the fencing regulation. An earlier fence must be replaced or repaired to the latest standard if it is demolished or removed or if it is impractical to repair the fence in a manner that keeps it in good condition. This means that, for the purposes of fencing requirements, a replacement fence is a new fence.

Under current pool fencing legislation:

- Section 14 of the Building Regulation 2006 references a mandatory part (MP) of the QDC that specifies pool barrier standards: MP3.4—Swimming pool barriers. MP3.4 took effect on 1 December 2009 as part of the stage one package of measures to improve pool safety.
- MP3.4 is a detailed document but does not exhaustively detail the pool fencing requirement. The complete specification is obtained by referencing the most recent Australian standards for the construction and location of pool fences—AS1926.1-2007[1] and AS1926.2–2007[2]. MP3.4 prevails over AS1926 to the extent of any inconsistency.

Compliance arrangements for pool fences

Section 235 of the *Building Act 1975* requires pool owners to have a fence that complies with the fencing standards and to keep it in good condition.

The arrangements for the inspection and certification of new pool fences are the same as those for buildings generally and some councils have dedicated pool inspection programs.

2.1.2 Local laws

A number of local governments have introduced local laws on non-private dwellings that impose pool fencing requirements and/or define the standard of fencing. Of Queensland's private dwellings, 22 per cent are captured by such laws and the general pattern is that:

- councils have imposed fencing requirements on all public and private pools or have explicitly extended the requirements to class 3 buildings and caravan parks. 'Public pools' include both

[1] AS1926.1–2007: Swimming pool safety—Part 1: Safety barriers for swimming pools

[2] AS1926.2–2007: Swimming pool safety—Part 2: Location of safety barriers for swimming pools

community pools and pools in non-private dwellings such as hotels and motels, boarding schools and student residences, that is, class 3 buildings.

- exceptions occurred where councils extended the requirements to some combination of caravan parks, indoor pools and tourist complexes.
- the fencing standards in local laws have generally been superseded by statewide requirements. Some councils enacted these provisions in the 1970s and 1980s, before the first changes to state law.
- three councils have imposed standards that are more stringent than state law.
- many councils have separately regulated other aspects of pool safety, for example, relating to water quality and behaviour management.
- the local laws have been inherited by the post-amalgamation councils and many apply only in parts of the post-amalgamation local government area.

2.1.3 Insurance requirements

It should be noted that, while not a legislative requirement, insurers often require that pools in class 3 buildings are fenced according to the relevant Australian standards.

2.2 Proposed course of action

The regulatory proposals that are the subject of this RIS include measures that define the minimum standard of pool fences, measures that improve compliance with the proposed standards, and a range of supporting measures. These measures will impose appreciable costs on the community.

2.2.1 Minimum standards for pool fences (or 'proposed regulation')

Section 4 describes the legislative arrangements that have governed the construction of new pools since 1st December 2009, referencing the new mandatory part of the QDC (MP 3.4—Swimming pool barriers).

It is proposed that, from 1st December 2010, that fencing standard also apply to existing pools. The phase-in arrangements would allow five years for pool owners to comply with MP 3.4 except on properties that are sold or leased in the meantime, in which case compliance would be a pre-condition for sale or lease.

At the end of the five-year phase-in period:

- Queensland's pool fencing laws will govern existing pools in class 1, class 2, class 3, and class 4 buildings and caravan parks.
- Queensland's pool fencing laws will govern portable swimming pools that are more than 300 mm deep.
- The exemption that currently applies to indoor pools will be removed.
- All pools will be subject to the same minimum standards under state law, eliminating the complexity and confusion that is associated with the multiple standards under which existing pools have been constructed.
- All non-disability related exemptions will be revoked.

2.2.2 Inspections regime for pool fences (or 'compliance measures')

It is not proposed that there be mandatory periodic inspections of all pool fences, other than the existing requirement for building certification at the time of construction and on other occasions where building approvals are obtained. However it is proposed that:

- pool owners would be required to provide pool safety certificates at the time of sale or lease
- local governments would be required to inspect pools that have been the subject of a complaint or immersion report
- local governments would be required to inspect pools in body corporate buildings where the body corporate failed to produce a pool safety certificate to enable a sale or lease to proceed
- local governments would be required to periodically remind all pool owners that (a) it is

sensible to have their pools inspected, and (b) the state government must be notified when a pool is inspected. Local councils would be obliged to send these reminders every four years.

2.2.3 Supporting measures

It is also proposed to implement the following supporting measures:

- a new class of swimming pool inspectors would be established
- a swimming pool register would be established, with pool owners obliged to register their pools before 1st June 2011, which is six months after the implementation date of 1st December 2010
- medical practitioners, nurses and the Queensland Ambulance Service would be obliged to report immersion incidents to the state government. This information will then be forwarded to the relevant local government, triggering obligatory inspections by local governments. Details on these incidents would be recorded by the state government
- local governments would be obliged to provide information such as addresses of pools, changes to pools and disability exemptions granted to the state government.

2.3 Authorising law

The authorising law is the *Building Act 1975* and its subordinate legislation.

2.4 Policy objectives

The primary policy objective is to reduce the number or deaths and injuries caused by accidental immersions in residential swimming pools and in the pools of non-private dwellings like hotels, motels, hostels and caravan parks. Young children under the age of five are most at risk.

Even to a reasonable and diligent carer, it is not intuitively obvious that a child can be highly persistent and inventive in gaining access to a pool. Particularly vulnerable are the children of visitors to a residence with a pool, and the children of new occupants who have not previously had experience with residential pools.

The reason for pursuing the objective through subordinate legislation is to engage the existing machinery of building codes and standards that is familiar to pool suppliers and installers. Subsidiary objectives are to rationalise the current provisions, which have become complex and confusing, and to restrict the ability of councils to impose local requirements that differ from state law.

2.5 Legislative intent

The government's policy objectives will be achieved mainly by: encouraging and requiring greater compliance with pool fencing requirements, reducing the confusion and complexity that is currently associated with those requirements and extending the requirements to pools that are currently exempted. The legislation creates a number of obligations.

Pool owners will be obliged to:

- register their pools
- obtain a pool safety inspection and certificate before selling or leasing the property
- comply with the safety requirements of newly-constructed pools, regardless of when the pool was originally constructed
- upgrade pools to whatever safety requirements are current at the point of sale or lease.

Properties with pools will also be subject to greater rights of entry by local government inspectors.

Local governments will be obliged to:

- participate in the development and operation of a pool register
- inspect pools in response to complaints and reports of immersion incidents, and take the appropriate enforcement action
- periodically advise pool owners that they should have their pools inspected
- inspect pools in body corporate buildings where the body corporate failed to produce a pool safety certificate to enable a sale or lease to proceed

- provide information about pools to the Queensland Government
- no longer impose pool safety requirements that are already dealt with under state law.

Medical practitioners, nurses and the Queensland Ambulance Service will be obliged to:

- report immersion incidents to the state government. This information will then be forwarded to the local government and the Queensland Commission for Children and Young People and Child Guardian (CCYPCG).

The Queensland government will establish a new class of **pool safety inspectors,** who will be obliged to:

- undergo suitable training and be licensed.

2.6 Consistency with the authorising law

The primary objectives of the *Building Act 1975* and its subordinate legislation are to safeguard public health, safety and the welfare of the community now and in the future. The proposed measures are consistent with the objectives of the legislation.

2.7 Consistency with other legislation

The Department of Infrastructure and Planning is not aware of any inconsistency between the proposed measures and other state legislation.

3 Stakeholder analysis

3.1 Impacted stakeholders

The proposed measures will mainly affect pool owners and local governments.

3.1.1 Pool owners

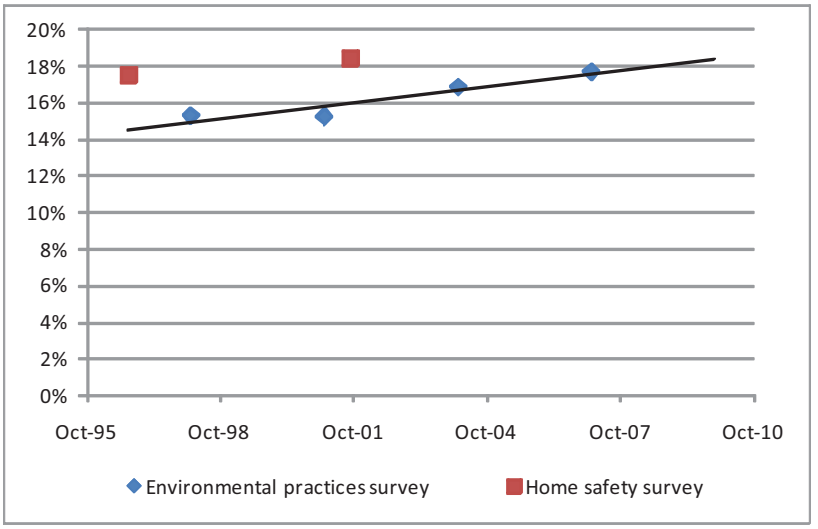
The proposed measures will affect the owners of existing pools at private dwellings and in certain non-private dwellings. Private dwellings are houses, flats and units. Non-private dwellings are buildings like hotels, motels, hostels, boarding schools, student residences and welfare accommodation.

Private pools in private dwellings

There is currently no way of determining how many properties have swimming pools. The ABS has conducted periodic surveys that, amongst other things, provide estimates of pool ownership in houses, flats and units—see figure 3.1. The count is confined to private pools, that is, it excludes 'shared pools' that can be accessed by the occupants of an apartment building or a housing development. Most shared pools are part of 'community property' under community title arrangements.

The estimates are from two ABS surveys, one focusing on environmental practices, the other on home safety. The former simply asked only about 'pools' but the latter asked explicitly about wading pools and spas and this is probably why the latter returned higher estimates.

Figure 3.1 ABS estimates of the proportion of Queensland households with swimming pools: 1996 to 2007



Sources:

ABS 4387.3 Survey of safety in the home, Queensland

ABS 4602.0 Environmental issues: people's views and practices

The latest survey information is for March 2007 but pool ownership is clearly on an upward trend. Linear extrapolation has been used to obtain estimates for December 2009, which are reported in table 3.1.

Table 3.1 Estimated pool ownership amongst Queensland households, December 2009

	Number	*% of total households*	*% of households with pools*
Total households	1 674 000		
Households with pools			
in-ground or above-ground pool	300 300	17.9%	89.6%
wading pool	20 000*	1.2%	6.0%
outdoor spa	15 000*	0.9%	4.5%
total	335 300	20.0%	100.0%

Source: extrapolations from ABS 4387.3 and ABS 4602.0

* There is limited and somewhat conflicting evidence on the number of wading pools and spas.

The ABS home safety survey also documented differences in pool ownership between households with and without young children. Young children are children aged 0–4 years inclusive, but a household is defined as having young children if young children are resident or a young child has visited at least once per week in the four weeks prior to the survey. Key findings are that pool ownership is lower in households with young children but that the incidence of wading pools is much higher—see table 3.2. Note that the latest data is for October 2001.

Table 3.2 Differences in pool ownership between households with and without young children: October 2001

	Households with young children		*Households without young children*	
Total households	360 500		1 049 400	
Households with pools				
in-ground pool	13 800	3.8%	166 400	15.9%
above-ground pool	5600	1.6%	22 600	2.2%
wading pool	12 500	3.5%	5700	0.5%
outdoor spa	4 000	1.1%	9000	0.9%
total	35 900	10.0%	203 700	19.4%

Source: ABS 4387.3 Survey of safety in the home, Queensland

It is apparent from interstate comparisons that there are large regional differences in pool ownership and that these reflect climatic differences. For example, the most recent ABS survey (March 2007) returned a low of 3.8 pre cent for Tasmania and a high of 28.9 per cent for the Northern Territory. Queensland was second-highest at 17.9 per cent. There are likely to be significant differences within Queensland but these are poorly documented.

There are also large differences in pool ownership by socio-economic status. This is based on the estimates in table 3.3—see the note to the table for an explanation of the methodology. This analysis indicates that:

- There is a strong positive relationship between socio-economic status and pool ownership.
- There are lower but not insignificant levels of pool ownership in areas with low socio-economic status. Socio-economic groups 4 and 5 have ownership rates of about 6 per cent but are in areas that are ranked in the bottom 20per cent in terms of the socio-economic index.
- About 50 per cent of the houses with pools are in areas that are ranked in socio-economic groups 6 and 7, and have pool ownership rates of 10–23 per cent.

Table 3.3 Pool ownership by socio-economic status, detached houses*

Socio-economic group	Index range*	% of occupied houses in each group	% of houses with pools
1	621 to 683	0.1%	0.0%
2	683 to 745	0.2%	0.0%
3	745 to 807	1.0%	2.1%
4	807 to 869	5.4%	6.2%
5	869 to 931	17.1%	5.8%
6	931 to 993	24.3%	10.6%
7	993 to 1055	24.8%	22.7%
8	1055 to 1117	17.8%	25.0%
9	1117 to 1179	8.0%	27.2%
10	1179 to 1243	1.3%	44.1%
Total		**100.0%**	**16.7%**

Note:

* This breakdown has been organised around the Socio-economic Indexes for Areas (SEIFA) that have been devised by the ABS. These indexes are composite scores for geographic areas that use 21 measures from the 2006 census, including the area's profile in terms of income, internet connections, occupation and education. A low score indicates relatively greater disadvantage and a lack of advantage in general, whereas a high score indicates a relative lack of disadvantage and greater advantage in general. The ABS has calculated indexes for each of Queensland's 7458 census collection districts (CDs) and the Index of Relative Socio-economic Advantage and Disadvantage has been used, which ranges from a low of 621 to a high of 1243.The CDs have been ranked by the index and randomly selected 110 CDs, but with a minimum of 10 areas from each of the 10 socio-economic groups in table 3.3, as indicated in table 3.3, the 10 groups are defined by equal increments of the index. At least 10 properties at each location have been randomly selected, for a total of 1887 detached houses and 126 buildings that contained some other form of attached dwelling (semi-detached houses, flats or units). Aerial photographs in Google Maps, as at December 2009, were then used to identify properties with swimming pools.

Shared pools in private dwellings

Most pools that are shared by the occupants of private dwellings are community property under community title arrangements. There would also be pools on wholly-owned investment properties that provide rental accommodation, particularly at tourist destinations.

The Australian Resident Accommodation Managers' Association has provided an estimate of between 8000 and 9500 swimming pools in bodies corporate in Queensland. To support this estimate, sample survey data has been used indicating that the proportion of multi-unit buildings (flats, units, etc) with pools is considerably lower than the proportion of detached dwellings with pools, around 10 per cent. This means that, allowing for the multiple dwellings in each such building, the ratio of pools to dwellings must be considerably lower again. 'Ballpark' estimates have been developed that show that the ratio of pools to multi-unit dwellings (not buildings) is 2:100 at most, and there are 10 000 such pools. The estimates have been developed as follows.

- A total of 126 multi-unit buildings were identified in the sample survey that is reported in the notes to table 3.3. Thirteen of these had outdoor pools, or about 10 per cent.
- A proportion of the larger multi-dwelling buildings would have indoor pools but, given the preponderance of multi-dwelling buildings with 20 or fewer lots (91 per cent), indoor pools in the larger buildings would not add significantly to the total.
- Based on information provided by the office of the Commissioner of Body Corporate and Community Management, the average multi-unit dwelling has about nine dwellings. The ratio may be somewhat lower if there are a large number of small multi-dwelling investment properties that are excluded from this data. It is assumed that the average is only five dwellings per multi-unit building.

- It follows that the ratio of pools to dwellings is 2:100, that is, 10 per cent divided by five.
- Extrapolation from 2006 census data suggests that there are now about 500 000 such dwellings, which puts the number of pools at 10 000 (= 2 per cent * 500 000).

Non-private dwellings and caravan parks

Table 3.4 reports an estimate of the number of pools in non-private dwellings and caravan parks, obtained as follows.

- The ABS provided a count of occupied non-private dwelling at the 2006 census, and the latest ABS census of tourist accommodation[3] returned a total of 326 caravan parks for Queensland.
- For the major types of property (hotels, motels and caravan parks) a large survey was conducted using the lists generated by Google Maps, with a sample survey of 260 properties.
- Smaller surveys were conducted of boarding schools and student residences and the incidence of pools was recorded.
- An informed guess was made about the remainder.

There is moderate confidence in the total count of 1300 pools, obviously a small component of the total. There is a high incidence of pools in the non-private dwellings at tourist destinations.

[3] ABC cat. 8635.0 *Tourist Accommodation, Australia*, The survey also provides an estimate for licensed hotels, motels and guest houses with five or more rooms, totalling 1034 at the September 2009 survey. This is consistent with the higher estimated for hotels, motels and B&Bs in table 3.4, which has no room limit and included B&Bs.

Table 3.4 Pools in non-private dwellings

*Type of non-private dwelling, census categories**	*Count of non-private dwellings at the 2006 census*		*Pool ownership in non-private dwellings*	
	Number	*% of total*	*Estimated % of dwellings*	*Number*
Hotel, motel, bed and breakfast	1820	57.30%	55%	1001
Staff quarters	305	9.60%	5%	15
Boarding house, private hotel	208	6.55%	10%	21
Hostel for the disabled	114	3.59%	20%	23
Hostel for homeless, night shelter, refuge	96	3.02%	0%	0
Other welfare institution	79	2.49%	0%	0
Residential college, hall of residence	73	2.30%	60%	44
Boarding school	62	1.95%	80%	50
Prison, corrective institution for adults	47	1.48%	0%	0
Nurses' quarters	43	1.35%	0%	0
Childcare institution	3	0.09%	0%	0
Caravan park	326	10.26%	45%	147
Total	**3176**	**100.00%**		**1300**

Note:

* The census definition of a non-private dwelling also includes health and aged care buildings.

Sources:

ABS, special tabulation from 2006 census for properties other than caravan parks

ABS Survey of Tourist Accommodation for the count of caravan parks.

3.1.2 Local governments

Councils were surveyed to collect information about pool safety policies and programs, including some indications of cost. Responses were obtained from 22 of Queensland's 74 local governments, either by phone or self-completed survey. The 22 councils included Brisbane, Gold Coast and a number of other large councils and, overall, the respondents accounted for 74 per cent of Queensland's dwellings. Pool registration and inspection practices were the main focus of the survey. Table 3.5 summarises the results. Given the very large differences in the size of councils, the responses have been reported in terms of both the unweighted proportion of councils and the dwelling-weighted proportion of councils. The following discussion is in terms of the dwelling-weighted returns.

Pool inspections

Pool inspections are currently conducted by local government as:

- part of the building approvals process
- in response to a complaint, incident or requests or
- as part of mandatory safety inspections that are conducted on a periodic basis or as resources and priorities permit.

The key findings are as follows.

- few councils (5.4 per cent) conduct systematic searches for unapproved pools
- a minority of councils (17.5 per cent) currently conduct periodic pool safety inspections with some past inspection programs ceasing for reasons of resource priority or pool owner resistance
- pool fence inspections can be carried out by staff who are not building certifiers.

Table 3.5 Pool registration and inspections arrangements of Queensland's local governments

	*% of LGAs**	*% of dwellings***	*Average*	*Maximum*	*Minimum*
A. Incidence of pool safety policies and programs					
Pools recorded in property information system	59.1%	81.9%			
Separate swimming pools register	14.3%	5.9%			
Follow-up on final inspection	45.0%	16.2%			
Systematic searches for unapproved pools	15.0%	5.4%			
Systematic safety inspections (other than complaints and requests)	13.6%	17.5%			
Statistical reports	25.0%	13.4%			
Cost recovery arrangements	35.0%	23.9%			
B. Capacity to record pool details recorded on property information system					
Owner's name and address	71.4%	87.6%			
Property address	76.2%	87.9%			
Pool's date of construction	52.4%	81.2%			
Details of regulatory exemptions or variations that have been granted	52.4%	51.6%			
Details of approved modifications after pool fence was constructed	55.0%	51.6%			
Details of inspections and approvals	65.0%	52.9%			
Details of compliance/enforcement actions	71.4%	53.9%			
Details of drownings, near-drownings and complaints	33.3%	13.1%			
C. Cost parameters for pool inspections, other than building inspections					
Number of inspections completed in an average day			9.2	30.0	4.0
Average onsite time (minutes)			40.4	90.0	15.0
Average onsite inspection time, excl. educational tasks (minutes)			22.7	45.0	15.0
Total hours per inspection, including travel and administration (hours)			2.9	6.0	1.0
Source: survey of councils, with 22 responses from Queensland's 74 councils					
Notes: * unweighted proportion of councils that responded to survey, unweighted, ** dwelling-weighted proportion of councils that responded to the survey					
Memo: vendor shares of council property information systems (complete count, not sample survey)					
In-house software	2.7%	37.5%			
Civica (Practical or Authority)	71.6%	19.6%			
TechnologyOne (Proclaim)	12.2%	19.6%			
Infor (Pathway)	8.1%	23.2%			
Other	2.7%	0.1%			
Total	100.0%	100.0%			

Average inspection times and resources are reported in panel C of table 3.5. A key variable is the extent council inspectors respond to the owner's need for information and advice. This differs in the importance attached to the information and advice function, and this may reflect the mix of inspections that they undertake. Councils that conduct uninvited inspections may find that they need to spend more time educating owners.

Councils were asked about inspection fees but only a limited response was obtained. Not all councils seek to recover costs but, of those that do, the range of fees is broad. Cairns Regional Council charge the lowest fees for 'pool fence inspections', at $80 per inspection with Redland, Scenic Rim and Sunshine Coast charging fees of $300 or more. Other councils charge in the range of $150 to $250.

It is proposed that local governments will be required to inspect pools following a complaint or immersion incident and would be required to inspect pools in body corporate buildings where the body corporate failed to produce a pool safety certificate to enable a sale or lease to proceed.

The pool inspection function of local government should not be impacted by the proposed sale and lease pool safety certificate compliance mechanism as councils could still conduct a periodic inspection program if desired, although it may not be considered as necessary.

Pool registers

Most councils record basic information about pools in their property information systems, including address, construction date and property owner's details. About half also record approvals, inspections and other compliance information.

Brisbane and Gold Coast, have developed in-house property information systems and almost all of the remainder use the software of one of three vendors, Civica, Infor and TechnologyOne.

The completeness of council pool registers varies with purpose-built vendor systems widely adopted by councils in the 1990s. At this time decisions were made about migrating data from older computer systems with some councils opted for exhaustive transfer and others opted for various degrees of partial transfer.

A vendor reported that many property information systems will not have pool records from the period before 1996, however some of the missing information will have been preserved in legacy property information systems and in ongoing satellite databases.

Local governments may continue to operate an independent pool register as part of their property information processes however they would be required to initially provide data on all pools and disability related exemptions to populate the state pool register and to ensure the integrity is maintained when pools or exemptions are approved or removed.

3.2 Preliminary stakeholder consultation

The department has consulted with other state departments, local governments, Royal Life Saving Association Queensland, Housing Industry Association, Local Government Association of Queensland, Australian Institute of Building Surveyors, Master Builders, Swimming Pool and Spa Association, Royal Institute of Chartered Surveyors, Residential Tenancy Authority, Office of Fair Trading, Australian Medical Association Queensland, Real Estate Institute of Queensland, Qld Law Society, Property Owners' Association of Queensland, Queensland Commission for Children and Young People and Child Guardian and software vendors, mostly in relation to the current status of property information systems, pool registers and pool inspection programs and the implementation of the proposed stage two of the pool safety program. This has been mainly to gather information but the department also has feedback on the following matters.

Preferred option for state-wide pool registration

As part of the survey that is reported in section 3.1.2, councils were asked to consider the following options for the development of a pools register and to express a preference.

Option 1: State will develop and maintain a whole-of-state system and input the data, making access to this data available to councils

Option 2: State will develop and maintain a whole-of-state system but local governments will input data and have access to this data

Option 3: State will develop and distribute a system that councils would implement locally, and periodically provide data to the state

Option 4: Other

Of the 12 councils that responded to this question, eight preferred option 1, three preferred option 3 and one preferred option 4. The latter preferred that councils develop their own pools registers and periodically provide data to the state, which is a variation on option 3.

The department expresses its gratitude for the information and comments that stakeholders have provided.

4 Options and alternatives

4.1 Shortlisted policy options

The major policy alternatives examined in this section focus on the implementation of a sale and lease compliance measure and the requirement for all pool owners to comply with the new standard.

A sub-option examines the pool safety inspection regime to determine the reduced cost of allowing pool inspectors to undertake and self-certify minor works as part of the inspection program.

4.1.1 The three main policy options

Business as usual (BAU): This option is sometimes called the 'do-nothing' option, but this does not mean that the incidence of accidental immersions would be unchanged in the absence of the proposed regulations. Other measures, such as local government initiatives and the state government's pool safety awareness campaign, would affect business as usual outcomes.

Compliance only measures: This option is to implement the compliance and enforcement measures only (inspections and related measures), leaving the fencing requirements unchanged (also referred to as 'inspections regime for pool fences' under section 2.2.2).

Proposed regulation: This option is to implement the complete package of measures that is outlined in section 5, both the compliance and enforcement measures and the uniform fencing requirement (also referred to as 'minimum standard for pool fences' under section 2.2.1).

Hereafter, the following three scenarios will be referred to:

- BAU scenario—business as usual
- COM scenario—compliance only measures
- WPM—with proposed measures

This means that the assessment is in two stages. First the incremental costs and benefits of the COM relative to BAU is assessed and then the incremental costs and benefits of the WPM relative to COM.

4.1.2 Sub-options relating to the inspections regime

Pool safety inspections will often identify defects and areas of non-compliance that only involve minor repairs, avoiding the need to undertake an expensive building approval process.

The Queensland Government is exploring the possibility of allowing properly licensed inspectors to self-certify minor repairs. This would reduce costs incurred by the pool owner by avoiding multiple inspections, for example, to first identify defects, then to check whether the remedial work is satisfactory, and re-inspect if the remedial work is defective.

Many pools would require only one visit from a self-certifying contractor, to identify the problems, do the repairs and issue the safety certificate. Others may require a number of visits but generally not a special visit to do a final inspection.

4.2 Other options

Some detailed aspects of policy implementation have yet to be finalised, as follows.

- The proposed pools register will provide statewide coverage but both centralised and decentralised options are still being considered.
- A new class of swimming pools inspectors will be created but the details of the training requirements and certification have yet to be decided.
- The 'sighting' of pool safety certificates at the point of sale or lease will need to be recorded by means that have yet to be decided.

Comment is invited on these matters but consider that, other than the need to identify the least-cost administrative solutions, they are not critical to the assessment of the proposed measures.

More substantive policy variations would involve significant changes to the overall regulatory approach. For example, the approach could be relaxed by adopting a policy of providing information and advice about pool safety and strongly encouraging the installation of pool fencing, but only voluntarily. It could be tightened by requiring all pools to be periodically inspected, for example, on a four or five-year cycle.

Regarding the 'information and advice' approach, it should be noted that the government accepted a recommendation from the committee (DIP 2009: page 20) that significant additional funding be provided for annual education and awareness campaigns. Education and awareness is regarded as complementing fencing regulations, not as a substitute for fencing regulations.

The committee also considered the option of periodic mandatory inspections. In Western Australia for example, councils are obliged to have pools inspected every four years. The committee recognised the cost advantage of organising inspections in batch mode (that is, on an area-by-area basis) and possibly by using organisations with relevant expertise, such as the Royal Life Saving Society. But the committee preferred inspections at point of sale or lease because, statistically, the greatest danger to children is in the first six months after the family first occupies the dwelling.

5 Business compliance costs

Business compliance costs are the administrative and paperwork costs of meeting regulatory requirements, defined as follows:

- *Notification:* costs of reporting transactions before or after the event
- *Education:* maintaining awareness of regulations and regulatory changes
- *Permission:* applying for and obtaining permission
- *Purchases:* materials and equipment required for compliance
- *Record keeping:* keeping statutory documents up-to-date
- *Enforcement:* facilitation of audits and inspections
- *Publication and documentation:* displays and labels
- *Procedural:* required compliance activities such as fire drills and safety inspections

The administrative procedures associated with the proposed measures will touch on the operations of local governments, pool owners and various businesses, although not all of these are compliance costs as defined here. A discussion was organised to deal separately with the pools register, the creation of a new class of swimming pool inspectors and the obligation for pool owners to present a safety compliance certificate at the point of sale or lease.

Costs to local governments

Local governments may incur some costs for the now mandatory inspections and providing information to the register (see section 3.1.2 for information on local government responsibilities).

Costs to pool owners

As outlined in section 5.3, pool owners will incur costs for:

- registration of pool safety compliance certificates
- building certification charges (where works exceed $3000 or would otherwise require a building approval)
- pool fence compliance costs.

5.1 Pools register

It is anticipated that the pools register and the requirement to register pools will be implemented by legislation not by subordinate legislation and therefore does need to be assessed in the RIS. The material in this section is to provide background only.

Administrative arrangements

It is assumed for the purposes of consultation that the pools register will take the form of a single centralised web-based database that is operated by or on behalf of the Department of Infrastructure and Planning. It is also assumed that:

- the register will record information about swimming pools, swimming pool inspections and swimming pool exemptions and alternative solutions[4]
- pool owners will be able to register their pools online but will also be able to register pools by email, fax or mail
- councils will be obliged to submit online registrations for all existing disability related exemptions and any subsequent variations to those exemptions[5]
- councils will be obliged to submit online registrations for all existing alternative solutions involving swimming pools
- councils will be obliged to submit online registrations for each new pool at both the approval and the final inspection stage, including details of any exemptions

[4] Pool owners may apply to their local governments to be exempted from pool fencing requirements on grounds of disability. Local governments can allow exemptions if they are satisfied with whatever alternative safety measures are proposed. An appeals process will be implemented where pool owners may request an alternative solution where strict compliance is cost prohibitive and physically impractical.

[5] Exemptions are only granted for the period of the disability and should be terminated when the grounds are no longer valid.

- swimming pool inspectors will be obliged to submit online registrations for each inspection of an existing pool resulting in a pool certificate
- certain details about all registered pools will be publicly available and the register will have the appropriate search functions.

It is anticipated that:

- councils will be able to access data on pools registered and inspections completed either through access to the module maintained by the department or through periodic notification of pool inspections that have been registered for their area (say, on a monthly basis), fulfilling the obligation on owners to notify councils about the results of inspections.
- real estate agents, lawyers and conveyancing practitioners will use the register to check the status of a property at the time of sale or lease. The presence of a current safety certificate will be taken as evidence that the appropriate inspections have been carried out and that the pool fencing is compliant.

It was considered that most councils have information about pools and, with relatively little effort, could export that information to the register. But these records are not always complete and, if partial information is provided, individual pool owners would be uncertain whether their pools are registered. At this stage it is anticipated that pool owners will be required to individually register their pools and that any information from councils will be used only to cross-check for gaps. The nature of the request for council information has yet to be determined.

Compliance costs

Pool registration will be free however there will be a small fee to register pool safety certificates (see section 5.3). Pool owners may incur some minor inconvenience associated with reissuing a pool certificate or to search details of compliance.

5.2 Pool safety inspectors

Administrative arrangements

In addition to complying with the reporting requirements of the pools register, pool inspectors will need to:

- comply with training and certification requirements (educational action)
- maintain awareness of regulations and regulatory changes (educational action)
- keep records of pool inspections, since not all relevant information will be deposited on the register (record keeping action)
- facilitate audits (enforcement action).

Pool inspectors can be sourced through councils or private operators can be contacted directly by the pool owner. Figure A.1 in appendix A provides an overview of the process for obtaining a swimming pool inspector's licence. It is expected that many of the applicants will be drawn from occupations that already have some exposure to the issues, for example:

- contractors who are licensed by the Building Services Authority (BSA) to construct, install or maintain swimming pools
- pre-purchase building inspectors
- public pool managers (particularly in remote areas)
- pool shop operators
- yard maintenance operators
- the Royal Life Saving Society.

Each operator will need to assess the market for inspection services, their competitive position, and how best to integrate inspections with fence construction and repairs. In some cases they will need to separately consider the scope of their licences to construct, maintain and repair fences. The department has not attempted to assess these matters or to otherwise offer business advice. However, table 5.1 provides an indication of the compliance costs and insurance charges that inspectors will incur.

Compliance costs

Annual compliance costs has been estimated at $6590 per inspector, as shown in table 5.1.

- Panel A reports the 'time costs' in terms of compliance days.
- Panel B reports the financial costs.
- Panel C reports the sum of the time and financial costs in annualised form.

Table 5.1	Estimate of annual compliance costs for pool inspectors	
A.	**Compliance days (per inspector)**	
Incurred once in 10 years		Days
	Training and certification	5.0
Annual		
	Training and certification	0.5
	Maintain awareness of regulatory changes	0.5
	Keep pool inspections records in auditable form	1.0
	Otherwise facilitate departmental audits	0.5
	Total	2.5
B.	**Professional fees and charges (per inspector)**	
Training and certification		$
	Incurred once in 10 years	$500
	Annual	$250
Annual insurance charges*		
	Professional indemnity	$4,500
C.	**Annual or annual equivalent** costs (per inspector)**	
Compliance days @ $50/hour		$1270
Professional fees and charges		$5820
Storage of records for audit purposes		$500
Total		$6590

Note:

* It is anticipated that bulk insurance will be organised by companies/peak bodies and be available to many inspectors at a lower cost.

** The annual equivalent of the once only costs is calculated by assuming that the cost is spread over 10 years in such a way that the discounted value of the annual payments is equal to the once-only expense.

5.3 Pool safety certifications

Administrative arrangements

Pool owners will incur the costs of certification and will also pay an administration fee to register pool safety certificates that have been generated by the pool inspection and building approval processes. This fee is designed to recover the cost of administering the pool safety program and is likely to be small, probably $10 to $30. For the purposes of this document, a fee of $20 for the registration of all pool safety certificates has been assumed.

It is expected that swimming pool inspectors will do the bulk of pool safety certifications. As also explained in section 4.1.2, this will be organised as either a self-certification regime or an independent certification regime, or some mix of the two. Self-certification would be at least partly integrated with the normal commercial process of on-site client consultation and provision of a quote, works, then client sign-off and billing. At a minimum, it would dispense with a final inspection because the contractor is on-site to see the work finished.

Independent certification will be a more structured process such as that shown in figure A.2 of Appendix A and would typically require at least two visits from the safety inspector, to identify the repairs that will be needed and, later, to confirm that the repairs have been carried out.

But not all certifications will be performed by pool safety inspectors. As explained in section 4.1.2, building approvals will be required for new and replacement fences and for any repairs that cost more than $3000. Local governments will register these approvals in the pools register in the same way that they register the construction of new pools, and a pool safety certificate will be recorded against the pool. The possible outcomes in this situation are that:

- some pool owners in this situation will anticipate that they need a new fence or expensive repairs and initiate the building process directly
- others will have an inspection done and find that a building approval is needed
- probably, others will find ways to avoid the building approval, for example, by having the repairs done and obtaining a certificate from a pool inspector who is unaware of the history of the pool or the nature of the repairs.

The distinction between the work of pool safety inspectors and building certifiers is important in the context of this RIS. This is because the registration and certification measures will be implemented by legislation, not by regulation, and it is only the regulatory components of new programs that are included in a statement of regulatory impacts. In relation to pool certification, the regulatory impacts arise solely from the regulatory requirement to obtain a building permit for certain types of fencing work. Thus, the costs of the pools register are not 'regulatory impacts', and neither are the compliance costs that are associated with the new class of pool inspectors and their pool certifications.

Finally, the associated compliance tasks of 'sighting' the pool safety certificate will be minor, since real estate and conveyancing agents will be able to search the online register.

Compliance costs

Owners will pay building certification charges of between $450 and $650 where there is no fence or the fence has been partly demolished or is otherwise structurally unsound and the repairs will cost more than $3000. An average charge of $550 is assumed.

To estimate the aggregate costs, it is necessary to consider the scale and mix of pool inspection tasks that will arise over the next 5–10 years. Table 5.2 reports the relevant estimates.

In Table 5.2, panel A reports an important breakdown of the stock of pools at December 2009. Note that there are three broad categories:

- *Public pools, shared pools and private pools in tourist accommodation:* These are buildings with such a high turnover of residents that they will need to have a current safety certificate at all times. Public pools are the pools in class 3 buildings such as hotels, motels, student residences and boarding schools. Shared pools are the pools on common property in private dwellings, which was estimated at 10 000. It was estimated that there are somewhat fewer private dwellings (5000) that are used for tourist accommodation and have private pools. This number is inferred from the result of the domestic and international visitor survey conducted by the Bureau of Tourism Research, indicating that tourists and visitors would occupy 25 000 to 35 000 houses, flats and units on an annual basis. Putting aside the shared pools, it was assumed that there are 5000 private pools in this situation.

- *Private pools in other private rental dwellings:* Normal rentals are typically much longer than the few days or weeks of visitor rentals, but most rentals are less than three years. The pools on these properties will need to be certified at least every few years and many will be continuously certified.

- *Private pools in private owner-occupied dwellings:* The final category, owner-occupied dwelling, has the lowest rate of turnover.

In Table 5.2, panel B reports the number of first-time inspections of pre-2010 pools for each of the three categories, with a breakdown by dwelling type. The department is confident that, as shown, all properties in the first two categories will be certified at least once in the first 10 years of the program, and most of these in the first five years. This follows logically from the combination of (a) the requirement to have a safety certificate at the time of lease, (b) short tenures, and (c) the need for public and shared pools to be certified even if only one lot changes hands. There is some uncertainty about the rate of first-time certification of pre-2010 pools on owner-occupied properties, which was put at 30–40 per cent in the first five years and 55–80 per cent in the first 10 years, depending on the type of building. By definition, these properties change hands mainly by sale. The important category of owner occupied separate houses accounts for 80 per cent of the stock of pools, of which was estimated that 30 per cent will require certification in the first five years and 55 per cent in the first 10 years.

This assessment/analysis indicates that there will be rapid 'first time' certifications for properties that have a disproportionately small share of pools (rented properties and flats, units and apartments) but slower 'first time' certification of properties that have a disproportionately large share of pools (owner-occupied separate and semi-detached houses). This is an important judgement that is informed by analysis of (a) a sample of 375 properties offered for rent on a prominent rental website

(domain.com.au), and (b) the sample of approximately 2000 properties that is reported in table 3.3, which allowed the examination of the sales history of a sub-sample of owner-occupied and rented properties. It was found that only 10 per cent of rented houses had pools and only 55 per cent of owner-occupied houses had been sold in the last 10 years. Importantly, however, there will be rapid certification of the pools where young children reside. These are private rental and owner-occupied properties with new occupants, particularly rental properties, which will be certified at the first lease or sale after December 2010.

Overall, it was estimated that almost 40 per cent of pre-2010 pools will be certified for the first time in the first five years, and almost 60 per cent in the first 10 years.

Panel C of Table 5.2 reports the estimates for total certifications, including allowances for repeat certifications and voluntary certifications. Our assumptions for repeat certification of pre-2010 pools are reported in the note to Table 5.2. Including repeats, it is expected that there will be approximately 0.5 million certifications in the first 10 years of the program. Given that picture of the certification task, it remains to provide an estimate the number of building approvals that will be required, which will be a subset of these 0.5 million certifications.

It seems likely that a building approval will be required for a sizeable minority of the first certifications of pre-2010 pools but for very few for repeat certifications or for pools that are built after December 2009, when the current pool fencing standards were introduced. Based on our review of the types of fence repairs that will be required, which is reported in more detail in section 6, it was estimated that about 50 000 of the fences that are repaired or replaced in first 10 years of the program repairs should have a building approval. However, it would not be difficult to avoid the formalities in many cases, for example, by having the repairs carried out and obtaining certification from a pool inspector who is ignorant of the history of the fence or the cost of the repairs. It is assumed that 40 000 building approvals will be obtained in the first 10 years of the program. At an average cost of $550 per certification, the total cost is $22 million.

Significantly fewer building approvals would be required in the absence of the uniform fencing requirements, that is, if the 'compliance only' option were adopted. Based on our review of the types of fence repairs that will be required, it is estimated that 23 000 would require a building approval at a cost of $13 million.

Table 5.2 Estimate of pool safety certifications in the first 5 years and first 10 years of the program

	A. Stock of pools at December 2009, excluding exempt wading pools		*Pool safety certifications in the first 5 years, to Dec 2015*		*Pool safety certifications in the first 10 years, to Dec 2020*	
			B. 'First time' sale and lease certificationsof pre-2010 pools			
Public pools, shared pools and private pools in tourist accommodation						
public pools in non-private dwellings	1300	0.4%	100%	1300	100%	1,300
shared pools in private dwellings	10 000	3.0%	100%	10 000	100%	10,000
private pools in private tourist accommodation	10 000	3.0%	100%	5000	100%	10,000
subtotal	21 300	6.3%	100%	16 300	100%	21,300
Private pools in other private rental dwellings						
separate houses	33 800	10.0%	85%	28 730	100%	33,800
semi-detached houses	1300	0.4%	90%	1170	100%	1,300
flats, units and apartments	2300	0.7%	95%	2190	100%	2,300
subtotal	37 400	11.1%	86%	32 090	100%	37,400
Private pools in private owner-occupied dwellings						
separate houses	265 200	78.8%	30%	79 560	55%	145,900
semi-detached houses	7200	2.1%	35%	2520	70%	5,000
flats, units and apartments	5400	1.6%	40%	2160	80%	4,320
subtotal	277 800	82.6%	30%	84 240	56%	155,220
TOTAL	336 500	100.0%	39%	132 630	57%	192,600
			C. Total certifications, including repeats*			
Sale and lease certifications, including repeats						
pre-2010 pools				231,200		466,300
post-2010 pools				4,900		18,700
subtotal				236,100		485,000
Voluntary certifications				16,800		33,600
TOTAL				252,900		518,600

Note:
* Repeat certifications of pre-2010 pools are assumed to occur at the following rates: public pools in non-private dwellings and shared pools in private dwellings—3 and 8 repeats in the first 5 and 10 years respectively; private pools in private tourist accommodation—2 and 4 repeats in the first 5 and 10 years respectively; private pools in other private rental dwellings and in owner-occupied flats, units and apartments—1.5 and 3 repeats in the first 5 and 10 years respectively; pools in owner occupied houses—4 per cent and 12 per cent repeats in the in first 5 and 10 years respectively

Table 5.3 provides a summary statement that includes the impacts of the pool certification requirements, but distinguishing building approvals as the only regulatory impact.

Table 5.3 Summary statement of the impacts of the pool certification requirements

	Program option	
	Compliance only measures	*Proposed measures, both compliance measures and uniform fencing requirements*
Total certifications	518 600	518 600
Revenue from certification fee at $20/certification ($m)	10.4	10.4
Regulatory impacts		
Number of building approvals	23 000	40 000
Cost of building approvals at $550/approval ($m)	13.0	22.0

6 Cost-benefit assessment

This section provides a summary statement of the costs and benefits of the proposed regulations (section 6.1), followed by a more detailed explanation of how the costs and benefits were estimated (sections 6.2 and 6.3).

6.1 Summary statement of costs and benefits

The regulatory impact has two components, the cost of any building approvals that are required and the cost of fence repairs. They arise from (a) the regulatory requirement to obtain a building permit for certain types of fencing work, and (b) the regulatory requirement that pool fences comply with Mandatory Part MP 3.4 of the Queensland Development Code.

Table 6.1 provides a summary statement of costs and benefits, reporting separately for the two program options that were identified in section 4, as follows:

- **compliance measures only**: implement the compliance measures but not the uniform fencing requirements
- **proposed measures**: implement both the compliance measures and the uniform fencing requirements.

Regarding the costs, it is assumed that the compliance regime has no effect on the cost of pool repairs and replacements. However, the program option affects the incidence and cost of building approvals. This is because the requirement for a building approval will be triggered more frequently in the presence of the uniform fencing requirements.

Note that the costs are the incremental costs that would be incurred, that is, after allowing for the repairs and replacements that would occur under BAU conditions. Related to that, while the cost of the proposed measures is $259 million, a large proportion of that cost ($164 million) would be incurred if the existing laws were more rigorously enforced. The incremental cost of the uniform fencing requirements is $95 million, that is, the difference between the cost of the proposed measures and the 'compliance only' option.

The average incremental cost of repairing and replacing pool fences to the proposed standard is $430 over 10 years.

Table 6.1 Summary statement of costs and benefits: 2010 to 2020

	Program options	
	Compliance only measures	*Proposed measures, both compliance measures and uniform fencing requirements*
Costs ($ m)		
Cost of building approvals	13	22
Cost of fence repairs and replacements	151	237
Total costs	164	259
Benefits		
It is not feasible to confidently quantify the benefits in terms of avoided deaths and brain damage to young children. But the measures should create the essential preconditions for 15 fewer deaths and 18 fewer young children suffering brain damage over the 10 years from 2010 to 2020. This may be conservative because the inspection program targets situations in which children seem to be particularly vulnerable, being rental properties and properties that have been newly occupied by a tenant or an owner-occupier.		

Table 6.2 Average cost of repairing and replacing pool fences for the 192 600 pools captured by the proposed measures

	Business as usual	*Compliance only measures*	*Proposed measures, both compliance measures and uniform fencing requirements*
10-year average	$425	$1158	$1588
1-year average	$43	$116	$159
Daily average	$0.12	$0.32	$0.43

Regarding the benefits of the two program options, the department expects that the uniform fencing requirements will be more beneficial because the requirements are more stringent. In particular, they will require rapid phasing out of three-sided fences (where the wall of a building acts as the fourth side of a fence) and because it will be more costly to make incremental changes to existing fences encouraging pool owners to replace pool fences earlier than otherwise. The most recent quantitative research for Queensland uses data from 1992 to 2001 (Barker: undated) and concludes that the risks to children are 10 times higher from pools with three-sided fences than those with four-sided fences.

However, it is not possible to confidently quantify the effects of a more rapid phase out of three-sided fences. There are other important differences between three and four-sided fences, particularly in relation to their proximity to the house and it is apparent that differences in supervisory practices also contribute to the observed differences in the risks associated with three and four-sided fences.

6.2 How the costs were assessed

The measures will require many pool owners to spend more on pool fencing than they would otherwise spend. The range of possible effects is significant. Some pools are unfenced at the present time. Others require only the replacement of a gate latch and a minority will not require repairs. The range of possible defects and compliance issues is apparent from table 6.1, which lists a number of questions that pool owners should ask about their pool fences[6]. It is not intended as an exhaustive list or to discourage pool owners from obtaining professional advice about the condition and status of their fences. But it is informative, in the sense of alerting owners to typical defects and compliance failures.

The department commissioned a quantity surveyor to provide estimates of the cost of the repairs that may be needed. These are reported in table 6.2, but include some modifications and additions in the light of subsequent discussions and developments.

Importantly, table 6.2 excludes the quantity surveyor's estimates of the very high costs that, on one interpretation of MP 3.4, would be incurred to fence a pool that has been constructed so close to the house that there is insufficient space to create a fenced passage that allows a child to gain access to areas outside the pool without going through the pool area. The pool would have to be relocated in the worst cases. MP3.4 is currently being redrafted to make it clear that such costs will be avoided. Specifically, it will require only that, to access the pool area, a child must pass through both the door of the dwelling and a separate gate in the pool fence. It will not be necessary to create a fenced passage to areas outside the pool area.

The department is concerned about any other instances of excessive cost and particularly invites comment on this issue. The department proposes a simple and expedient appeal mechanism to provide alternative solutions in cases where strict retrospective compliance is unreasonable. Such cases will include circumstances where the pool owner would require structural alterations to their home or incur costs in excess of $5000. The department is investigating specific scenarios that could be addressed by building certifiers without the necessity for an appeal. For the purposes of this RIS, it is assumed that excessive cost is entirely avoided.

[6] Most of the questions in table 6.1 are from a checklist published by PoolWerx.

Table 6.3 Questions about the condition of pool fences and gates

Swimming pool gate
1. Does the gate swing back to the closed position after being opened?
2. Does the gate latch and stay closed after it returns to the closed position?
3. Is the gate secure so that it can't be pulled open once latched?
4. Is the gate secure and does not open when a child bounced on the bottom rail of the gate?
5. Is there a gap of at least 100 mm between the gate and the fence?
6. Can a child gain access to the pool area directly from the house, without going through a pool gate?
Swimming pool fence
7. Are all the fence panels in place?
8. Are all the fence panels securely attached?
9. Have you checked the fence for gaps or holes?
10. Is the distance between the bottom rail and the ground less than 100 mm?
11. Have you checked for rusted, loose or missing screws?
12. Do you know how high the fence needs to be at all points, including different requirements for fences that are part of the property boundary?
13. Has anything been done that reduces the effective height of the fence, such as top-dressing the lawn or laying tiles close to the fence?
14. Can a child access the pool area through a shed or other structure that forms part of the pool fence?
15. If a window opens directly into a pool area, can it be opened by more than 100 mm?
Around the swimming pool fence
16. Have climbable objects near the pool fence been removed, such as chairs, ladders, trees, pot plants and BBQs?
17. Have trees and shrubs near the fence been trimmed so that children can't use them to climb the fence?
Emergency preparation
18. Is there a current resuscitation sign displayed prominently in the pool area?

Table 6.4 Estimated cost of repairs and replacements

Repair work	*Quantity surveyor's cost estimate*
Repairs costing less than $500	
Install resuscitation sign	$50
Repair/replace latch	$200
Repair/relocate child resistant doorset	$200
Seal openings in garden shed	$250
Repair/replace self closing device	$280
Add child resistant doorset	$290
Rehang door to swing out	$350
Fix window to open no more than 100 mm	$350
Reverse gate swing	$350
Install security flyscreens	$440
Fix intersections	$480
Repairs costing $500 to $3000	
Remove/relocate climbable objects	$590
Reduce gaps between uprights of mesh panels	$650
Add pool gate to outside of door	$720
Replace door with pool gate that swings away	$890
Reduce clearance under fencing	$950
Fenced enclosure for door that provides direct access	$1000
Increase height of fence	$1420
Increase height of boundary fence	$1420
Reduce gaps between uprights, clear plastic sheeting	$1600
Reduce spacing between rails and uprights	$1670
Fix steps on stepped fencing	$1670
Relocate pool fence from climbable objects	$1880
Remove/modify climbable objects	$1900
Install balcony fence	$2490
Repairs costing more than $3000, including new and replacement fences	
Replace boundary fence	$3700
Relocate garden pergola	$5950
New fence	$3960
Replace existing fence	$5540

Source: Davis Langdon

It is not possible to confidently determine the mix of repairs and replacement that will be required by the proposed measures but, based on discussions with councils and the available surveys of the condition of pool fences[7], the following views have been formed about the various categories of cost. They are dealt with in reverse order, starting with the highest cost repairs, because lesser repairs are displaced by comprehensive repairs.

[7] Sayer *et al* 1996, van Weerdenburg *et al* 2003

Repairs costing less than $500

These repairs are common, particularly to latches, self-closing devices and child-proof doorsets, even pools that have been inspected and repaired within the last five years. However, the incidence of these repairs will be considerably reduced by more comprehensive solutions, notably the replacement of the entire fence or a gate. It is expected that 35 per cent of first certifications for pre-2010 pools will require these repairs and that the average cost is $250.

Repeat certifications for all pools, both pre-2010 and post-2010, will also require some expenditure on repairs. However, the only information about the repair needs of relatively new or recently repaired pools is that it is common for such pools to require minor repairs within several years. A modest allowance has been included in the estimate of total cost, assuming that there is a second round of repairs to 35 per cent of all certified pools, at an average cost of $250.

Table 6.4 reports estimates of the total costs under the various scenarios. The WPM scenario is the 'with proposed measures' scenario, including both the compliance measures and the uniform fencing requirements. The incremental cost is about $237 million in the first 10 years of the program. It is estimated that the cost would be reduced by $86 million under the COM scenario (compliance only measures), to $151 million. This is largely because three-sided fences could be retained. A slightly higher incidence of less costly repairs has been allowed in that case.

It is assumed that the incidence of repairs would be much lower under BAU conditions. This is consistent with survey evidence that fence compliance is poor in the absence of inspection programs.

Repairs costing $500 to $3000

Surveys show that the most common problems are excessive clearance under fences, gaps between rails and uprights, objects in the climbable zone, and the need to protect windows that open into pool areas. It is expected that 20 per cent of first certifications for pre-2010 pools will require these repairs, plus more minor repairs in many cases, and that the average cost is $1250.

Repairs costing at least $3000

New fences and replacement fences will be in this category, and probably some of the alterations that will be required to remove substantial structures from the climbable zone. It is anticipated that a significant minority of pool owners will be required to, or will choose to, install a new or replacement fence. The following are important considerations.

- The 2001 ABS survey of safety in Queensland homes[8] reported that 82 per cent of respondents had child resistant fencing and a self-locking gate, which means that 18 per cent did not have these protections in 2001.
- It is estimated that about 50 per cent of pools were constructed before 1990 and are now at least 20 years old. Fences that were constructed between 1980 and 1990 are now 20 to 30 years old. A sizeable minority of fences were constructed during this period, or earlier. For example, a 1989 survey of pools in Brisbane[9] found that 72 per cent were fenced. Plausibly, fences of this vintage now account for 25 per cent of fences and are approaching the end of their useful life, if not already beyond it. There is no quantitative evidence on the life of fences but it has been informally suggested that it would be 'about 25 years'.
- The 1989 Brisbane survey suggests that two in three of the older fences are also three-sided fences (using a wall of the house as the fourth side) and will need to be modified in such as way that, to access the pool area, a child needs to pass through a the door of the dwelling and gate in the pool fence. Some proportion of pool owners will decide to replace the entire fence.

In general, pool owners may prefer to replace a fence rather than spend some $1000 or $2000 to structurally repair a fence that is close to the end of its life, avoiding some of the expenses that are listed further down in table 6.1. In effect, the proposed measures would prompt owners to bring forward a replacement decision that could not be long deferred in any case[10]. It is reasonable to expect that 25 per cent of first certifications for pre-2010 pools will require a new fence or its equivalent, and that the average cost is $5000.

[8] ABS 4387.3 Safety in the home, Queensland, October 2001

[9] Balanda *et al* 1991

[10] Importantly, the actual cost to the pool owner can be considerably less than the capital sum. The avoidance of the deferred investment is a saving that should be set against the immediate cost.

Table 6.5 Total cost of repairing and replacing pool fences, 2010 to 2020

Category of repairs and replacements	*Av. cost ($)*	*Incidence of repairs*			*Aggregate cost, 2010 to 2020 ($M)*		
		*BAU**	*COM**	*WPM**	*BAU*	*COM*	*WPM*
A. First certifications for pre-2010 pools							
Repairs costing $3000 or more	$5000	5%	15%	25%	48	144	241
Repairs costing $500 to $3000	$1250	10%	25%	20%	24	60	48
Repairs costing less than $500	$250	20%	38%	35%	10	18	17
No repairs	$0	65%	22%	20%	0	0	0
Total					82	223	306
B. Total repairs and replacements							
Repairs for first certifications for pre-2010 pools					82	223	306
Second round of repairs for all certified pools	$250	10%	30%	35%	5	15	18
Total cost of repairs					87	238	323
Incremental cost of repairs, relative to BAU						151	237

Note:

* BAU—business as usual, COM—compliance only measures, WPM—with proposed measures, both compliance measures and uniform fencing requirements

6.3 How the benefits were assessed

The reader is reminded that section 1 provides important background material in the form of a statement of the problem that these measures address (section 1.4.2), including historical data on child drownings.

Statewide pool fencing requirements were first introduced to Queensland in 1991 and have been credited with a significant reduction in the rate of pool deaths since that time.

> *The total number of toddler immersion deaths in Queensland (under five years) has fallen significantly from an average of 23 per annum pre pool fencing legislation (1983–1991) to 14 per annum post legislation (1992–2004). In the same time period, the average number of domestic pool related deaths has halved from 13 per annum to 7 per annum. (Barker et al 2008)*

Table 6.6 **Immersion deaths for Queensland children aged 0–4 years, by pool type and fencing requirements, 2005 to 2009**

Year	*Non-pool*	*Pool requiring fencing*	*Pool not requiring fencing*	*Public pools*	*Total*
2004/05	5	4	0	1	8
2005/06	10	6	1	1	18
2006/07	7	6	0	1	14
2007/08	1	5	0	0	6
2008/09	6	7	0	1	14
Total	27	28	1	4	60
Annual average	5.4	5.6	0.2	0.8	12.0

Source: CCYPCG

More recent figures suggest that the trend is downwards and is now about 6 deaths year. CCYPCG has provided drowning statistics for the period since 2004—see table 6.5. The average number of domestic pool related deaths is now about 5.8 per year, 5.6 deaths per year in pools that require a barrier and 0.2 deaths per year in wading pools that do not require a barrier.

Focusing now on domestic pools, and taking 6 deaths per annum as a baseline, what will the proposed measures deliver in terms of fewer drownings and the associated incidence of brain damage? This question cannot be answered with high confidence but the following figuring is indicative and provides a framework for working through the issues.

1. The average of 6 deaths per year in the period 2004 to 2009 translates to 1.9 deaths per 100 000 pools per year.
2. Pre-2010 pools will contribute about 3.4 million pool years in the 10 years from December 2010 to 2020.
3. Assuming a constant death rate, 65 children would drown in these pools over that 10-year period.
4. On past experience, about 25 per cent of those deaths will be caused by supervisory failures. Gates or doors are propped open and parents allow children into the pool area. Putting that 25 per cent aside, 48 deaths would be attributed to fencing defects and non-compliance.
5. On past experience, for each child that dies, another 1.0–1.5 children suffer brain damage. Assuming a ratio of 1.25, 61 children would suffer brain damage.
6. Plausibly, compliance may ramp up to 60 per cent over the period to 2020. This suggests that, on average for the 10 years, the 'defects and compliance gap' will be closed by 30 per cent. The proportionate reduction would result in 15 fewer deaths and 18 fewer young children suffering brain damage.

The relatively slow rate of pool safety certification—60 per cent of pre-2010 pools by 2020—has been explained in section 5.3. It occurs because most pools are in established owner-occupied houses and these properties will usually be certified only on sale, at a rate of 5–6 per cent of the housing stock per year. However there are important offsetting considerations that are explained in section 1.4.2 and referred to briefly in the benefits panel of table 6.1. Specifically:

- There is a higher risk of drowning when a family moves into a new home with a pool. This is because the adults are distracted and the children are actively exploring the property.
- Families will young children are still relatively mobile and, compared with families with older children or 'empty nesters' are more likely to be purchasing a new home or entering new rental agreements.
- A disproportionate number of deaths occur in pools on rental properties.

These considerations suggest that, by targeting pools on properties that are about to sold or leased, the proposed measures may be considerably more effective than would otherwise be suggested by the overall rate of pool safety certifications over the first 5–10 years of the program.

7 Fundamental legislative principles

The Legislative Standards Act requires that legislation has sufficient regard for the rights and liberties of individuals, and the institutions of Parliament. The department is not aware of any such issues arising from the proposed measures. The following are relevant considerations:

- The proposed measures have been publicly known for some time. As explained in section 1, the proposals are largely the recommendations of the swimming pool safety review committee that was established in December 2008. The Queensland Government accepted the committee's recommendations and announced a two-stage implementation plan that included all of the measures that are the subject of this RIS. In the period since, no concerns have been expressed about fundamental legislative principles.
- The proposed measures employ regulatory arrangements that are established and accepted throughout the community, specifically, the Queensland Development Code.

This consultation RIS provides a further opportunity for issues of this kind to be raised.

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Appendix A: Administrative processes

Figure A.1 Process for becoming a swimming pool safety inspector

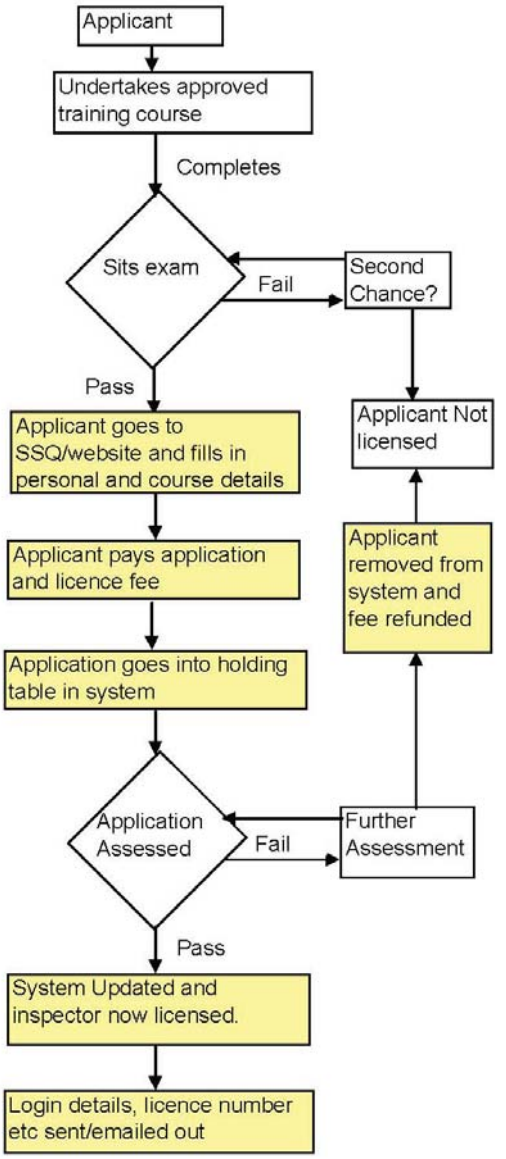


Figure A.2 Process for obtaining a swimming pool safety certificate

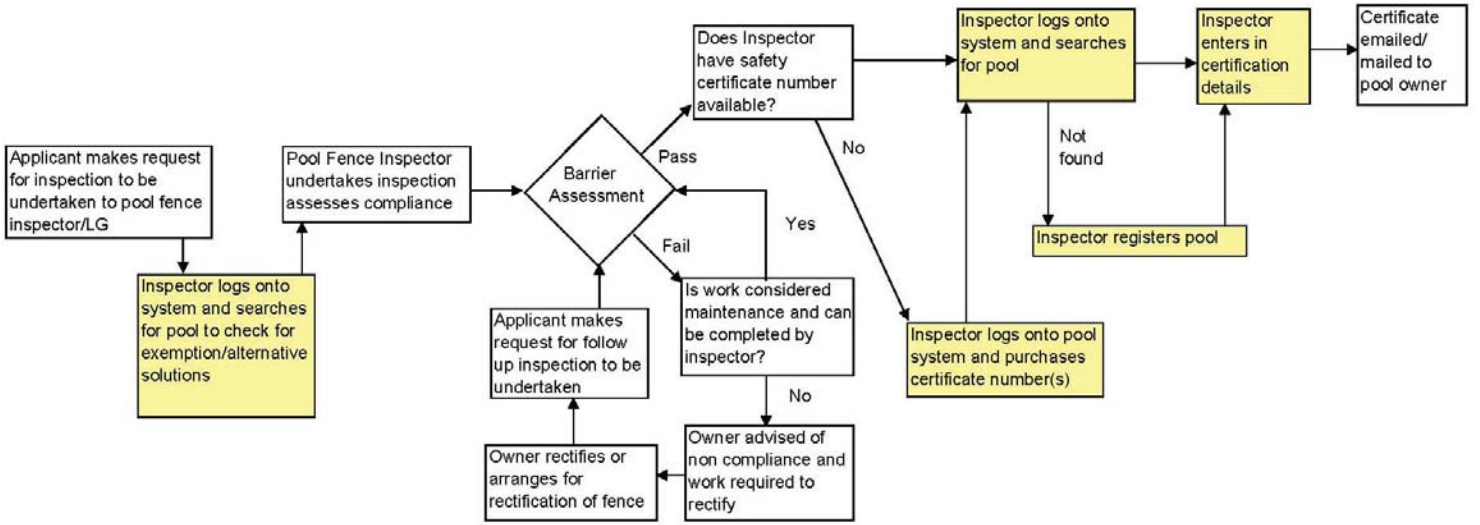


Figure A.3 Process for complaint and immersion incident investigation

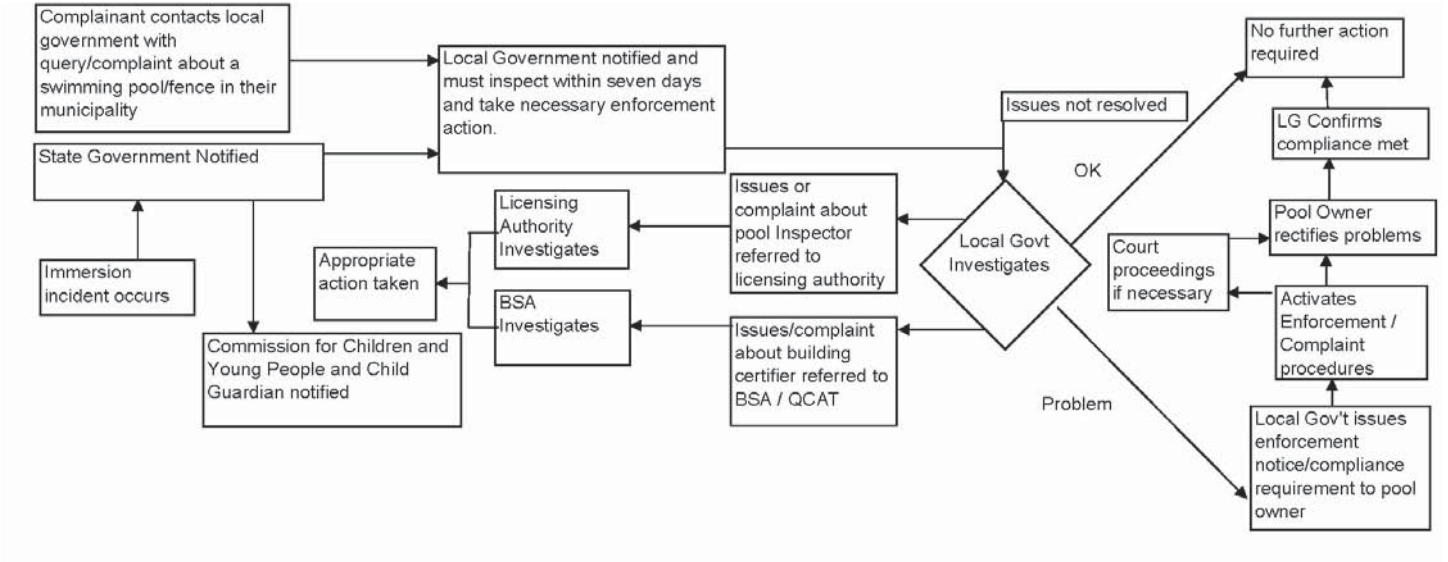
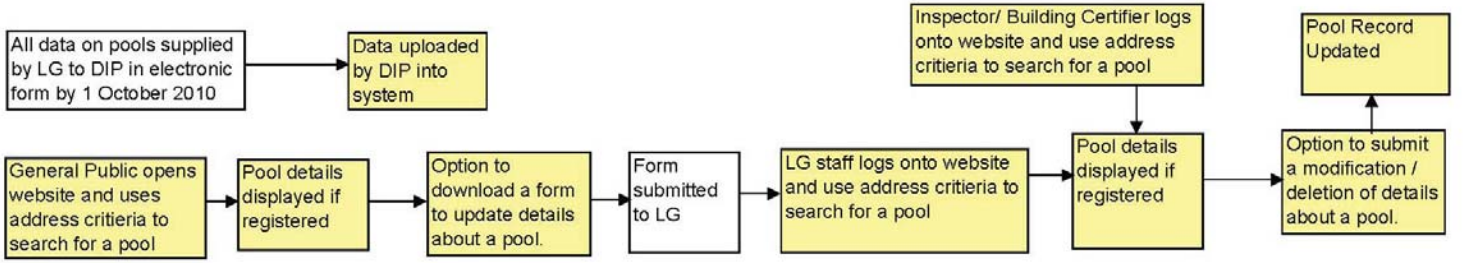


Figure A.4 Process for registering or modifying swimming pool details



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ENDNOTES

1 Laid before the Legislative Assembly on . . .

2 The administering agency is the Department of Infrastructure and Planning.