

Recently some States have overhauled existing legislation to again tighten fencing requirements around the pool, placing further challenges on designers and builders to create a fence that not only ensures it meets these new standards but also satisfies their client's wishes.

This is especially challenging in an era of the "outdoor room" which emphasises seamless transitions between the house and environment. Australian TV landscaper star Jamie Durie, said recently of the outdoor room trend: "Now, more than ever, Australians are living, cooking, entertaining and relaxing with family and friends in their outdoor spaces – and they want that to reflect their interiors."

This desire is plainly at odds with pool safety codes with necessary but limiting regulations.

But designers are rising to the challenge with new innovations, resulting in even more spectacular – and safer – pool environments.

Gary Kilworth, director of the award winning Out From the Blue, Melbourne, says: "The pool fence has to comply with the code – but melt into the background."

The Changes

In his SPLASH! 2010 Trade Show Seminar, Jake Brandish flagged that the Australian standards AS 1926.1-2007: Design, Construction, Performance; and AS1926.2-2007 – Location of the Barrier, are under review.

The revised standards may include: changing the Non Climbable Zone (NCZ) from 1200mm to 900mm; increasing the boundary height to 1800mm; declaring the minimum height for balconies above pools to be reduced from 2400mm to 1800mm; any retaining wall height will also be reduced from 2400mm to 1800m and that standards might refer to 'barrier' rather than 'fencing'.

For the time being: "Pool fencing must be a minimum height of 1.2 metres above ground level and boundary fences which form part of

the pool safety fence constructed or modified after September 2008 must be 1.8 metres," says Mike Cass of design-it landscapes, Sydney. "Gaps under and within fences/gates must not be greater than 100mm. There should be no obstructions around the pool fence which could be used as a foothold for a child to climb the pool fence. Swimming pools and safety fencing should not be installed without prior consent from council – this can often be quite an involved process."

The most important part of any fence is the gate. According to the Royal Life Saving Society, drowning tragedies have often occurred because the fence gate is simply left open.

"In brief, pool gates must open outwards from the pool area and are required to be self-closing and self-latching," says Cass. "The pool latch mechanism must be 1.5 metres above ground level or have a shield if the mechanism is lower." The Royal Life Saving Society emphasises that the gate must swing shut immediately.

Frameless toughened safety glass is often the best option for fencing a pool, although it is more expensive (ATC).



The new State-specific changes apply on top of Australian Standards. From December 2009, the Queensland Government introduced regulation of temporary fencing for pools, including reducing the time compliant temporary fences will be permitted to a maximum period of three months during the construction of a pool. There must be a sign advising a new pool is under construction and there must be a cardiopulmonary resuscitation (CPR) sign for all pools constructed on or after October 1, 2003. The Queensland Government also introduced mandatory final inspections.

Stage two – proposed to take effect in December 2010 – will mostly affect existing Queensland swimming pools, and licensed pool safety inspections triggered by the sale and lease of properties. It includes: the replacement of a number of different pool safety standards with just one pool safety standard for all pools (both new and existing pools must be upgraded to comply with the standard within five years unless sold or leased first); a five-year phase out of child-resistant doors (self-closing and self-latching doors) used as pool barriers for existing pools, unless sold or leased first; a sale and lease compliance system requiring pool safety certificates to be obtained from a licensed pool safety inspector; wider application of State laws to include indoor pools and pools associated with hotels, motels, caretaker residences and caravan parks; the requirement for all swimming pools to be included in the pool register managed by the State government; fencing for all portable pools and spas deeper than 300mm and mandatory inspections of pools by local government.

Building certifiers will be required to undertake a mandatory follow-up inspection within six months to two years after giving a building approval for a swimming pool. On July 5, 2010, the majority of the provisions of the Building and Other Legislation Amendment Act 2010 (BOLA 1) also commenced. BOLA 1 established the pool safety inspector licensing system and the state-managed pool register. An independent body, the Pool Safety Council (PSC), administers the licensing system.

The final legislative component of pool safety reforms, the Building and Other Legislation Amendment Bill (No 2) 2010, was introduced into the Queensland Parliament on 18 August 2010 and has yet to be debated.

"These are appropriate new regulations," says David Close, of SPASA Queensland, who was on the committee to review the legislation. Penalties of up to \$16,500 and on-the-spot fines of up to \$700 can be imposed



Even splash pools can benefit from the use of glass fencing (ATC).

“The pool fence has to comply with the code – but melt into the background.”

on pool owners if their pool fence does not comply with the law in Queensland.

It is worth noting that a recent coronial inquest into the drowning deaths of children (in NSW) called for criminal penalties for anyone found to be negligent in constructing or maintaining a pool's safety barriers.

Infinity and beyond

Moving to toughen up pool safety, NSW has also recently revoked all previous exemptions to pools. According to NSW SPASA chief, Spiros Dassakis: "All new pools must be separated by a complying barrier from the house and adjoining properties. The general requirement for child-resistant bar-

riers on residential properties is for the pool to be separated by a complying barrier from the house, adjoining properties and public spaces at all times.

"Direct access from the house to the pool area is not permitted unless an exemption has been applied for and approved."

Dassakis clarifies that an infinity pool's wall that forms the drop of the pool edge may be regarded as part of a natural barrier as long as that drop is at least 1.2m. However, there are many variations and circumstances which must be taken into account if it is to comply with Australian standards.

Pool designer and landscape architect firm, Peter Glass and Associates (PGA), often positions the pool in this way so the drop becomes part of the "fence".

PGA landscape designer, Connie Kollmann, says that depending on the topography of the property, sculpting the levels of the landscape can allow for opportunities to use the pool walls as the fencing.



Glass fencing is safe, while also allowing the pool to remain a feature when viewed from inside the home. This pool features fixed channel frameless glass fencing by Glass FX.

“Raising the level of the pool to allow for a pool wall that meets the fencing requirements allows for the pool area to appear open and boundless whilst still providing fully compliant enclosure of the pool area,” she says. “The exposed wall opens the opportunity for a feature spill-over edge and balance tank, or a glass edge allowing for views to be kept above or below the water.”

Victoria has also toughened up. From May 1, 2010, changes to the Building Code of Australia (BCA) meant that all new outdoor

swimming pools and spas in Victoria require a separate four-sided barrier. This means that direct access (i.e. through a doorway) from a building to an outdoor pool or spa area is not permitted.

However, building walls, retaining walls and child-resistant windows or screens can still be used as part of the safety barrier. Kilworth and colleagues won, Victorian Pool of the Year by incorporating a solid home wall with a viewing glass panel into the pool that acted as one side of the barrier.

“A recent coronial inquest called for criminal penalties for anyone found to be negligent in constructing or maintaining a pool’s safety barriers.”

“A window must not be able to be opened more than 100mm,” says Kilworth. “The new regulations are a challenge but we are onside because it is about safety.”

He adds that gates are incorporated into the design of the fence. “The code is strict. It must be a hinged, self-closing gate. So most of the gates are similar material to whatever the fence is made of so it is seamless.”

And in South Australia, from October 1, 2008, a person wishing to sell a property that has a swimming pool or spa pool needs to ensure that the child-safety barriers comply with the requirements that apply to pools built on or after July 1, 1993. But in South Australia, you can still use any combination of fences, walls or buildings to form the safety barrier around a swimming pool, including a child-resistant door that is part of a building – as opposed to a separate fence needing to be constructed as other States now require for all new pools.

Showing how regulations vary from State to State with spas, in the Top End, a December 2009 water safety release from the Northern Territory Government reminded that in the Territory: “All new pools and spas that are capable of holding more than 30cm of water at their deepest part must



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be fenced. The fence must meet minimum safety standards and be certified by the Water Safety Branch before the pool or spa is filled with water.”

WA also requires spa pools to be fenced, and Queensland is also coming into line here.

In NSW, a spa pool is not required to be surrounded by a child resistant barrier so long as access to the spa pool is restricted as per the Swimming Pools Regulation 2008, which states that spa pools must be covered and secured by a lockable child-safe structure such as a door, lid, grill or mesh.

Dassakis is not convinced these latest overhauls (especially follow-up inspections) will assist in reducing the drowning statistics.

“[Inspections] are unlikely to happen in NSW in the short to medium term as it requires significant funding and resources – none of which are currently being addressed by State and Local Governments. A fence is only as good as the day it was inspected and Council in some localities could take in excess of 10 years to inspect the current pool numbers let alone what is being built.”

While he emphasises that one child drowning is one too many, SPASA NSW



Glass FX spigot glass pool fence.

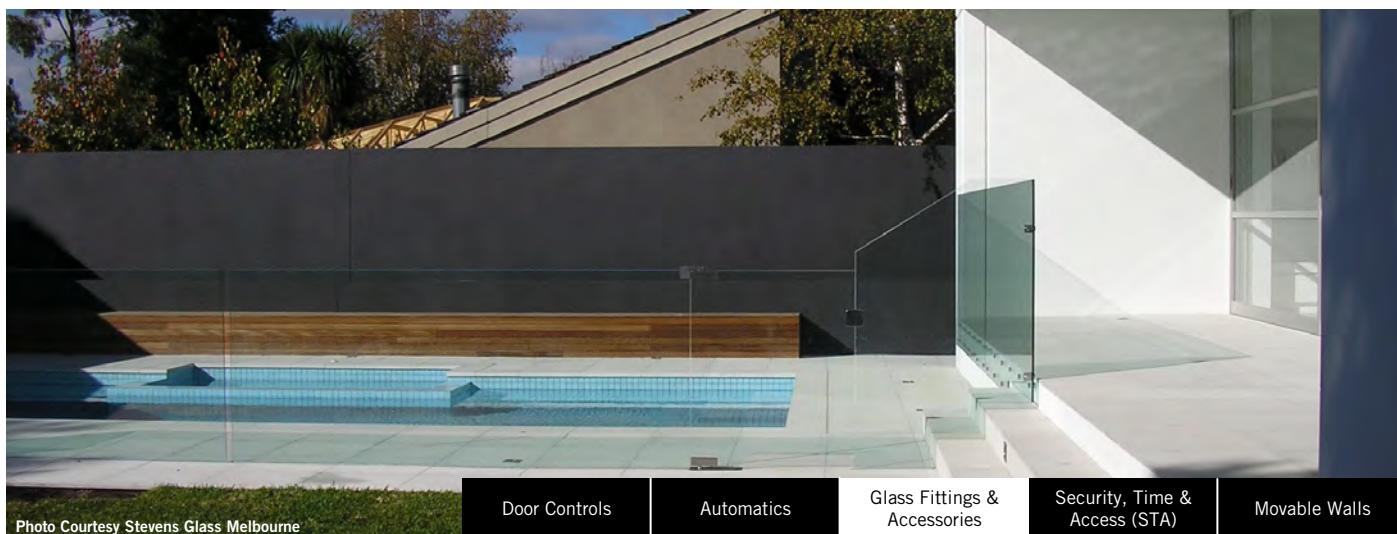


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has consistently lobbied for subsidised swimming lessons and supervision through ongoing community awareness programs, believing fencing is only one aspect of a multi-pronged approach to better protect children.

"Government is constantly looking for quick fixes," he says. "Fencing is important. I'm currently investing in the production of a

DVD with the Sydney Children's Hospital in relation to pool fencing which will ultimately provided the public with better education when it comes to swimming pool and spa safety. But when was the last time you saw an ongoing water safety initiative on TV?

"It will get to the point where we start put a fence over the top of a pool!" he says.

Dassakis also considers last year's statis-

tics which show fencing isn't foolproof: "Of the 19 child drowning in backyard swimming pools last year, approximately 80 per cent occurred in a fenced pool."

It's elemental

Once safety regulations are met, the fence becomes an aesthetic consideration. A glass fence offers an unblocked view of the pool; is contemporary, and protects against wind.

Rob Palmer of Palmers Glass says that glass balustrade fencing is rapidly becoming the first choice of all builders and home owners needing an unobtrusive space divider.

Palmer says that balustrade is made of toughened safety glass, which is four- to five-times stronger than normal glass of the same thickness.

"It can be both semi-framed, with posts between the panels, and frameless, in which the glass is bedded into a channel, slotted into spigots or standoff fixed, to provide an obstruction-free wall of glass."

"Glass is convenient and there's a broad spectrum available, but it must be toughened glass panels," says Kilworth.



12mm glass fence set into an aluminium channel, by Glass FX.

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"There are some imposters (of toughened glass around). You can tell the difference by listening to the sound of a gate closing and opening."

Glass offers warmth as well. "In hilly or coastal areas, consideration of wind protection is important," says Kilworth. "A high glass fence buffers the wind as well as improving sun in the cooler months." It can also reduce wind-borne evaporation, making it more environment-friendly.

Most of all, Kollmann suggests that glass is also the best for safety. "With its obvious absence of horizontal members, it can be amongst the safest of all fencing styles with regard to keeping children and pets out of the pool enclosure."

The downside is the cost compared to other materials. Glass is more expensive than aluminium, and the cost varies dramatically within glass options. Cass cautions that the cost of frameless glass is usually around double the cost of semi-frameless glass.

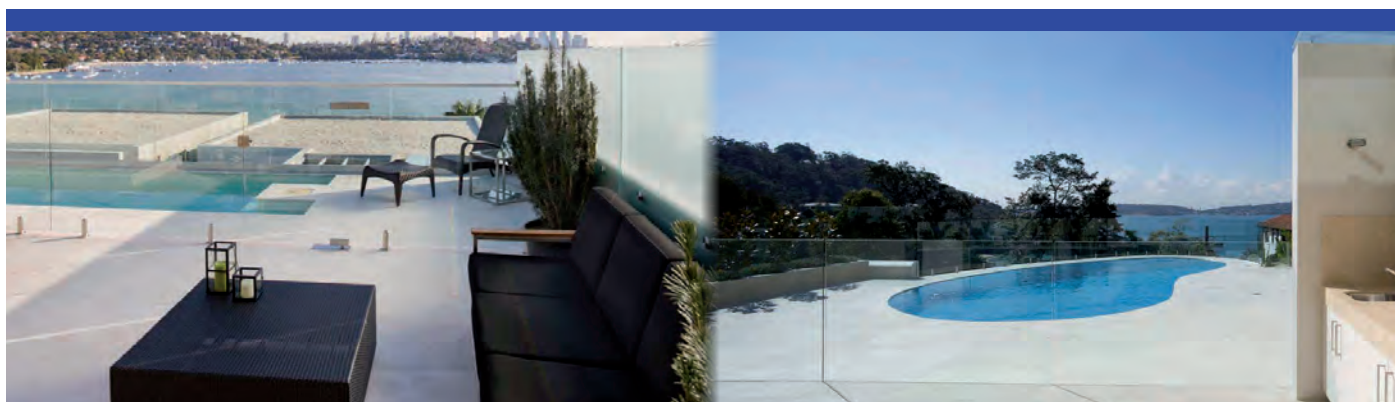
"People only go for aluminium when they can't afford glass," says Bev Hamann of Pride Pools, Sydney.



Glass FX's spigot standoff style glass pool fence.



Wind resistance is an additional benefit of glass fencing, meaning you can enjoy your view without the bluster. It is even more beneficial around swimming pools, as it helps stop wind-borne evaporation.



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If aluminium is chosen, the look changes to a classical style, with budget benefits.

"Powder-coated aluminium is another material used for pool fencing and is an extremely cost-effective means of safely securing a new pool," Mike Cass suggests. "Colour and style choices are important here. Contrary to what most people think, the darker colours are best, as they will hide the fence better. Stark whites or similar will only stand out against the surrounding landscape."

Kilworth observes that sometimes glass will jar with the surrounding environment. "For a Tuscan inspired property with wrought iron, glass may not be the best option." He advises designers to choose what will best fit the environment to promote seamlessness between the indoor and outdoor rooms.

Privacy or transparency?

The biggest drawback of glass is also its greatest strength – transparency. When privacy is a concern for clients, transparency is not what you're after.

While timber can seem dated, Jennifer Snyders from the House of Bamboo, Sydney, believes bamboo – a renewable resource – is becoming popular due to its tropical appeal and sustainability.



Palmers glass channel spigot balustrade.

Bamboo has been traditionally been used in a finer diameter, known as Natureed, to clad an existing Colorbond fence. However, Snyders explains that bamboo has recently come into its own.

"Bamboo fence material is made from carbonised bamboo, which is also used for decking," she says. "It's a new product that gives a nice feel, especially when combined with bamboo decking that flows into the fence with a beautiful line. New bamboo fencing is really hard and great for Australia's weather."

Kilworth suggests that the longevity of any natural product must be looked at because the pool fence must be maintained to stand-ard. "Certainly brush fencing doesn't last forever and needs maintenance," he says.

However, the big issue with bamboo and brush is safety, and particularly, if a child can climb it – which after all, is the reason for putting up the fence in the first place, and the legal requirement.

This may be overcome by having a two-layer fence – for example, Colorbond on the outside layer, and reed, bamboo or brush on the inside layer, where climbing is not an issue.


These types of fences are also very good for privacy screens which might be put in place in addition to the safety fence.

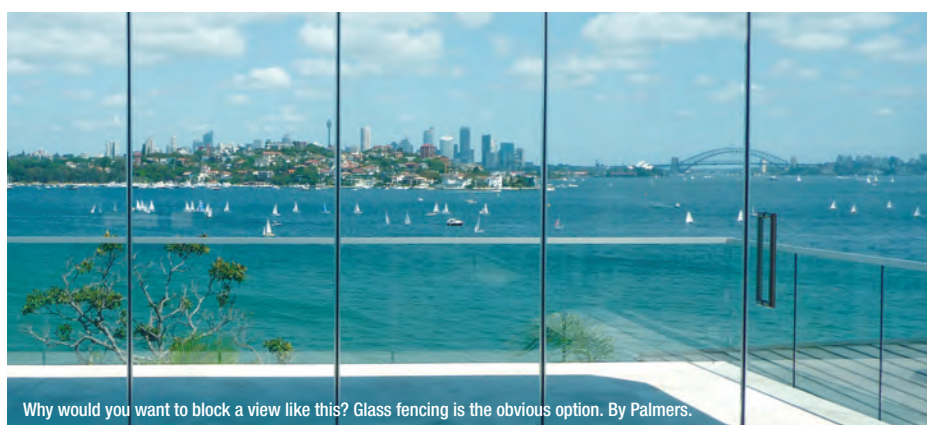
"With cladding, the fencing requirements are becoming so regimented, what (inspectors) consider to be climbable is up to interpretation," says Kilworth. "So it can be difficult to work with some products."

"Stacked stone has so many nooks and crannies it can be deemed climbable. You can be fine tuning a wall with a chisel to make sure it can't be climbed."

"While fencing is important there is no substitute for supervision," stresses Dassakis. Indeed, Kilworth has personal experience in how fallible the most carefully thought out fence can be when determined children are at play.

"Supervision and education are necessary," Kilworth says. "When my sons were six and four, one put a chair against the gate to reach the latch and the other one held the gate open when it swung back against the chair. They worked together – kids are very clever."

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