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Begun in 1997, BIRS developed from a small, home-development business. Expanding to form the organisation Building Improvement and Restoration Services in 2015, today the business proudly maintains the family-oriented values on which the company was built.

Our core values are reliability, integrity and respect. We are also very dedicated to maintaining a high quality of workmanship and materials, and we know that client satisfaction is the key to a good reputation. Upholding these values is why we are expanding as a business and why we have loyal clients who come back to us for restoration projects time and time again.

Each member of the BIRS Team is a registered builder, has a current OHS Construction Induction Training Certificate and current Workers Compensation Insurance (Lic No. 292163C). Every builder is fully dedicated to the remedial building trade



SERVICES

Our Sydney-based business handles remedial building repairs, successfully managing owner and strata-managed projects. The BIRS Team consists of licensed builders and developers bringing together years of experience in different fields and creating a strong group of workers capable of fixing any building issue related

- Painting
- Waterproofing
- Lintel & Brickwork
- Flashing
- Roof and Wall Membranes
- Concrete Spalling
- Building Fa ç ade Restoration
- Render Coating
- Joints and Cracking
- Water Leaks
- Flooding

Whether you have a building issue caused by carbonisation, a chemical attack, mechanical damage, or simply by age, we can identify the cause and provide a detailed rehabilitation specification what will include a practical and environmentally acceptable repair methodology. We will solve any issues you have with the above building aspects using long-term solutions with durable, good quality materials.

Painting

Our company can re-paint residential, strata and commercial buildings. We cover all interior and exterior projects from small bedrooms to large office floors or buildings. The need for painting can be brought about due to any building defect, and painting is the final stage in the beautification of the building. We would never simply paint over or mask a problem with paint, but always address the problem first, then paint after. Two main building defects which will require re-painting are bubbling plaster and mould.

Bubbling plaster

Bubbling plaster is a sign of water ingress on the other side of a wall where the water is pushing through the paint in bubbles. The internal water issues need to be fixed before restoring the wall and painting, and we can do it all for you

Aeration, cleanliness and sunlight are the simplest ways to counteract this moisture build-up and to reduce the stability of the temperature and humidity in the environment which is particularly attractive to moulds. There are many painting products that are sold as mould-removers, and many home remedies are purported to reduce mould growth if you are unable to increase the amount of sun or air getting to the problem area. Our builders are qualified to apply the right paints without compromising their health

How do I get rid of mould?

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Crack Stitching

Crack stitching is a method of repairing and stabilising cracked masonry that may have moved and cracked as a result of movement in foundation soils, seismic activity, and cyclical wet and dry, hot and cold environmental conditions.

BIRS builders use the Helibeam system (see image below). The Helibeam system uses Helibars bonded into cut slots in the wall with Helibond cementitious grout, which can be seen being applied in the picture below. Crack stitching reintroduces structural integrity and redistributes structural loads for a quick, simple, effective, and permanent solution. The Helibars are cold rolled, under tension, from continuous runs of stainless steel wire, and exhibit a compact profile that allows for easy transportation and on-site manipulation whilst maintaining impressive and reliable tensile strength. The Helibond grout formulation, which includes an expansive system to compensate for shrinkage in the hardened state, develops almost half of its fully cured compressive strength after 24 hours.

Our builders have got experience using the crack stitching method to fix brick wall cracks, and also cracks in rendered walls, cracks near corners, cracks in block walls, and cracks in stone walls



WATERPROOFING

Keeping a building watertight is essential to maintain its structural integrity. The introduction of water into a building can cause a huge range of issues, from concrete spalling to rising damp, from mould to crumbling brickwork. You might notice water damage in your building from either the damp smell, the rotting of carpets or flooring, rusting of any metal materials, mildew and mould growth, bubbling paint and plasterwork, or the de-bonding of materials such as tiles.

There are a host of reasons as to why waterproofing might fail in a building. The most common ones are:

- The original waterproofing membrane is old and failing;
- The movement of the building over time (or during/after initial construction) has shifted and torn the membrane;
- Lack of experience/attention by previous workers/handyman has led to a failed replacement of the membrane;
- New works have introduced incompatible materials or new protrusions which have disturbed/damaged/otherwise compromised the existing waterproof membrane.

In all these cases, we are there to investigate the cause and find solutions for whatever has caused the water ingress, and fix or replace the old membranes so that your building is water-tight once again.

Waterproofing, rendering, and capping progression



Balcony and balustrades

Balconies are generally made of timber or concrete, and as they are on the façade of a building they are subject to the elements, especially on the coast in saline environments. Timber balconies can be ruined by wet rot and termites, and concrete balconies can have concrete spalling, rusting, efflorescence, or failed waterproofing and drainage. If you aren't affected by any of those issues, you may be wanting to upgrade an older building whose features are no longer safe and compliant with the Building Code of Australia (for example, all balustrades must now be at least one metre high, and lots aren't), or you may simply want to upgrade your balcony look as it is a highly visible building feature

Regardless of why, we have help to make the process of balcony rectification and upgrading cost-effective and hassle-free. The Images shown on the next page are from a recent project in Sydney, NSW. The owners were mainly focused on the water and drainage issues they had, which were caused by the failed waterproofing and too small spitter (drainage) pipes. Because of this they also had concrete spalling. As can be seen, BIRS removed the existing brick balustrades, re-cast and waterproofed the concrete slab, and created a hob (or lip) around the edge in which were larger spitter pipes. We also upgraded the balustrades (which weren't compliant because not only did they allow climbing, but they were less than a metre tall) and installed new tiles, upgrading the building aesthetic.

**Balcony and balustrade rectification
(14 balconies completed in whole complex)**



**Balcony and balustrade rectification
(14 balconies completed in whole complex)**



RENDER COATING

Render coatings can be made up of different materials – there is cement render, cement lime render, and acrylic render. No matter how it is formulated (usually a ratio including sand, lime, cement and water), cement render is highly alkaline and extremely rigid. After it is mixed and applied to the building it has to be left for 28 days to cure which allows the alkaline to stabilise before it is painted. After being painted, the render is usually exposed to extreme variations in temperature which causes it to expand and contract. This ongoing stress on an inflexible product causes the render to crack. These cracks appear first as hairline cracks and are more obvious when the render is wet.

While hairline cracking can be patched up with different products (see image below), this does not deal with the underlying problem; it only provides a temporary solution. The recommended action – and unfortunately the most expensive – is to demolish any affected areas and prepare to re-render them. Cracks can allow water penetration which instantly worsens any situation and will only lead to other costly issues.



Pool Restoration

STEP 1 Remove Damaged

Substrate Remove any of the substrate or surface material, including patching or foreign materials. If there are cracks in the substrate, use a concrete grinder, to cut them out and extend the cut-out at least 1 inch beyond both ends of the original length of the crack. Make sure to wear safety gloves and goggles when working with a grinder. Then, with your chisel and hammer, make some pock marks in the pool's surface. These holes will help patching material bond better to the pool's new surface.

Step 2 - Find Hollow Spots

Although you will be able to easily spot cracks in the pool's surface, it may not be as easy to identify spots where the outer plaster has separated from the shotcrete or gunite beneath it. If these spots exist, they will most likely separate completely over time. It is best for you to repair these potential trouble spots while you are repairing your pool's surface.

3 Clean the Substrate Surface

Clean all dust, grit, and concrete pieces off the surface you are repairing.

Then cover the surface with an acid rinse.

Warning: Working with acid is dangerous if the proper safety precautions are not taken. Read the product's directions thoroughly and wear rubber gloves, boots, splash-safe eye goggle, and an approved respirator for acid fumes. Also, note that you should never add water to acid; always add acid to water. If you reverse this process, you could burn your skin via an explosive reaction.

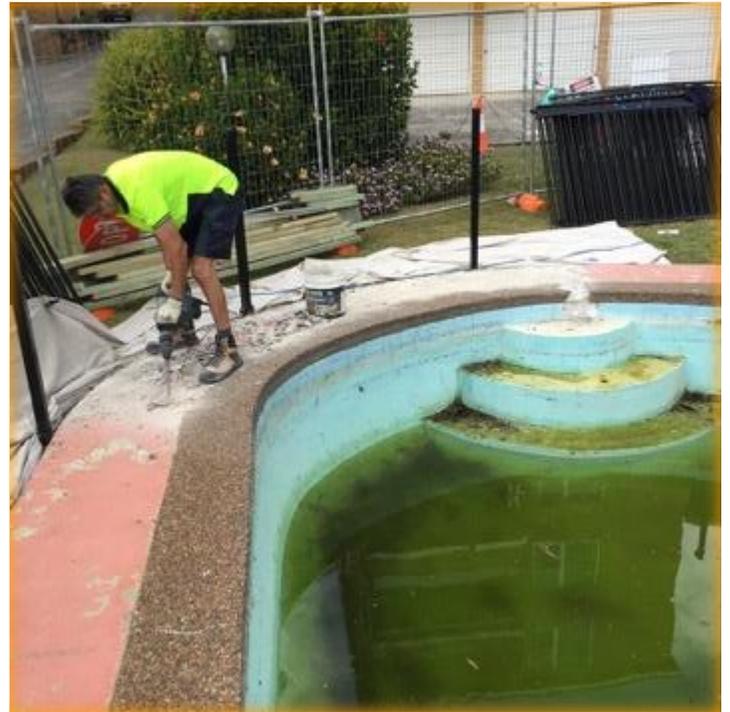
Step 4 - Fill Cracks and Depressions Fill the crack with caulk, leaving a space of 1/4 inch between the caulk and the top of the crack. This will allow you to later apply plaster without creating uneven places on the surface. When finished with the caulking, let it dry for 24 hours.

Step 5 - Apply a Fill Mixture Apply a mixture of white concrete, white sand, acrylic cement bonding agent, and enough water to create a mixture as thick as a thin putty. With your trowel, force the mixture into all divots, holes, and corners, being careful to force out any air bubbles. Use your trowel to smooth the mixture over the surface until the surface is level and smooth. Wait until the mixture has begun to set up, about 15 minutes, before

Step 6 - Texture the Surface If the old surface has a texture that is rougher than your newly patched area, you will want to match the textures while your newly patched spot is still wet. You can do this by texturing the area with a damp sponge.

Now that you have repaired your pool surface, you should fill it with water right away. If you expect a delay in filling your pool, spread wet towels over the just- repaired surface.

Before & After



Flashwork

The importance of flashing is often minimised but it is an essential element for a building to remain waterproof. Flashing is a construction detail used to seal and protect joints in a building from water penetration - it is therefore installed at intersecting roofs, parapets and walls.

The joints created by the intersection of the roof and roof mounted structures and projections, such as parapets, hatches, skylights, chimneys, vent stacks, or towers, are among the most vulnerable areas of roofing systems. They constantly expand and contract in response to changes in humidity and temperature. The greater the number of such projections, the greater the potential for serious leaks. Flashing is used at these intersections to keep rainwater from leaking into the building. It makes joints at these junctions watertight, while at the same time allowing the natural expansion and contraction of materials to continue

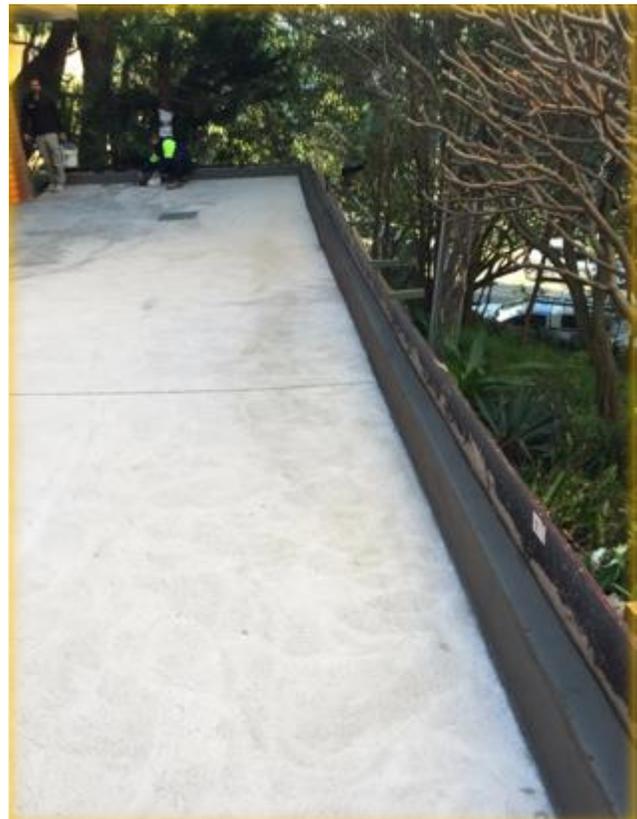
Flashing can either be concealed or exposed. Flashing concealed within the construction of the building may be of either sheet metal or a waterproof membrane. Exposed flashing typically consists of pieces of sheet metal or impervious, flexible membrane material. We often find that the flashing may have failed and this is the cause for water penetration. It is obviously linked to the waterproof membranes discussed on the [Waterproofing page](#)

Wall flashing



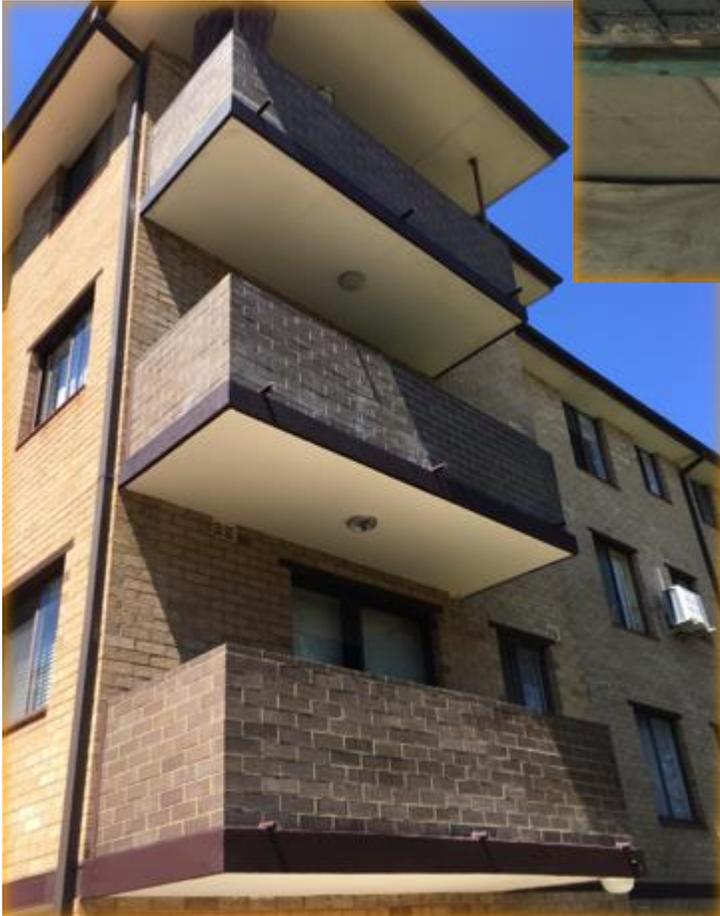
Concrete spalling

The most common issue with concrete which we are called to inspect and fix is concrete spalling. When concrete is used in construction, steel bars or steel mesh can be used inside the concrete slab as reinforcement. When exposed to air or water, these steel reinforcements can corrode, which causes the reinforcements and thus the concrete to expand. Concrete spalling is a common building condition, and is especially prevalent in buildings which are close to saline environments, such as ones along the coastline. With premises located along the south coast, we are very experienced with this type of building defect, especially in balcony slabs that are exposed. Concrete spalling is often called “concrete cancer” due to the progression of the corrosion. Once the concrete has cracked, it further exposes the steel to water and air, speeding up the process





Concrete spalling and concrete slab

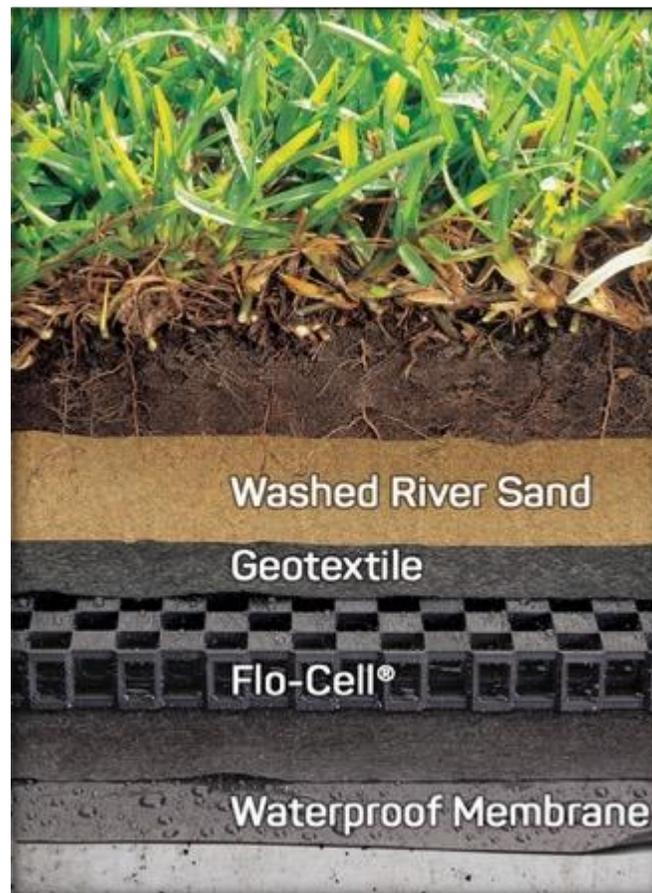


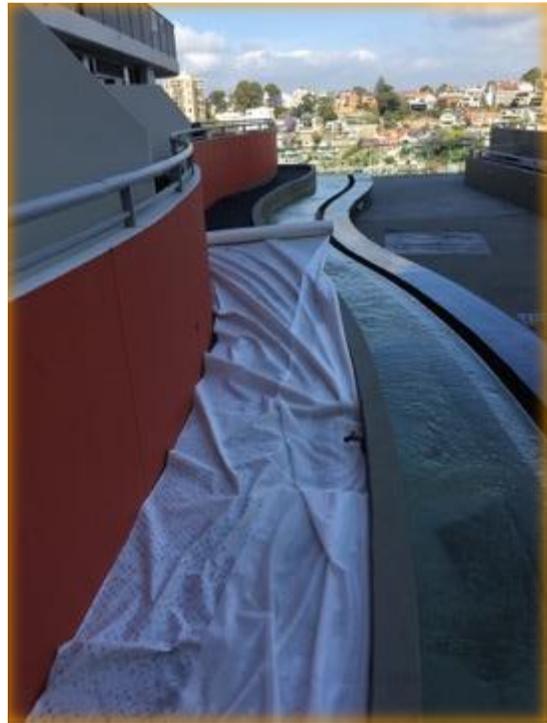
Drainage Cells

Drainage cells provide the perfect solution for creating a successful green roof without any traditional problems of leaking and cracking. The drainage cells provide a uniform surface as well as internal void space for effective draining of excessive water during heavy rainfalls.

Drainage cells help landscapers make use of mature plants in a roof garden which needs soil depth and water retention properties.

High temperatures in summer cause thermal expansion in concrete and can cause water proofing to crack, but with the help of drainage cells the heat escapes and hence reduce the risk of cracking, enhancing building life





Installation of drainage cells & landscaping



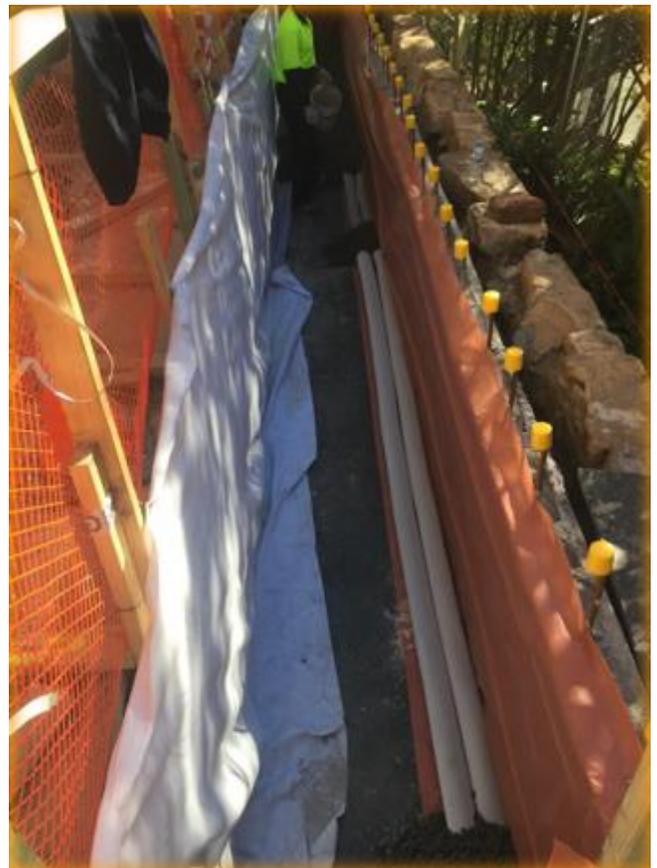
Retaining Walls

A retaining wall is a protective structure, first and foremost. It is a structure that holds back soil from a building or structure. Retaining walls prevent down slope movement and provide support for vertical or near-vertical grade changes. Concrete retaining walls can serve aesthetic and landscape design functions as well. A retaining wall installation completed by a quality professional will enhance the value of one's home. An expert retaining wall installation ought to be both functional and aesthetically satisfying.

How are retaining walls useful?

- provides functional support for keeping soil in place,
- prevents sink holes and eliminating the eye sore of dirt piles and hills
- helpful in preventing flooding
- reduces maintenance and prevents erosion
- prevents damage to property or surrounding structures

Reinforcement of the retaining wall





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