BILLABONG
POOL SERVICE & SUPPLY
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'The Pool Problem Solvers'

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QBuild Registration No: 878105

Technical Treatment Procedure

1. Initial Assessment

- Confirm water is opaque or deep green, with visibility < 1 metre.
- Verify free chlorine is near zero because of the high organic load.
- Record pH, total alkalinity, and CYA before treatment.

2. pH Reduction

- Adjust pH to 7.2–7.4 to maximise chlorine oxidation efficiency.
- Use hydrochloric acid as required based on test results.

3. High-Level Super-Chlorination

- Apply a heavy shock dose of liquid chlorine:
  - 20–30 L per 50,000 L of pool water (depending on severity).
- Maintain circulation continuously.
- Expect rapid chlorine consumption during the first 12–24 hours.

4. Mechanical Disruption

- Brush all surfaces thoroughly to break biofilm and expose algae to oxidiser.
- Repeat brushing after 4–6 hours of circulation.

5. Coagulation / Flocculation (Optional but Recommended)

For extremely cloudy water:

- Apply a flocculant or clarifier according to label instructions.
- Allow settling if using a floc; vacuum to waste.

6. Filtration and Removal

- **Run filtration 24–48 hours continuously.**
- **Backwash sand filters or clean cartridges as pressure rises.**
- **Vacuum settled debris as required.**

7. Secondary Shock (If Required)

If water remains green or chlorine demand is still high after 24 hours:

- **Apply a second shock dose at 10–15 L per 50,000 L.**

8. Water Balancing

Once water transitions from green → grey → blue:

- **Re-test and adjust:**
  - **pH: 7.4–7.6**
  - **Total Alkalinity: 80–110 ppm**
  - **CYA: 30–50 ppm (higher CYA slows recovery)**

9. Final Algaecide Application

After the pool is clear and chlorine demand stabilises (typically 24–48 hours post-shock):

- **Apply a broad-spectrum algaecide such as:**
  - **Lo-Chlor Pool Algaecide***
  - **Lo-Chlor Miraclear Algaecide**
  - **Lo-Chlor Algae Knockout**
- **Dose strictly according to the manufacturer's label instructions.**

***This step provides residual protection and prevents immediate regrowth.**

ALGAE PREVENTION — TECHNICIAN QUICK-REFERENCE

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1. Sanitiser Control (Primary Defence)

- **Maintain Free Chlorine (FC) in range for CYA (e.g., 5–7 ppm at 50 ppm CYA)**
- **Increase output during summer, storms, heavy bather load**
- **Avoid any period of zero chlorine**
- **Salt systems: boost output before heatwaves**

Key Principle: Consistent chlorine levels prevent algae from establishing.

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2. pH Management

- **Keep pH 7.2–7.6**
- **High pH reduces chlorine efficiency**
- **Test more frequently in hot weather**

Key Principle: Mid-range pH maximises sanitiser strength.

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3. Circulation & Dead-Spot Control

- Achieve 1–2 turnovers/day
- Aim returns to eliminate dead zones
- Keep skimmer and pump baskets clear
- Extend runtime in summer

Key Principle: Moving water disrupts algae settlement.

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4. Brushing Routine

- Brush walls, steps, corners, behind ladders weekly
- Pebble/plaster: stiff brush
- Vinyl: soft brush

Key Principle: Brushing removes early algae colonies.

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5. Filtration Efficiency

- Backwash when pressure is 20–25% above clean
- Clean cartridges every 4–8 weeks
- Replace media when worn or channelled

Key Principle: A strong filter removes what chlorine kills.

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6. CYA (Stabiliser) Balance

- **Outdoor pools: 30–60 ppm**
- **Avoid >100 ppm**

Key Principle: Balanced CYA protects chlorine without suppressing it.

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7. Phosphate Management (Supportive)

- **Keep below 500–1000 ppb**
- **Use remover if levels climb**

Key Principle: Lower nutrients slow algae growth.

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8. Contamination Prevention

- **Rinse swimsuits used in natural water**
- **Clean toys, robotic cleaners, brushes**
- **Reduce leaf load and organic debris**

Key Principle: Prevent algae introduction.

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9. Strategic Algaecide Use

- **Use polyquat 60 for holidays or low-attendance periods**
- **Avoid copper unless the staining risk is understood**

Key Principle: Algaecide supports chlorine, not replaces it.