

# BioCycle

## 8200 *Ecolution*

# INSTALLATION

# GUIDE

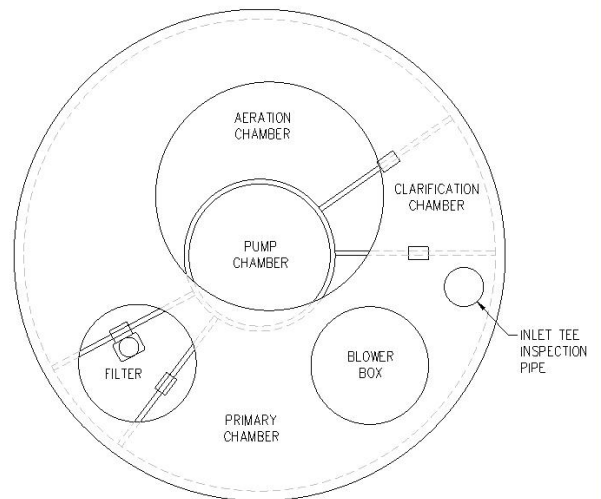
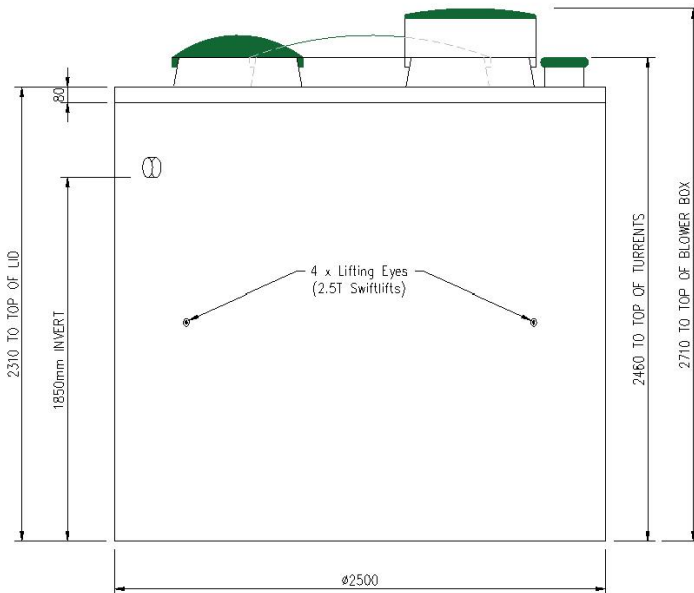
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Thank you for purchasing a BioCycle 8200 *Ecolution* Secondary Aerated Wastewater Treatment System.

At BioCycle Limited, we strive to manufacture and supply high quality, fit-for-purpose wastewater management tanks and supporting products. While we always check over our products for Quality Assurance prior to dispatch, it is inevitable that sometimes a component may get overlooked or even receive damage during transit. You should check over your new BioCycle tank thoroughly upon receipt and if you find anything not as it should be, please notify us immediately and we'll ensure it gets remedied without delay.

The following **Installation Guide** is intended to provide a basic overview for practical installation of the BioCycle tank. However, only trained and experienced Registered Drainlayers should install any wastewater treatment tank and their own knowledge of the New Zealand Building Code, New Zealand Standards (AS/NZS) and industry Codes of Practice guides should ensure each tank is installed correctly and safely.

In addition, the location of the tank and effluent dispersal field (PCDI, LPED or other discharge design) should be laid as precisely as possible in line with the detailed design provided by a CPEng or SQP design author for each specific property, and as approved for Building Consent by the relevant local Building Authority.



APPROXIMATE TOTAL DRY WEIGHT = 8100kg



Wastewater Treatment Systems

Biocycle 8200  
Ecolution  
General Layout  
& Dimensions

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|          |        |                |
|----------|--------|----------------|
| DRAWN    | NW     | 25-07-19       |
| CHECKED  |        |                |
| APPROVED |        |                |
| SCALE    | N.T.S. | SHEET SIZE: A3 |

The BioCycle 8200 *Ecolution* pre-cast concrete tank weighs approximately 8,200Kg (dry) and is 2500mm diameter x 2310mm High.

There are 4 x Reid Swiftlift points on the BioCycle tank. At the time of publication these are each 5.0tonne rated. They are clearly marked as lifting points. A **spreader bar should be used** by the crane operator when lifting the tank.

Only a very large capacity truck-mounted crane should be used for delivery to site and installation into the excavated hole. The truck with tank on board could weigh up to 24tonne in total and is as much as 4.2metres high.

Overhead powerlines, tree branches or other obstructions must be removed. If the driveway is not easily negotiated and stable, many Hiab truck operators will decline installation on arrival, so please ensure all access work is done prior to delivery. Generally, the back wheels of the Hiab truck must be within four metres of the hole to lift the tank in safely. It is the Drainlayer's responsibility to ensure a clear, level & stable driveway providing access for the truck right up to the hole.

Please note that BioCycle Limited advises **against** attempting to use a large excavator or other hydraulic powered machine to lift and manoeuvre the BioCycle tank. If a large excavator is the only option for installation, a minimum 30tonne machine should be used.

**WARNING:** No BioCycle tank is manufactured to withstand excessive weight loading, such as that of a vehicle driving over the top. Tanks should never be located too close to driveways where there is heightened risk of vehicular loading.

For hole excavation, BioCycle Ltd recommend an excavator size of no less than 3tonne capacity to ensure adequate reach and speed of operation.

The hole for BioCycle location should only be excavated on the day of installation. This ensures minimal risk of water table or adverse weather filling the hole and/or subsequent collapse of the hole sides. The digger should be on site and readily available during delivery in case of any oversights, but also to backfill the hole immediately after tank installation.

If ground water table is high, the hole should be dewatered using appropriate pumping equipment to ensure proper bedding of the tank.

Hole excavation should measure a minimum of 3.0Metres square, by 2.4metres deep. The base of hole should be level and firm. Wherever loose or rocky base is present, a minimum 50mm thick bed of fine aggregate (sand, pea metal or GAP7) should be evenly spread as a settlement platform for the tank.

Sewer pipe from the dwelling should be 100mm DWV type and fall at least 1:60 from the dwelling to BioCycle tank. Care should be taken to communicate with the subfloor plumbing contractor for each property **prior** to them laying their pipes. Ensuring they understand the importance of laying waste pipes with consideration given to tank location will save unnecessary cost and complication. If waste pipes are located too deep for standard BioCycle tank installation, turret risers will be needed (at extra cost) to raise access lids and electrical components above final ground level. **The maximum additional riser height allowable is 500mm.**

Including lid turrets and a maximum 500mm riser installation, the **maximum soil cover over tank lid is not to exceed 600mm** under any circumstances. Warranty is void if your installation is found to be in breach.

When burying a BioCycle tank deeper than standard, it may be necessary to bench the sidewalls of the hole to reduce risk of collapse and to enable deeper reach for the digger. Extreme care should be taken and fall prevention measures put in place around the excavated site to mitigate accidental falls and injury.

During backfilling, shaping of topsoil should be undertaken to make certain that stormwater cannot gravitate and collect on top of or around the BioCycle tank. It may be necessary to cut swale drains nearby to ensure surface water runoff away from tank location. Backfill soil should be free of large rocks and air voids should also be avoided.

Immediately following installation and backfilling, a minimum of 5,000Litres of water should be introduced, to fill both the Primary chamber and Aeration chamber. This ensures the tank won't float during rain.

Care should be taken to ensure gully traps are installed above surface water collection areas around the dwelling, as **no stormwater** should be allowed to enter sewer drains or the BioCycle tank, under any circumstances.

**Electrical Connection** should only be undertaken by a registered electrician, in a methodology compliant with AS/NZS 3000. An electrical wiring diagram is supplied with each tank. If this diagram is lost, please visit our website at [www.biocycle.nz/page/technical-documents/](http://www.biocycle.nz/page/technical-documents/)

At the time of publication, the BioCycle 8200 models utilise an electrical control unit located on the Blower Box, manufactured by N2P Controls Limited in Auckland. Please refer to the BioCycle Controller Installation Guide for connection by electrician.

An OPTIONAL alarm panel is available for sites where interior alarm observation is desired inside the dwelling. A 2.5 TPS cable is also needed as alarm plate power supply, running from BioCycle tank back to the dwelling where alarm panel is to be located on an interior wall.

**Please note:** Electrical conduit MUST BE SEALED to ensure no rain, stormwater or ground water can access the conduit, causing water to enter the electrical control box. Failure to ensure this will result in full repair costs to the electrical contractor.

**Commissioning** of the BioCycle 8200 *Ecolution* system should only be undertaken by a trained BioCycle installer or accredited BioCycle Service Agent.

There are critical valve settings and other tests which need to be completed by only trained persons. If your system is not commissioned by a suitably trained person, the tank may flood, voiding warranty.

The warranty (see Homeowner Manual) period begins from the date printed on your Commissioning Certificate.

A Commissioning Certificate should be completed and delivered to the new Homeowner, along with a completed Service Agreement signed by both Service Agent and Homeowner (these documents are available from BioCycle Limited on request. Both completed documents should be supplied along with the Drainlayer's "As Laid" plan to Council for Code Compliance Certification.